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Instructions for authors

The *PNLA Quarterly* publishes both peer-reviewed and high-quality non-peer reviewed articles. Please indicate whether you would like your article to go through blind peer review when you submit it.

Authors should include a 100-word biography and mailing address with their submissions. Submit feature articles of approximately 1,000-6,000 words on any topic in librarianship or a related field. Issue deadlines are

Peer-reviewed articles:

October 1 (Winter)

January 1 (Spring)

April 1 (Summer)

July 1 (Fall)

Non-peer-reviewed articles

October 1 (Fall)

January 1 (Winter)

April 1 (Spring)

July 1 (Summer) for non-peer-reviewed content.

Please email submissions to mbolin2@unl.edu in rtf or doc format.

Would you like to serve as a peer reviewer? Please contact the editor at mbolin2@unl.edu

President's Message

MICHAEL BURRIS



At its meeting in Dumas Bay, the main topic on the Board's agenda was the fallout from the deficit incurred by the 2010 PNLA/WLA conference in Victoria. As I reported in the fall, the conference ended up with a \$23,000 deficit, of which \$10,000 was PNLA's portion. That is a good chunk of money for any association to swallow. Fortunately, PNLA was able to absorb the loss by cashing in some of our investments. Of course, doing so has made the association's financial picture a bit blurrier. The Board remains confident, however, that PNLA will continue to provide the same services that its members have counted on.

As I also mentioned in my column last fall, we need to ensure that the annual conference is of the highest quality possible as well as financially viable. In order to do so, we need to listen carefully to the opinions of PNLA members with regard to what the conference should offer. We also need to hear from non-members. With so many options regarding professional development, and PD budgets tighter than ever, we need to ensure that the PNLA conference provides something that is not available at other conferences. There needs to be an incentive to attend.

That is why the Board has developed a short survey to gather feedback regarding the conference needs of library staff in the states and provinces served by PNLA. If there is a need that is going unfilled, we need to investigate whether it makes sense for the PNLA conference to fill it. The link to the survey is <http://www.surveymonkey.com/s/pnlaconference>. Please take a few minutes to fill it out. And please share the link with as many people as you can. We need to hear from as many people as possible! As an incentive, PNLA is offering an iPod Nano that will be awarded to one lucky respondent.

As I've become more immersed in PNLA, I have come to value what it provides more and more. We are all faced with tough choices when it comes to spending money (our own or our institutions) for association memberships. I think that there are a number of things that PNLA does that makes it a worthy choice. PNLA Leads is an example. The *Quarterly* is another, as is the Young Readers Choice Award. But the conference is also on that list. When I started attending PNLA, I was struck by the broad perspective on display. I believe the cross-border (or international, to use a grander term) aspect of PNLA is a real strength. I have learned much from my American colleagues, and I trust they would say the same about us Canadians. And I think that the size of the conference appeals to many who feel swallowed up by the national conferences. In order to ensure the continued success of the

PNLA conference, we need to continue to nurture the welcoming atmosphere and the broader perspective, while developing a program that resonates with the library community in the Pacific Northwest.

At the Board meeting in November, the Board also passed a motion that effective with the Winter 2011 issue of the *PNLA Quarterly*, there will be a one issue embargo for non-members. The motion was approved, although the timing has had to be adjusted somewhat. The next issue of the *PNLA Quarterly* will be forwarded to PNLA members. The Board felt that having the move to making the *Quarterly* a refereed journal was a very positive one and would serve as an incentive to potential members. Please take a few moments and fill out the conference survey. We appreciate and value your input.

From the Editor

MARY BOLIN

The *PNLA Quarterly* is continuing its transition to being a peer-reviewed journal. This issue contains some very fine peer-reviewed content, and the Spring 2011 issue will have even more. This issue also has excellent editor-selected content, and that mix of high-quality publications will continue to exist in future issues. Please continue to submit your articles either for peer review or editor selection, and be sure to let me know if you would like to be a peer reviewer. A number of people have volunteered, and we can always use more.

A Survey of Biodiversity Metadata Standards

Susan Burke

Susan Burke received her MLIS from San Jose State University in December 2010. She currently works in the Reference Division of the Carlsbad City Library in Carlsbad, California where she serves at the Reference Desk, Information Desk, Interlibrary Loan Office, and as selector for part of the collection. In her spare time, Susan volunteers with a wildlife rescue group based in San Diego. She lives with her husband, three cats, and a very large rabbit named Ursula. She can be reached at: susan.burke@students.sjsu.edu

Introduction

"...So the Salamis Stone may have provided a simple way for ancient workers from different places to calibrate their rulers and cross-reference different units of measurement."

This quote is taken from a Public Broadcasting System special exploring the ancient techniques used to build the Parthenon. The narrator went on to explain that *"Architect Mark Wilson Jones believes the enigmatic Salamis Stone, depicting an arm, hands and feet, may be a conversion table for the different measuring systems, Doric, Ionic and Common."* This may lead us to conclude that the Salamis Stone is the first example of biological metadata. As the program continues, the experts went on to explain that without a common standard, the Parthenon project would have been a logistical nightmare.

About 2,500 years later, the author was searching for a topic that would be interesting and also personally meaningful. For an animal lover, exploring metadata content that pertains to the animal kingdom fits those criteria. Respect and love for the animal kingdom may ensure that all are understood, protected, and will hopefully persevere on an Earth that is very rapidly becoming less hospitable for them.

The term "Biodiversity Informatics" is foundational for this paper, because it relates to the creation, storage, and retrieval of information related to biological entities, but the rest of the story eluded me, like what does "biodiversity" actually entail? According to Wikipedia, *"Biodiversity is the degree of variation of [life forms](#) within a given [ecosystem](#), [biome](#), or an entire [planet](#)."* (2010)

"Biodiversity informatics" is a relatively new term, coined around 1992. Quoting from Wikipedia again, *"biodiversity informatics is the application of informatics techniques to biodiversity information for improved management, presentation, discovery, exploration and analysis. It typically builds on a foundation of taxonomic, biogeographic, or ecological information stored in digital form, which, with the application of modern computer techniques, can yield new ways to view and analyze existing information, as well as predictive models for information that does not yet exist."* (2010)

To fully grasp this concept, one can break it down into the three major focuses of biodiversity informatics: taxonomy, biogeography, or ecology:

Taxonomy

Metadata sometimes changes so that newer information must be described over the course of time. Naturally, this is a very important fact in taxonomy and related disciplines. In 1753, Carolus Linnaeus presented a system of classification system for life on Earth. (ibid, 2010) He group things according to shared physical characteristics. In LIBR 202 we learned that these are known as "attributes." This taxonomic hierarchy that has identified, described, and named between 1.4 and 1.6 individual species over the past 250 years. (Thomas, 2002) Most of us are relatively familiar with this classification system from biology class: Kingdom, Phylum, Class, Order, Family, Genus, Species, and sometime Subspecies.

Biogeography

Biogeography is the study of life on Earth. The actually definition for biogeography is "*the study of the distribution of species spatially and temporally.*" (ibid. 2010) To consider the importance of biogeography, one can image the physical changes to the earth that have affected the life of a species or lead to a variation of a species. For example, the "Jesus lizard" lives near water, and evolved to be able to "walk" across the water to evade predator, scurrying across on the surface tension of the water.



Ecology

The last part of biodiversity relates to ecology. Most of us hear "ecology" and think "green," and preserving the environment. Ecology is defined as "*the scientific study of the relation of living organisms to each other and their surroundings. Ecology includes the study of plant and animal populations, plant and animal communities and [ecosystems.](#)*"

To sum up, Biodiversity Informatics is built upon the foundations of taxonomy, biogeography, or ecology in digital form. Digital form...this is where we being exploring the metadata of life!

The Importance of Biodiversity Metadata

Some may wonder why such importance is given to the emergence of biodiversity metadata. My simple answer is the survival of plant and animal species throughout the world. Not only is the scientific community at the heart of these standards, but consider public policy makers. Without the results of years of research, education, and learning, our legislature would not be able to develop laws and policies aimed at conservation efforts and sustainable development.

Our natural world relies heavily on those individuals who make it their very own responsibility to rely on the immense amount of taxonomic, biogeographical, and ecological data that is available online today. Some of this data include scientific names, common vernacular, publication references for the names, taxonomic hierarchies, and links to related resources. (Thomas, 2002)

Current Biodiversity Metadata Groups

Integrated Taxonomic Information System (www.itis.gov) is one of the most popular online destinations for biodiversity metadata. It exists to facilitate use of taxonomic information throughout the world. The ITIS is a cooperative project between multiple agencies—both national and international.

Their purpose is to “establish a general framework of cooperation among the Federal agencies to develop, scientifically review the content of, continuously improve, and maintain a taxonomic information system to be used by the signatory agencies and others.”

Most of the US member agencies on the list are unsurprising, including the Environment Protection Agency, the National Oceanic and Atmospheric Administration, the Department of Commerce, the Geological Survey, and the Department of the Interior. Also included are the National Park Service and NatureServe (www.natureserve.org), a non-profit group whose mission is to provide information on rare and endangered species and threatened ecosystems.

International partners include Agriculture and Agri-Food Canada and Comisión Nacional para el Conocimiento y Uso de la Biodiversidad (Mexico).

All information found in the ITIS database is free and considered public information. It is also considered the de facto “go to” place in biodiversity informatics. (www.itis.gov)

A simple search for information on an “African elephant” was done. From the home page one can perform a Quick Search using a scientific name, a common name, a TSN (Taxonomic Serial Number), or an “Any Name or TSN*” radio button.

Searchers can use the Common Name radio button, and then the drop-down box to select Animal Kingdom and “containing,” and retrieved three results. The first item was a record about African Elephants; complete with Linnaean Taxonomy and nomenclature, geographic information, and references.

Below is a partial screenshot of the www.itis.gov page for African Elephant.

***Loxodonta africana* (Blumenbach, 1797)**
Taxonomic Serial No.: 584939

Download data: [Download](#) *Loxodonta africana* TSN 584939

Taxonomy and Nomenclature

Kingdom:	Animalia
Taxonomic Rank:	Species
Synonym(s):	
Common Name(s):	African Bush Elephant [English] African elephant [English] African savannah elephant [English]

Taxonomic Status:
Current Standing: valid

Data Quality Indicators:
Record Credibility Rating: verified - standards met

Taxonomic Hierarchy

Kingdom	Animalia – Animal, animals, animaux
Phylum	Chordata – chordates, cordado, cordés
Subphylum	Vertebrata – vertebrado, vertebrates, vertébrés
Class	Mammalia Linnaeus, 1758 – mamífero, mammals, mammifères
Subclass	Theria Parker and Haswell, 1897
Infraclass	Euphonia Gill, 1872
Order	Proboscidea Illiger, 1811 – Elephants
Family	Elephantidae Gray, 1821
Genus	Loxodonta Anonymous, 1827 – African Elephants
Species	<i>Loxodonta africana</i> (Blumenbach, 1797) – African Bush Elephant, African elephant, African savannah elephant

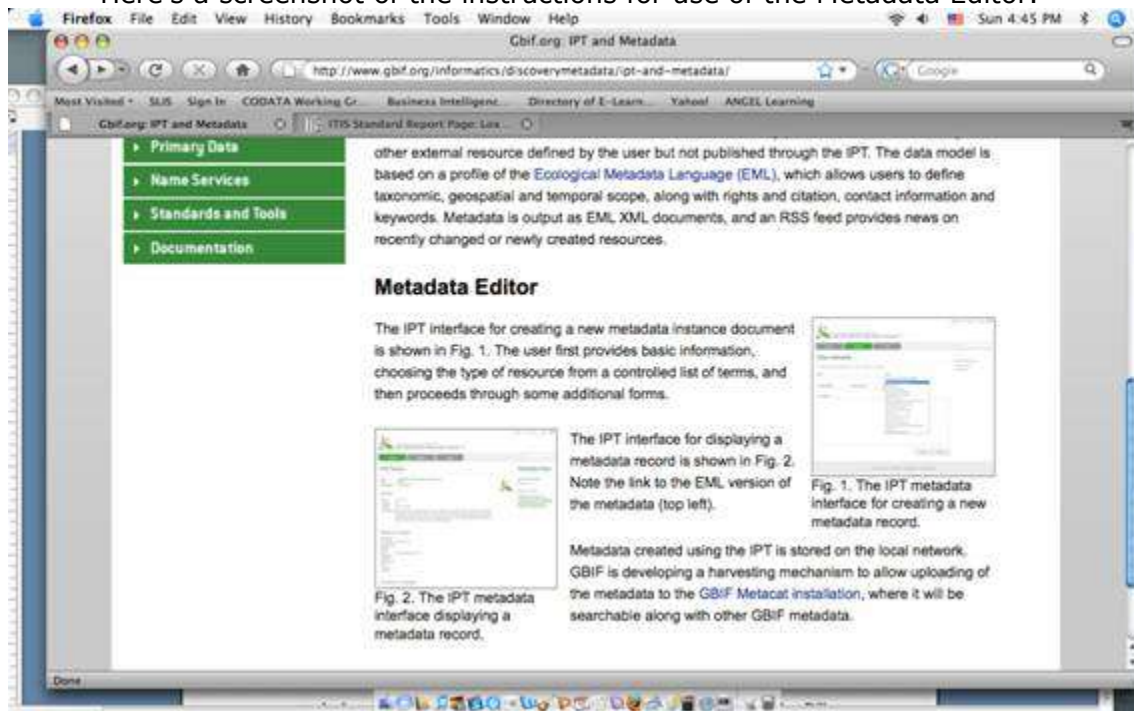
The remainder of the page contains information on references, geographic information, comments, a list of off-site resources, and a disclaimer from ITIS. This is also where conservation information can be linked to, which is also on the ITIS website.

Global Biodiversity Information Facility (www.gbif.org) is an international organization that offers free and open access online. Like other organizations mentioned, their goal is to make biodiversity information available for use in conservation, scientific research, and sustainable development.

This site is particularly useful for those new to metadata as it contains information specific to informatics, discovery/metadata, and primary data. The GBIF site even offers an Integrated Publishing Toolkit (IPT) that works with other software to continue to harvest and index information created with other software platforms.

Additionally, a Metadata Editor is offered for creating a new metadata record. As stated, "The IPT interface for creating a new metadata instance document is shown in Fig. 1. The user first provides basic information, choosing the type of resource from a controlled list of terms, and then proceeds through some additional forms." Fig. 2 displays the new metadata record.

Here's a screenshot of the instructions for use of the Metadata Editor.



The Global Biodiversity Information Facility also links to the Taxonomic Databases Working Group website at www.tdwg.org. This is really the website that got me thinking about how animals, conservation, and metadata fit together.

Taxonomic Database Working Group (TDWG) goes under the full name Biodiversity Information Standards - Taxonomic Database Working Group. They are a not for profit scientific and educational association that is affiliated with the International Union of Biological Sciences.

Like other agencies, the group was established to fill a need for collaboration and standardization of information related to the aggregation and dissemination of biological and biodiversity data. (TDWG, 2010)

Their mission is to:

- Develop, adopt and promote standards and guidelines for the recording and exchange of data about organisms,
- Promote the use of standards through the most appropriate and effective means and,
- Act as a forum for discussion through holding meetings and through publications

The TDWG website contains the content of many different current and prior metadata standards used.

The Darwin Core

The Darwin Core (DwC) is a metadata standard intended to facilitate the discovery, retrieval, and integration about modern biological specimens, their spatiotemporal occurrence, and sharing of information about biodiversity information. DwC was developed by the Z39.5 Biology Implementers Group (ZBIG), with support from a National Science Foundation award.

The term "Darwin Core" was first used at a meeting about the elements required in Z29.50 natural history collections. Since the concept was similar to Dublin Core, Allen Allison suggested the name Darwin Core, and it remains known by that name today. (Wikipedia, 2010)

From the TDWG page on Darwin Core: *"The Darwin Core standard was originally conceived to facilitate the discovery, retrieval, and integration of information about modern biological specimens, their spatiotemporal occurrence, and their supporting evidence housed in collections (physical and digital). The Darwin Core today is broader in scope and more versatile. It is meant to provide a stable standard reference for sharing information on biological diversity. As a glossary of terms, the Darwin Core is meant to provide semantic definitions with the goal of being maximally reusable in a variety of contexts."* (2010)

Darwin Core 1.2 Classic has 44 elements, including the hierarchy in Linnaean Taxonomy: such as Kingdom, Phylum, Class, Order, Family, Genus, Species, and Subspecies.

Other elements include reproductive condition, establishment means, sampling protocol, and geodeticDatum. In case the scientist needs a reference for all of the terms, one can be found on the TDWG website. This is the reference information for "geodeticDatum":

Term Name: geodeticDatum

Identifier: <http://rs.tdwg.org/dwc/terms/geodeticDatum>

Class: <http://purl.org/dc/terms/Location>

Definition: The ellipsoid, geodetic datum, or spatial reference system (SRS) upon which the geographic coordinates given in decimalLatitude and decimalLongitude are based. Recommended best practice is use the EPSG code as a controlled vocabulary to provide an SRS, if known. Otherwise use a controlled vocabulary for the name or code of the geodetic datum, if known. Otherwise use a controlled vocabulary for the name or code of the ellipsoid, if known. If none of these is known, use the value "unknown".

Comment: Examples: "EPSG:4326", "WGS84", "NAD27", "Campo Inchauspe", "European 1950", "Clarke 1866". For discussion see <http://code.google.com/p/darwincore/wiki/Location>

Details: geodeticDatum

Simple Darwin Core is aimed at those who want to share biodiversity information using the simplest methods and structures. One thing that is particularly appealing about Simple DwC is that a record can be presented in a spreadsheet or single database records.

Simple DwC is also flexible. There are minimal restrictions on what fields are required (none). An example of how this is useful is that individuals can share single names, places, events, etc. (2010) There are a few general rules for using Simple Darwin Core:

1. Any Darwin Core term name can be used as a field name.
2. No field name may be repeated in a record.
3. Do not use a Class (Occurrence, Event, Location, GeologicalContext, Identification, Taxon) as a field
4. Provide data in as many fields as you can.
5. Use the dcterms:type field to say what Dublin Core type (PhysicalObject, StillImage, MovingImage, Sound) the record represents, if possible
6. Use the basisOfRecord field to say what Darwin Core type (PreservedSpecimen, FossilSpecimen, LivingSpecimen, HumanObservation, MachineObservation, NomenclaturalChecklist, Taxon, Occurrence, Location, Event) the record represents.
7. Populate fields with data that match the definition of the field.
8. Use the controlled vocabulary for the values of fields that recommend them.
9. If data are withheld, use informationWithheld to say so.
10. If data are shared in lower quality than the original, use dataGeneralizations to say so. (www.tdwg.com, 2010)

Like regular Darwin Core, Simple Darwin Core is implemented in extended markup language. The following is a sample from a text on insect biodiversity:

```
<record>
```

```
<darwin:Country>United States</darwin:Country>
```

```
<darwin:StateProvince>New York</darwin:StateProvince>
```

```
<darwin:InstitutionCode>OSUC</darwin:InstitutionCode>
```

```
<darwin:CollectionCode>Insects</darwin:CollectionCode>
<darwin:CatalogNumber>OSUC 141975</darwin:CatalogNumber>
<darwin:ScientificName>Aradophagus faciatus</darwin:ScientificName>
</record>
```

The record above uses Darwin Core 1.0 (Footitt & Adler, 2009). Throughout this survey on biodiversity metadata, two things have become clear: biology, time, and space are all very much intertwined.

Merging Observation and Information

Often metadata contains geospatial information and the standard it follows is the Content Standard for Digital Geospatial Metadata (CSDGM), as set forth by the Federal Geographic Data Committee (FGDC). This standard was even the subject of an Executive Order in 1994 was signed by President Bill Clinton. The text of the order mandated that "federal agencies collecting or producing new geospatial data must use the CSDGM to describe that data and must make the metadata accessible to the National Geospatial Data Clearinghouse," which provides federated searching of metadata repositories." (Caplan, 2003)

According to the CSDGM, this metadata is intended to serve four functions:

1. To determine that data exist for a geographic location
2. To help ascertain if the data meet a specific need (fitness for use)
3. To allow the user to acquire an identified set of data
4. To facilitate processing and use of a dataset (ibid.)

There are a number of practical applications of these principles. In the animal kingdom, this could relate to altered migration patterns of an animal species over the course of years; meteorological measurements can be kept during seasons of extreme weather to make predictions for safety planning, and to maintain accurate measurements of receding glaciers.

Today, most biologists use the Biological Data Profile metadata standard. It is commonly known at the NBII (National Biological Information Infrastructure) biological metadata standard.

The NBII is a collaborative program between federal, state, international, non-military organizations, civilian, academic, and private industry to increase access to biological information resources. Their website is located at www.nbii.gov and offers resources for any interested in learning more about Earth and its inhabitants.

Not surprising, the Biological Data Profile metadata standard was created by the Biological Data Working Group of the FGDC and the Biological Resources Division of the

United States Geological Survey (USGS). Mention of the USGS reminds me that there must be a huge amount of information that is shared worldwide with regard to seismic activity!

The Biological Data Profile expounds on the CSDGM standard as it:

1. Includes extensive taxonomy information
2. Offers an Analytical Tool to the Identification Information section that includes a biocomplexity thesaurus, chronological and topical displays of conferences, access to the Natural Resources Monitoring Partnership (which is open to everyone), information on various metadata standards including Darwin Core and Dublin Core, a section on Geospatial Interoperability Framework, a list of NBII partners, and a NBII publications library.
3. Includes a data Quality information section that includes the methodology used to collect the data.

The Natural Resources Monitoring Partnership can be found at: [Natural Resources Monitoring Program](#)

Conclusion

It is gratifying to see that there are so many organizations devoted to the proliferation of the Earth's flora and fauna. It was uplifting to see so many groups devoted to the sharing of scientific information for the sole purpose of preserving both the information—and the species.

Like the Salmis Stone at the Parthenon, biodiversity metadata are the common standards that are in use today—not to build a temple—but to build an ever-growing knowledge base for ensuring the lasting beauty of our Earth and its inhabitants.

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Stress and Frustration in the Use of ICT in University Libraries: A Study of Selected Universities in Nigeria

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Introduction

Information and Communication Technologies (ICT) are used for creating, storing, managing, and communicating information. ICT can be used in education to support constructivist teaching methods such as collaborative learning. Despite the usefulness of ICT, users may encounter stress and frustration while using them. Stress and frustration occur when there is a negative impact on physical and mental wellbeing. That can result from the inability to access needed information on the net, work overload, and unrealistic deadlines. University libraries use ICT with the goal of transformation of the library and the university with the power of these new technologies. This transformation may be inhibited by undue stress and frustration. This study therefore examined factors that cause stress and frustration in the use of ICT facilities in Nigerian university libraries.

Conducting research is one of the core elements of university education. The application ICT in support of research, teaching, and learning is obviously essential. Many users encounter stress and frustration in using these technologies in Nigerian university libraries. With few exceptions, university libraries in Nigeria are poorly funded, and many are unable to meet the basic requirement services for academic growth. Their record of income generation has been poor. Indeed, most university libraries have to rely on some measure of external assistance to remain functional as centers of knowledge. The Education Trust Fund (ETF) has been serving this purpose. It should be noted, however, that use of ICT raises operating costs of institutions, even as they improve their efficiency and effectiveness.

Literature Review

Dunham (2004) describes stress as "a physiological state of the individual which is influenced by a wide variety of environmental factors known as stresses." Levels of stress and frustration affect individuals differently. McGrath (2001) sees stress as "a (perceived) substantial imbalance between demand and response capability, under conditions where failure to meet demand has important (perceived) consequences." Lander and Trumber (1993) list stressors in the workplace: job insecurity, excessive competitive, hazardous working conditions, and task demands, long or unusual working hours.

Gross (1999) has three broad classes of workplace stress: career, task, and organizational. Payne and Purgh (2004) assert that stress and frustration are subjective and individual. Bridger (2007) sees stress and frustration as phenomena that must be managed.

Moursund (2005) discusses ICT as tools for innovation, productivity, and enrichment, and as crucial to the field of education. Ajani and Banwo, (2007) citing Juceviciene and Tautkeviciene (2003) discuss the use of ICT to create a virtual learning environment.

Ajayi (2000) citing an Association of African Universities (AAU) survey (1988) found that university libraries in Nigeria are struggling to emerge from lack of funds. Research has been substantially reduced. There is a lack of up-to-date equipment and Internet connectivity. Growth of the Internet has been limited by low levels of telephone connectivity, and the bandwidth serving universities is also limited.

Objectives of the Study

The study sets out to:

1. Examine stress and frustration experience by users in the use of ICT facilities,
2. Ascertain the reasons for the stress and frustration faced by users

Research Questions

The following questions were raised to guide the study:

- What are the external factors causing stress and frustration of ICT users in the Nigerian university libraries;
- What are internal obstacles responsible for stress and frustration of users when utilizing ICT facilities in the Nigerian university libraries;
- What are the human resources and other related obstacles faced by users in the Nigerian university libraries?

Methodology

The study employed a descriptive survey research design, and used a questionnaire for data collection. The total population for this study was 570, with 300 respondents randomly selected from three universities in the southwest Nigeria: University of Ibadan, Ibadan (UI), University of Agriculture, Abeokuta (UNAAB), and Olabisi Onabanjo University, Ago-Iwoye.(OOU) These universities were chosen because UI is a first generation university in Nigeria, UNAAB is third generation and an agricultural university, OOU was the first state

university in Nigeria. Respondents included academic staff and non-teaching staff. The questionnaire had four sections. Section A sought background information, section B had external factors, section C had internal obstacles, and section D had human resources-related factors. Three hundred questionnaires were administered out of which 283 (94.3%) were completed and found usable. The data collected for the study were analyzed using percentages and chi-square at 0.05 alpha levels.

Results and Discussion

Table 1: ICT Literacy Skills of Respondents

ICT literacy Level	Frequency	%
Very Good	60	21.2%
Good	162	57.2%
Average	61	21.6%
Total	283	100%

A large majority of respondents are highly skilled in the use of ICT. This indicates that lack of adequate skills are probably not one of the causes for stress and frustration faced by users.

Table 2: Purpose of ICT use by respondents

Purpose	Frequency	Percentage %
teaching	128	45.2%
research	226	79.9%
word processing	274	96.8%
Internet	144	50.9%
discussion group	60	21.2%
video conference	101	35.7%
electronic mail	245	86.6%
e-publishing	101	35.7%
typing	176	62.2%
online catalogue	78	27.6%

A majority of respondents use ICT facilities mainly for word processing, email, research, and generally browsing.

Table 3: External factors that make users of ICT Facilities experience stress and frustration are lack of enabling environment, poor power supply, limited bandwidth and frequent server breakdown.

Calculated Chi-Square Value	Critical Chi-Square Value	Degree of Freedom	Level of Significance
18.15	7.82	3	0.05

Table 3 shows responses to questions on external factors responsible for stress and frustration in the use of ICT facilities. The calculated value is higher than the critical value for 3 degree of freedom at 0.05 level of significance. This indicates that the majority of respondents felt that external factors contributed most to the stress and frustration they experience. These external factors are lack of enabling environment, poor power supply, limited bandwidth and frequent server breakdown.

Table 4: Internal factors responsible for stress and frustration while using ICT Facilities are poor maintenance, inadequate local area network, low level priority by management and lack of ICT policies.

Critical chi-Square Value	Calculated chi-Square Value	Degree of Freedom	Level of Significance
16.42	7.82	3	0.05

Table 4 shows responses to questions on internal factors responsible for stress and frustration. Since the calculated value is higher than the critical value, a majority of respondents agreed that internal factors are partly responsible for the stress and frustration.

Table 5: Human Factors responsible for stress and frustration while using ICT Facilities are inadequate training program, lack of trained technical and support staff and inadequate human resources.

Critical chi-Square Value	Calculated chi-Square Value	Degree of Freedom	Level of Significance
14.75	7.82	3	0.05

Table 5 reveals that a majority of respondents concluded feel that human resources factors affect the use of ICT facilities and contribute to frustration and stress experience.

Table 6: Other contributory obstacles to stress and frustration in the use of ICT facilities

Contributory Obstacles	Frequency	%
Boredom	38	13.4%
Lack of space	20	7.1%
Limited service	27	9.5%
Non-availability of computer system	9	3.2%

Other contributory obstacles include boredom, lack of space, limited service, and non-availability of computers.

Conclusion and Recommendations

This study shows that stress and frustration in the use of ICT in Nigerian university libraries have internal, external, and human factors. These include lack of enabling environment, poor and unreliable maintenance of ICT facilities, an unreliable electricity supply, high Internet fees, and unavailability of trained technical and support staff. The installation of functional ICT facilities in the library would create simultaneous access for many users, and give library users self service to replace the unreliable service that have led to stress and frustration. Any university library without functional ICT connectivity will eventually become obsolete.

The study recommends that:

- University administration should provide an enabling environment for users to enjoy the use of ICT facilities in the libraries. This may reduce stress and frustration encountered by the users.
- Institutions must provide alternative sources of power, e.g., solar energy, generator, or inverter and batteries, which will prevent frequent server breakdowns and improve access.
- There is the need for adequate training programs for staff to enable them render adequate and effective services to users. This will reduce stress and frustration faced by library users.
- University administration should provide financial and technical assistance, especially in the areas of increasing bandwidth, sufficient computer units, and maintenance of the facilities.

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Undergraduate Self-Concept and Use of Information: A Correlative Study

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Introduction

Information is critical for effective social functioning. Useful, relevant, and timely information is crucial to purposeful living and survival. Information is required for our day-to-day activities and information sources have multiplied. Undergraduates need information for their daily functioning as students. The extent to which relevant information is available and accessible to students helps determine their academic success. Academic achievement of students is contingent upon several psychological variables, one of which is self-concept. Self-concept has been used to explain behaviours in an array of situations, and having a positive self-concept is a desirable goal (Marsh, 1988).

There have been several attempts by psychologists to define "self-concept". There is a general agreement that the construct is composed of relatively permanent elements such as personality, attributes, skills, abilities, occupations, hobbies, and physical attributes ("Self-concept," 2009).

Undergraduates' self-concept could affect their information use and academic achievement. Effective information use could be a product of their self-assessment or self-concept. Gender differences are of interest in this study. Gender can help explain differences among undergraduates and their use of information.

Few studies in Nigeria have investigated use of information by undergraduates as a product of their self-concept; hence, the need for this study which examines Library and Information Science (LIS) undergraduates in Tai Solarin University of Education (TASUED), Nigeria.

Statement of the Problem

In recent years, the level and frequency of information use by Nigerian undergraduates may have been declining, judging from reports from university libraries in Nigeria. This study therefore investigates self-concept as a correlate of use of information sources by LIS undergraduates in Tai Solarin University of Education, Nigeria.

Research Questions

The following research questions are raised to guide this study.

- What is the level of self-concept among LIS undergraduates in TASUED?
- What is the level of information source use by LIS undergraduates in TASUED?

Hypotheses

The hypotheses formulated for the study are listed below. They were tested at 0.05 level of significance.

Ho1 This is no significant relationship between self-concept and information sources use among LIS undergraduates in TASUED.

Ho2 There is no significant gender difference in the self-concept of LIS undergraduates in TASUED.

Ho3 There is no significant gender difference in the information use of LIS undergraduates in TASUED.

Literature Review

Self-concept refers to the global understanding that a sentient being has about him or herself (Fleming & Courtney, 1984). It is composed of relatively permanent self-assessments such as personality attributes, knowledge of one's skills and abilities, one's occupations, hobbies and awareness of one's physical attributes (Wikipedia, 2009). Most definitions of the self-concept variable link the construct to achievement (Shavelson, Hubner & Staton, 1976). It is important to note that self-concept is not restricted to the present. It includes "past selves" and "future selves". Future selves or possible selves represent individuals' ideas of what they might become. Possible selves may function as incentives for future behaviour and they also provide an evaluative and interpretative context for current view of self (Markus & Nurius, 1986).

Self-concept of people across different life endeavours has been found to impact on behaviours; one of such is information use. Information use or information sources use is an important variable in information user research. Essentially, information is conceived as a resource, especially as problem solver in development context (Meyer, 2005). The extent to

which people are able to utilize information from various sources will determine the usefulness of information as a developmental resource (Meyer, 2005).

Despite the prevalent thinking that human information behaviour consists of not only information seeking, but also of information use; a deeper concern for understanding usage aspect of human information practices is a relatively new one (Spink & Cole, 2006). In effect, information source use is therefore a critical component of human interaction with information.

Most self-concept studies have examined correlation between self-concept and a measure of other construct. In the case of this study, it is information source use. Purkey (1970) found a positive relationship between self-concept and academic achievement while Marsh (1988) reported that self-concept declined from early adolescent and then increases from middle adolescence through early adulthood.

A study on self-concept, self-esteem, gender, race and information use (Jackson et al, 2009) found that information technology use predicted dimensions of self-concept and that internet use as a source of information had positive influence on self-concept dimensions.

Undergraduate information use studies have shown that students are frequent information sources user (Hoglund & Thorsteinsdottir, 1996); although there are large differences in how students of different disciplines use library and information services. Studies which include Fidzani (1998), Foster (2004), Steinerova & Susol (2005) have investigated the information use by undergraduates from different disciplines.

Ankem (2006), studied the use of information sources by cancer patients and found that health care professionals, medical pamphlets, family and friends were the most used sources of information; internet and support group were least used. Edem (1993) investigated information use of Nigerian Journalists, Popoola (1996), studied civil servants while Mabawonku (2004) probed the information use of artisans. These studies espouse the information seeking and use behaviour of specific user groups.

Research Methodology

The study is a survey based on ex-post facto type. The independent variable cannot be manipulated or directly controlled. The study population consisted of LIS undergraduates of Tai Solarin University of Education, Ijebu-Ode. The study was conducted when the students were in the latter stage of their first and second year of a four year Bachelor of Library and Information Science programme. The students' population is one hundred and eight (108). Total enumeration technique was used such that all the students participated in the study. A questionnaire tagged Self-concept and Information Use Questionnaire (SCIUQ) was directly administered to all the students. The instrument have two sections A & B. Section A elicited respondents bio-data while section B had items which collected information on the undergraduates self-concept and information sources use. This section was structured on a four point likert type rating scale.

The instrument was examined by Librarians and Psychologist for face and context validity while reliability was achieved through a pilot study involving selected students from other departments within the University. Cronbach alpha test on the scales revealed co-efficient values of ($\alpha = 0.78$) for the scale on self-concept and ($\alpha = 0.72$) for the scale on information sources use. They were all retrieved, however five (5) of the retrieved

questionnaire was not usable due to several omissions and mutilations. One hundred and three (103) questionnaire was used for the study, representing 93% response rate.

Results

The study revealed that 30 (29%) of the study participants were male while 73 (71%) were females. Those within the age bracket of 21-24 years were 60%; 78% were 24 years and below.

Research question 1

What is the level of self-concept among Library and Information Science undergraduates in Tai Solarin University of Education?

The items measuring self-concept of Library and Information Science undergraduates in Tai Solarin University of Education showed high mean scores and this is an indication that the self-concept of the respondent is high. The highest mean score being ($\bar{X} = 4.57$; $SD = 0.68$) and the least is ($\bar{X} = 2.80$; $SD = 1.32$). The cumulative mean score is ($\bar{X} = 41.71$; $SD = 10.76$).

Table 1. Rank order of self-concept measures of Library and information science undergraduates in Tai Solarin University of Education.

Rank	Items	\bar{X}	SD
1.	I am confident that I can pass my examinations	4.57	0.68
2.	I am a submissive person	4.41	0.68
3.	I am reliable and dependable	4.12	0.89
4.	I am proud of my life achievements	4.13	1.03
5.	I can face any difficulty in life	4.03	0.83
6.	I have positive social interaction with others	3.96	0.92
7.	Sometimes, I allow people to do what I cannot really do	3.84	1.11
8.	I feel that I am a person of worth, at least on equal basis with others	3.73	1.32
9.	I always agree with mates on all issue	3.21	0.91
10.	I am self centred	2.91	1.07
11.	It is not worth living in a world full of unfaithful people	2.80	1.32

$n = 103$ ($\bar{X} = 41.71$; $SD = 10.76$)

Research Question 2

What is the level of information sources use by Library and Information Science undergraduates in Tai Solarin University of Education?

The study showed that there is high level of information use through Radio/Television (\bar{X} , Friends, Colleagues and Relatives ($\bar{X} = 4.40$; $SD = 0.94$), Churches and Mosques ($\bar{X} = 4.37$; $SD = 0.96$) Libraries ($\bar{X} = 4.23$; $SD = 1.00$), Lectures, Seminar and Workshops ($\bar{X} = 4.00$; $SD = 1.21$) Textbooks and Monographs ($\bar{X} = 3.96$; $SD = 1.31$);

Newspaper and Magazines (\bar{x} = 3.93; SD = 0.97), Posters (\bar{x} = 3.90; SD = 1.31) Bulletins/handbills (\bar{x} = 3.74; SD = 1.08), Internet (\bar{x} = 3.67; SD = 1.20) and others. Low levels of information use is recorded for Databases (\bar{x} = 2.67; SD = 1.31), Film shows (\bar{x} = 2.58; SD = 1.42); Government publications (\bar{x} = 2.57; SD = 1.26); Non-governmental organizations (\bar{x} = 2.53; SD = 1.34) and University counselor (\bar{x} = 2.08; SD = 1.23).

Table 2. Rank order of level of information sources use by Library and Information Science undergraduates in Tai Solarin University of Education.

Rank	Information Sources	\bar{x}	SD
1.	Radio/Television	4.67	0.85
2.	Friends, Colleagues, Relations	4.40	0.94
3.	Churches, Mosques	4.37	0.96
4.	Libraries	4.23	1.00
5.	Lectures, Seminars and Workshops	4.00	1.21
6.	Textbooks and Monographs	3.96	1.31
7.	Newspaper and Magazines	3.93	0.97
8.	Poster	3.90	1.31
9.	Bulletin/handbills	3.74	1.08
10.	Internet	3.67	1.20
11.	Billboards	3.64	1.44
12.	Information centres	3.52	1.22
13.	Journals	3.15	1.20
14.	Campus social groups/organization	3.08	1.31
15.	Brochures/Leaflets	3.06	1.16
16.	Databases	2.67	1.31
17.	Film shows	2.58	1.47
18.	Government Publications	2.57	1.29
19.	Non-government organizations (NGOs)	2.53	1.34
20.	University Counsellor	2.08	1.23

n = 103

Test of hypotheses

Hypothesis 1: There is no significant relationship between self-concept and information sources use among LIS undergraduates in Tai Solarin University of Education.

The result shows a correlation co-efficient value $r = 0.055$; $P > 0.05$. This validated the hypothesis that there is no significant relationship between self concept and information sources use among LIS undergraduates in Tai Solarin University of Education.

Table 3. Relationship between Self-concept and Information use among LIS undergraduates in Tai Solarin University of Education.

Variables	N	\bar{X}	SD	r	Sig.	Remark
Self concept	103	37.582	3.81			
Information use	103	74.233	10.91	.055	.579	N.S

Significant at 0.05 level

Decision: Not significant

Hypothesis 2: There is no significant gender difference in the self-concept of LIS undergraduates in Tai Solarin University of Education.

The result of the study show a t-test value $t = -1.051$ df is 101, and a significant value of 0.295 at 0.05 level ($t = -1.051$; $df = 101$; $P > 0.05$). The hypothesis is therefore validated.

Table 4. T-test comparison of the self-concept of LIS undergraduates in Tai Solarin University of Education based on gender.

Variables	N	\bar{X}	SD	df	t	Sig.	Rmk
Male	30	36.96	3.45				
Female	73	37.83	3.94	01	1.051	.296	.S

Significant at 0.05 level

Decision: Not significant

Hypothesis 3: There is no significant gender difference in the information use of LIS undergraduates in Tai Solarin University of Education.

The result show a t-test value $t = 3.012$, df is 101, and a significant value of 0.003 at 0.05 level ($t = 3.012$; $df = 101$; $P < 0.05$). The hypothesis is therefore in validated. Male respondents had higher level of information use ($\bar{X}=79.10$) than the females ($\bar{X}= 72.23$).

T-test comparison of Information sources use of LIS undergraduates in Tai Solarin University of Education based on gender.

Variables	N	\bar{X}	SD	df	t	Sig.	Rmk
Male	30	79.10	8.40				
Female	70	72.23	11.25	01	.012	.003	

Significant at 0.05 level

Decision: Significant

Discussion

Majority of LIS undergraduates in the study are females; an indication of the growing population of the female gender in Library and Information Science profession in Nigeria. The study revealed that undergraduates in Tai Solarin University of Education have high level of self-concept. This suggests that the students' self assessment in terms of their personality, attributes, knowledge and abilities is positive. They are positive about their general personality and ability to succeed as undergraduates.

High level of information sources use by the students was recorded for Radio/Television, Friends, Colleagues and relations; Churches and Mosques, Libraries, Lectures, Seminars and Workshops, Textbooks and Monographs, Newspapers and Magazines, Posters, Bulleting/Handbills, Internet, Journals, Information Centres and others. There was low level of information sources use recorded for Databases, Film shows, NGOs and the University counselor. One would have expected the students to exhibit high level of information use via these sources. Though the undergraduates had taken advantage of the several other sources of information available to them adequately. One could also explain that the students' level of information use is a function of their being Library and Information Science undergraduates and they are therefore exposed to the reality of these sources of information. The study found no significant relationship between Self-concept and Information sources use of the undergraduates. The student's high level self-concept did not positively contribute to information use. The study corroborates Adetoro, Simisaye and Oyetuga (2010). Though the undergraduates' level of self-concept is high, their information sources use did not lend support. The fact that there was low level of information use via some credible information sources may explain why their information use did not lend support to their self-concept.

There is no significant gender difference in the self-concept of the undergraduates. The study found that gender was not a factor with regards to the respondents' level of self-concept. This suggests that both gender had high self-assessment with regards to their personality, attributes, skills, abilities and potentialities. There is a significant gender difference in the information use of the undergraduates. The male respondents had higher level of information sources use than their female counterpart. This suggests that the male undergraduates were more sophisticated information users than their female colleagues; they have a better understanding of the various information sources available for use and they could also make use of these sources better than the female undergraduates.

Conclusion and Recommendations

Library and Information science undergraduates in Tai Solarin University of Education have exhibited a commendable level of self-concept and information use via an array of information sources. However, some information sources recorded low level of use. The consequence of the foregoing was that self-concept of the undergraduates had no significant relationship with their level of information sources use. Invariably, it can be deduced that information use is not always a function of intrinsic factors such as self-concept. Male Library and Information science undergraduates in Tai Solarin University of Education were better information users via variety of sources though self assessment levels are the same for both genders. This study have shown that high level of self-concept or positive self-assessment may not necessarily guaranteed positive outcomes such as adequate information use via all the credible information sources available.

The study therefore recommends that the university should further strengthen its advocacy mechanism for positive students' activities so as to be able to sustain their level of self-concept. The University and indeed the Library and information science department of Tai Solarin University of Education should widen the knowledge of the students; introducing them to various information sources available and emphasizing the need to increase their use of information via databases, government publications, NGOs, Counseling and other reliable sources.

The University should also put up an information use training programme in collaboration with the university library to educate the students and expose them to relevant and reliable information sources and how information could be better accessed from these sources.

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Extended Hours in Academic Libraries: A Case Study of the University of Ilorin

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Introduction

The University of Ilorin is located in the ancient city of Ilorin and was established by decree of the Federal Military Government of Nigeria in August, 1975, to implement one of the educational directives of the country. The Third National Development Plan aimed at providing more opportunities for Nigerians aspiring to university education and to generate a trained workforce, which is vital for the rapid expanding economy. The library was established in May 1976.

The desire for extended hours of library service at the University of Ilorin began with the move of the Faculty of Arts and Faculty of Business and Social Sciences from a temporary site ("mini-campus") to the permanent site (main campus) and the resulting increase in the number of courses that led to the increase in the number of students. This put considerable pressure on existing library facilities and services. Study space was in short supply and there was high staff turnover. Library services were in high demand which could not be met.

Serious economic problems have forced many institutions of higher learning to prune their services. At the University of Ilorin, the reverse appears to be the case. There has been a gradual expansion of services and facilities. Twenty-four hour services have been introduced and a digital workshop is being set up to digitize resources to create a huge and searchable database that will support administrative and academic work in the university. The demand for information is increasing, so University of Ilorin library cannot afford to close its doors to user expectations, especially before and during examination periods.

During the examination period of the 2008/2009 academic session, the library was open 24 hours a day for five weeks. Library users were very happy about this. The 24-hour service included weekends and public holidays, provided students were on campus. The library was motivated to do this as a result of student agitation for extended hours of readings and the need to add value to the services provided in the library.

Even in the developed world, most university libraries do not have 24-hour service for such an extended period. Some libraries provide this service for a week or two, while some do not offer 24-hour service. Anderson, Petros, Beckwith, Mitchell, and Fritz (1991) found that evening is a better time of day for retaining information from reading or studying. Student use of the University of Ilorin Library's 24-hour service was far greater than their user of the library during the morning and afternoon during the semester. Extended hours are good for students and helped them to prepare adequately for their examinations. The aim of the research is to find and assess the opinions of students on the extended library hours.

In Nigerian universities, lectures are held until the day before examinations begin. In the past, the University of Ilorin Library opened at 5:00 p.m. and closed at 10:00 p.m. on the Sundays that preceded examinations. The complaints of students when they had to leave the library at closing time when examinations are approaching necessitated extended hours. The seriousness of the student concerns about their academic performance made this investigation worthwhile.

Objectives of the Study

The objectives of this study include:

- 1) To determine the correlation between extended hours of library service and student performance.
- 2) To determine whether service delivery meets user expectations.
- 3) To suggest alternatives for library hours to administrators.

Literature Review

There is a variety of research on hours of library service. Curry (2002) focuses on user opinions as the most effective way of investigating the phenomenon. The Fillet report (Joint Funding Council's Library Review Group, 1993) recommends that university libraries consider longer hours make better use of limited space. This may seem surprising, considering Lancaster's (1982) prediction that information technology would reduce the need for the physical library. Technological advances have made library resources available remotely, but that increased access to the physical library is still in high demand. Delaney (2002) states that "with 24 x 7 accesses to electronic resources comes an expectation of similar access to print resources." The use of online databases with unlimited use do not have the same impact on library services (Aremu and Saka 2006).

"Shift culture" is significant in the provision of library services. Jamal (1989) asserts that "missed weekends, social gatherings, working evenings: it is all just another day in the life of a shift employee." Getting adequate sleep is essential for high performance and students with irregular sleep schedules had daytime sleepiness (Manber, et al., 1996).. Such sleep-wake patterns are usually accompanied by decreased motivation, performance, concentration, and attention, as well as increased fatigue and somnolence (DCSC, 1990). It is reasonable to suppose that university students who develop such sleep patterns may have poor academic performances. Studies on this topic include Carskadm and Davis (1989), Lack, 1986, Medeiros, et al. (2001), Hicks and Pellegrino (1991), Gomes (2002), and Gray and Watson (2002).

London (2010) explores extended hours for public libraries. Wavelength (2005), a publication of California State University, Channel Islands, stated that "the University library will be open continuously from 10 a.m. on Sunday December 12, until midnight on Thursday, December 16, for final exams. The library offered activities such as "slipper and bathrobe contest."

Argosy University (2010) library adjusts its hours to accommodate student needs; if there are no classes on campus the hours are reduced. Kyle library (2008) describes a program of extended hours. McCarthy (2001) reveals that the library has developed a

flexible learning environment serving both on-campus and external students. User surveys were used to gauge student satisfaction.

In Africa, some universities have extended library hours. In Ghana, one institution has students who make monthly visits. During that time, the library has extended hours (Lawoe 2005). University of Capetown has also extended its library hours. Extended hours of library services may be a novel idea in Nigeria but they are not new in many parts of the world, as illustrated by the University of Western Cape in South Africa (Darch, 1995). Some libraries in Nigeria have started provided extended hours of library service in recent years. Olorunshola and Awolola (2001) revealed that shift work had made it impossible for staff on extended hours duty to attend social events, take care of family issues and had difficulties in getting home after work.

Justification for Extended Hours

In Europe, some universities have extended hours while others are planning to implement them. In the US, a number of universities have extended library hours, including 24-hour service. They include the University of Oregon, the University of Arizona, and the University of Kentucky. In Nigeria, the University of Lagos started extended hours in 1995, but when it became apparent that the program was been hijacked by cultists, it was suspended. Ladoke Akintola University of Technology (a state university) Ogbomoso, Oyo State, began a program of extended hours in 2005. The University of Agriculture, Abeokuta and University of Calabar started extended library hours in 1989 and 1999 respectively. Unfortunately, some students abused the facilities by turning them into meeting points for cults and other anti-social activities. Some students who could not be accommodated in the hostels used the library as a hostel. These problems led the library administration to cancel the extended hours. The University of Ilorin has increased enrollment significantly without a corresponding increase in library space, facilities, and reading materials. This calls for extended hours of reading so that all students can be accommodated.

Methodology

This study adopts a survey research design using a pure qualitative approach. The methodology for uses qualitative data collected with a questionnaire and observation. The target population of the study was 850 students who registered in the library at the time of the research. All were taken as sample for the study. Of the 850 copies of the questionnaire distributed, 660 were returned, which represents a 77.65 percent return rate. Two library assistants did the distribution and collection of the questionnaires. The questionnaire was divided into two sections: demographic characteristics and 15 items which are arranged based on the objectives of the study. Data was analyzed using percentages and frequency. The study was carried out from November to February, 2009-2010.

Data Analysis and Results

Table 1. Demographic characteristics of respondents

Gender	Frequency	Percentage%
Male	402	60.9%
Female	258	39.1%
Total	660	100%
Level		
100	81	12.2%
200	180	27.3%
300	174	26.4%
400	156	23.61%
500	69	10.5%
Total	660	100%
Age		
15-20	225	34.1%
21-25	348	52.7%
26-30	27	4.1%
31-35	48	7.3%
36 and above	12	1.8%
Total	660	100%

Source: Field Survey 2009.

About three-fifths of respondents were male and the rest female. There are more male students than female enrolled in the university. The vast majority are between 15 and 25 years old, and the levels 100 through 500 are more evenly represented, although the data tends to suggest that the lower and higher level of University of Ilorin students do not patronize the library during these extended hours. With regard to 500 level students, it was observed that most of them used the period to write their projects since they have fewer courses than other levels.

Research objective 1: To determine the correlations between extended hours and perceived student performance.

Table 2:

s/no.	Items	Agree	S/Agree	Disagree	S/Disagree	Total no. of Students
1	Extended hours of reading have not brought about improvement in my academic performance.	42(6.4%)	33(5.0%)	219(33.2%)	366(55.5%)	660(100)
6	I come to library to read for the forthcoming examinations.	126(19.1%)	312(47.3%)	150(22.7%)	72(10.9%)	660(100)
10	Added hours have brought improvement in my academic performance.	180(27.3%)	261(39.5%)	24(3.6%)	195(29.5%)	660(100)

Source: Field Survey 2009

Nearly 90 percent of students agreed that extended hours had improved their academic performance. Two-thirds said they came to the library to study for examinations.

Research objective 2. To determine whether service delivery meet user expectations.

Table 3:

s/no.	Items	Agree	S/Agree	Disagree	S/Disagree	Total no. of students
3	I come to library to write up my notes.	195(29.5%)	78(11.8%)	174(26.4%)	213(32.3%)	660(100)
7	I got disturbed with calls from people sitting beside me.	204(30.9%)	162(24.5%)	183(27.7%)	111(16.8%)	660(100)
15	The library is my only study environment.	138(20.9%)	204(30.9%)	246(37.3%)	72(10.9%)	660(100)

Source: Field Survey 2009

Students were fairly evenly divided on these questions. A large number come to the library to write up their lecture notes. Many are disturbed the others' phone calls. The library is the only place that many students go to study, but by no means all of them.

Research objective 3. To Suggest alternative hours of library use to the management.

Table 4:

s/no	Item	Agreed	S/Agreed	Disagreed	S/Disagreed	Total no. of students
2	Extended hours are not a good time for me to study	234(35.5%)	129(19.5%)	117(17.7%)	180(27.3%)	660(100)
4	Reading in those hours affects my sleeping habits	225(34.1%)	84(12.7%)	177(26.8%)	174(26.4%)	660(100)
5	I used the period to make phone calls, since it is call free hours	132(20.0%)	63(9.5%)	135(20.5%)	330(50.0%)	660(100)
8	Sleep and then wake up is my habit during those hours	114(17.3%)	177(26.8%)	174(26.4%)	195(29.5%)	660(100)
9	Those hours are not conducive for my reading	192(29.1%)	318(48.2%)	102(15.5%)	48(7.3%)	660(100)
11	It is good to stay all night studying in the library	261(39.5%)	141(21.4%)	177(26.8%)	81(12.3%)	660(100)
12	If the sleep circle is reduced by two hours much of what was read earlier that night might be lost	168(25.5%)	120(18.2)	174(26.4%)	198(30.0%)	660(100)
13	Reading all night is not good for my health and my grade.	105(15.9%)	219(33.2%)	150(22.7%)	186(28.2%)	660(100)
14	There are not enough hours in the day to get things done, thus, the need for the wee hours of the morning	135(20.5%)	141(21.4%)	171(25.9%)	213(32.3%)	660(100)

Source: Field Survey 2010

More than half of respondents agreed that added hours were a difficult period for them to study, because most of them go to sleep before midnight. About 40 percent agreed that the extended hours affected their sleeping habits. An inspired guess may be that they are use to go to bed early, 351 (53.2%) disagreed and strongly disagreed. Although 12:30 a.m. is when free phone call from many network service providers in Nigeria begin, most students do not stay up for this reason.

To summarize the tables discussed above, it was evident that the objectives of the study were met. Table 1 examined the correlation between hours and perceived students' performance. More than 88 percent of the respondents perceived that extended hours of library service had made a great impact in their academic performance. In determining whether service delivery met users' expectations, it is clear that more than half of respondents believed that the library provided a conducive environment for learning. It was also evident that most students did not like the idea of extended hours, but since lectures do not stop until a day before examinations, they were forced to make use of these hours, although more than three-quarters were of the view that studying in those hours, especially at night, could be bad for their health.

Abuses of the Exercise

Most students behaved well when supervised during the exercise, although there were some problems. There were some reports of thefts, including mobile phones, note books, jotters, and textbooks belonging to the library. There was some of removal and rearrangement of library furniture, especially chairs, which created problems for library staff in the morning. Another major abuse of the program was that off campus students, who could not return home to sleep, slept on the readily-arranged chairs in the library. Many

library chairs were damaged in the process. The staff had to contend with a lot of food and drink being brought in, and electric fans and lighting were overtaxed, the result of which is overheating of the wiring system. There was the threat of the library inadvertently providing a breeding ground for cult activities in the late night hours. Agboola (2001) discusses the problems of cult activities on Nigerian university campuses.

Conclusion

The study suggests that the University of Ilorin Library should consider alternative hours that may not necessarily extend past midnight, because of the adverse effects on students who may not be used to it. The library could open from 10:00 a.m. to 8:00 p.m. on Saturdays and Sundays, for example. That would extend hours far beyond their present number over the course of a year. The library was also deemed the best place to study on campus, but effort should be made to provide air conditionals to make readings more comfortable.

Recommendations

While extended library hours are popular with students, the effect of these late hours on students' sleep cycles must be considered. Reading all night in the library may not be the best for better grades. Adequate rest may produce better performance. There is a need to ensure a constant supply of electricity to the library at night. If the electricity supply is interrupted, users will be tempted to bring flammable materials such as lanterns, candles, and matches into the library, which, if carelessly handled, might result in fire outbreaks. Extended hours of library service have an impact on the work schedules of staff. The dwindling staff positions at the University of Ilorin makes it hard to extend the hours. Cleaning, shelving, supervision, assistance to readers, acquisition, cataloguing and classification, and all other library activities became huge challenges during this period. More research should be conducted in this area to add to the available literature.

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Censorship: An Exploration of Issues, Problems, and Resolutions

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Introduction

During my senior year of high school, the state of Wyoming passed a law requiring everyone to wear seatbelts while in a moving vehicle. Having my life saved at the age of fourteen by a seatbelt caused me to latch on to this law and consider it an appropriate move by the state. My English teacher, however, was very opposed to the law. For her, it was not the fact that seatbelts were good or bad; it was the idea of having someone tell her she was required by law to wear it that upset her. I thought her attitude was ridiculous at the time, but recently have been leaning a little more towards the views she had. I believe that seatbelts should be worn at all times because of the protection they bring us in case of an accident, but I question what right the government has to tell us to do so. There are laws that are in place to protect others around us-speed limits specifically-but a seatbelt law only seems to protect the person wearing the seatbelt. Whether they wear it or not does not have an effect on others, at least in the physical sense. Not wearing a seatbelt will not endanger another driver on the road or cause someone else to have an accident. It seems logical that to wear a seatbelt or not should be a personal choice. Part of me cringes to say that though. I think about children-should they have a choice in the matter? Or parents-should they be required to set the example for their children? Are people smart enough to make that choice or is it something that should be a law? In reality, this issue is relatively unimportant to me, but there is an issue that is very similar to a seatbelt law and much more controversial. Instead of being in place to protect a person's physical well being, it is brought up as a way to protect people's minds. This issue is censorship.

Censorship has been something I have believed in for most of my life. I grew up in a very conservative household and continue to prescribe to many of the beliefs I grew up with. Censorship however is a big issue that I cannot quite wrap my head around. I struggle with saying that thoughts and ideas should be censored, but also struggle with the idea of not having censorship at all. Part of my struggle is just an overall doubt in the ability of the general public to make ethical choices. I think upon people wanting to inflict harm on others and finding out how to do so; I think upon the children I see in the schools who are being brought up without scruples because of the example their parents set; I think upon racist slurs and hateful words. As I consider the many different words and images that I do not want to see it pushes me towards promoting censorship. But are not those issues a result of my own personal ethics? Is it my job to "protect people's minds" from the filth that is out there? Could something that I define as filth be someone else's art? Do we need some of those opposing opinions to help us solidify our own morals and beliefs or

should we all be encouraged to think the same way without the chance to explore what else is out there?

I would like to explore the issue of censorship. At this time I am stuck in the middle, running back and forth between the views I grew up with and the views I am considering. This will be an exercise in exploration as I present the thoughts I have about censorship and consider the American Library Association's position on the issue.

Freedom of Speech

The American Library Association (ALA) considers the issue of censorship to be an issue of free speech, and that promoting censorship is infringing on the Bill of Rights. They state that "*free communication is essential to the preservation of a free society and a creative culture.*" (ALA Council) This claim attributes to a purpose far deeper than just continuing education. This purpose pushes to provide a place where free speech is preserved. They do not limit the catalog of books to only those that ascribe to their set of values and views, but instead aim to give the public the resources they need to make decisions based on a variety of sources. Personal views or beliefs are not taken into account when choosing to put books into the public library. Instead, they are placed there so that free speech is preserved and everyone has access to information whether it supports their own personal views or not. They are trying to protect free-speech.

Does free-speech include hate speech, terroristic methodologies, or pornography? A quick answer is yes. As the First Amendment to the Constitution states: "*Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.*" The First Amendment protects a person's right to state their beliefs in words, in writing, and in art. It gives Americans the right to express themselves. A simple rule is that if you do not agree with it or are offended by it-do not read or look at it. That little rule may work at home, but may not work in a public setting such as a library where computers and books are out in the open for everyone to see.

Censorship and Libraries

My views on access to library materials have changed in big ways throughout the years. When I was younger, I believed in censorship-that we should not allow certain items to be available to the public. This view was backed by my strong morals and the idea that there are things we should keep our minds clear of. There was also a fear in me related to opposing viewpoints. In my opinion, reading opposing viewpoints was not safe. I would rather have suppressed someone else's voice than allow a different opinion than my own. It was safer.

The view I used to have was in complete opposition to what the Library Bill of Rights written by the ALA stands for, and the beliefs I have today have stretched very far from my initial beliefs on the subject. Today, I hold the belief that all information in a library should be equally available to everyone-regardless of age, background, financial status, etc. This information should represent a variety of viewpoints-not just one. Books in the library should not be thrown out, rejected or censored because of the content or beliefs of the author, publisher or librarian. The Intellectual Freedom Manual states-"*Librarians have a professional responsibility to be inclusive, not exclusive, in collection development...*" (117)That statement applies to all the resources in the library. A librarian cannot remove a book or decide not to order a book because it disagrees with their moral beliefs. Allowing

information that goes against one's personal beliefs can be a very hard spot to be in, but it is part of upholding the Library Bill of Rights and providing that equal access to a variety of opinions to everyone. Going against that is censorship.

In respect to the freedoms allowed to us by the Bill of Rights, the American Library Association refers to the right of the public to read or write anything as the Freedom to Read. The Freedom to Read allows us to choose to read what we would like regardless of what the writing says. This freedom has been stretched with the internet and the variety of blogs, websites, and overall information that is on there.

Censorship and the Internet

I read an article called *Censoring the Internet* which encouraged people to try an internet search through a Firefox extension called "China Channel". The point of the article and the internet search was to make people aware of the censoring of the internet in other countries and to realize that our access here in the United States is uninhibited. This is a very important issue as more and more people use the internet to stay up to date on current events, find information, and even read books, we are potentially going to see more push for censorship of the internet in our country. This would be very limiting to the Freedom to Read, and would be a huge step away from allowing everyone equal access to all information.

The Internet is a wonderful tool. It has given access to so many great things over the years. I keep in touch with my family through social networking sites, I buy items at a much discounted rate, and I have an amazing amount of up to date information at my fingertips almost constantly. The internet has also brought many negative issues with it though. Scam artists, sexual predators, and false information plague computer screens as people try to sort through some of the mess information found on the internet. People must be careful, but they also should not be scared. The internet has so many wonderful resources for people, that it is a shame when there are limits placed upon it. And as people push for more limits, the right to access information is lost. That is why we must uphold people's freedom to access any information they would like.

In a public place, once in a while issues will arise with images that may appear on a computer screen. Technically, the library cannot limit what a person looks at--even pornography--but if something on a screen is offending the people around it should be dealt with. The library cannot revoke a person's right to access information, but they can try to find a solution that allows patrons to gain all the resources they need without making people around feel uncomfortable. It is a tough line that I am not always sure should be upheld, but I believe that limits can snowball and one limit can lead to more. With that in mind, I am against censoring the internet in any regards except illegal items such as child pornography (which opens up more debate about what it includes!)

Censorship, Children, and Filters

The biggest question I have in relationship to censorship is how children fit into all of it. I am completely fine with allowing adults to read pretty much whatever they want to. They can do so. But what about children? Should children be given free rein to stumble upon pornographic sites, or to find information on bomb making, or to meet a new "friend" online? I do not think so. On the other hand, I think they need to be offered freedom to read about new ideas and to explore a little. The ALA states in the Intellectual Freedom Manual that "*Lack of access to information can be harmful to minors*". (79) Children need

to hear a broad range of ideas in order to learn about the world and develop their own beliefs instead of blindly following a set of prescribed beliefs.

A quote I read from Judy Blume recently has been a challenge for me as I push to overcome some of the fears I have in opposing viewpoints. She says: *"I believe that censorship grows out of fear, and because fear is contagious, some parents are easily swayed. Book banning satisfies their need to feel in control of their children's lives. This fear is disguised as moral outrage. They want to believe that if their children don't read about it, their children won't know about it. And if they don't know about it, it won't happen."* (Petrilli) This is challenging to me in, not only thinking about children, but in just confronting the opinions that may differ from my own. Fear has led me in this, but I am now convinced that just pushing away opposing views is a less safe way to solidify my own beliefs.

Many children, however, do not have the sense to know what should or should not be grasped on to. I remember when I was teaching third grade and a student was telling me about a reality tv show in which scientists were going back in time and bringing back living dinosaurs to the present day world. He was convinced that it was reality! I had actually seen the show and knew right away that it was only a television show and was not real. This was a cute and harmless example a child getting confused by not having the proper screening. I am not saying he should not have watched the show, but instead think he should have had someone there to help guide him in the understanding of the show.

Understanding what is real and what is not is just one challenge of children being given the freedom to read or look at whatever they would like to in the library. For most elementary students past the age of nine (or even seven), understanding that difference is simple. They know. So it is barely even an issue. There are many more harmful issues that could come up. The internet has opened up a lot of them as well. In the past, a child could find a book on sexuality and browse through it in the library-maybe even bring it home, but most parents would notice and take that book away from them. Now, with the internet, information along those lines are more readily and privately accessible. That is not necessarily a bad thing though. Children will need to be taught or exposed to subjects such as sexuality at some point in their lives. Protecting them from knowing anything about it will do more harm than good as just because they do not know about it does not mean it is not out there.

So what can be done to find the balance between what may be appropriate for children and what is not? Many people try to place filters on internet connections to block out what should not be there. The idea of filters is a good idea except for two major issues. The first is that filters are not smart enough to filter only what should be filtered-their purpose is to filter the bad, but many times they filter the good as well which blocks access to many viable resources. They also will not block every bad site either. So kids are still seeing the bad and many times not seeing the good. The other issue, and it is huge, is that filters are set up to block someone's definition of bad and let in someone's definition of good. Bad and good are not the same for everyone though. I believe in absolute truth but also know there are many gray areas. If I were to set up an internet filter, I would block many more sites than other people might. I also might let many more sites through the filter than others would.

At the Laramie High School there are internet filters on the entire network. As a teacher, there are times where these filters are great-they block gaming sites, social networking sites, and sexually explicit images. They are great for that. But they are also

frustrating. For one, there are still many gaming sites that students can access, so I still deal with students playing games instead of working. There are also ways around the filter which can be found to let students access social networking sites such as Facebook and Myspace. Those issues will always be there and, for the most part, those issues deal with a student's ability to motivate themselves to do school work; they are not moral issues. The big issue is when students are doing research. Many times the filter will block out legitimate websites that students are trying to access to garner information from. So they have to search longer, many times having many sites and information blocked depending on the topic they are searching for.

Placing an Internet filter on a computer can help to combat some of the explicit websites that may not be appropriate for children, but many times they just lend themselves to deeper frustration for the patrons. But giving students free rein to screen resources themselves may be too much for younger kids to handle.

So what is the final answer? I remain torn. I have moved to a place in my beliefs where I believe that teenagers and adults are able to censor for themselves. They do not need someone else telling them what they can or cannot read. With children, however, there is this strong sense in my mind that we need to protect them, but I know that we should not protect them from everything. There are still two sides that pull at me. In the end though, it comes down to parents. Librarians are not parents or guardians of children. They are not hired to protect the minds of children, but instead to uphold the First Amendment by providing equal access of all materials to everyone. The First Amendment includes children! If a parent does not want their child looking at or reading about certain topics, then they can stop their children from doing so. But it is not the librarian's responsibility.

Even though I am torn about the issue, I like what the Albany County Library is doing in Laramie, WY. They allow equal access to all resources to everyone, but also have a computer section that is reserved for just children. These computers have filters on them to block certain types of websites. Children are not required to use those computers though. They can use any computer in the library. Parents can place them in the children's section though and feel a little safer about them using the internet there. Children are still offered equal access, but there is an option for parents and for the library to provide a place that is a little more restricted in internet privileges if that is desired.

As part of the Freedom to Read, children are allowed access to any information in a library. Even with this freedom though, children should be given some guidance-especially on the internet. They may not need to be protected in what they read, but they need to be taught how to be careful to screen through the mess of information that is available. They also need to be taught how to protect themselves from the scams and most of all from the people out there that can cause them physical and emotional harm.

Censorship in Public Schools

In a public school setting, however, I still find myself a bit confused. Many teachers would say that they are called upon to act as parents while the students are at school. I agree with this, but I still do not think this gives a librarian an ultimate freedom to screen books for children. There are a few more freedoms in that though. School boards set up policies about what is appropriate in a school setting and what is not-so a library must follow those as well. Students cannot be given free rein at school.

In the Intellectual Freedom Manual, the ALA has written a School Library Bill of Rights. It is similar to the Library Bill of Rights, but adds a few adjustments for public schools. Public schools must uphold the Freedom to Read, but they also must fall under the policies put in place by the school board. This allows for internet filters to be put in place, even though normally that would go against the Freedom to Read. It also gives librarians a little more freedom in the selection process as they take into account the board policies and the maturity levels of students. In an elementary school setting, there will not be many books that are not appropriate for that age of children, but there will still be books that parents do not want in there. These books should not be removed from the library, but the librarian should respect a parent's requests for their child to not be allowed access to that book.

In a high school library, however, students are old enough and should be allowed to make their own decisions in regard to books. *"School library media specialists cooperate with other individuals in building collections of resources appropriate to the needs and to the developmental and maturity levels of students."* (Intellectual Freedom Manual) The key for me here is "maturity levels".

A few years ago a book in the history section of Laramie High School was brought up for reconsideration. It was a non-fiction book that included many scenes of soldiers sitting around a campfire and talking. A parent was upset with the language and subjects that were in the book and did not feel that the student was mature enough for the topics. After consideration it was decided that there were other books in the library that this student could use to support their research on the war and that this particular book was a realistic representation of what the barracks were like. So the book is still in the library. It sounded like it was handled well as the student was given a few other options of books so that they could finish their research on the topic, and the book in question was kept in the library so other students would have the freedom to read it.

Even though a public school has a few more restrictions than a public library, there is still a responsibility to uphold the Freedom to Read. As the School Library Bill of Rights states: *"The responsibility of a school library is to place principle above personal opinion and reason above prejudice in the selection of materials of the highest quality in order to assure a comprehensive collection appropriate for the users of the library."* (Intellectual Freedom Manual) As we aim to uphold the freedoms that the Constitution gives us, we must keep in mind the maturity levels of children in the public schools but also keep in mind a push to allow opposing opinions to be heard.

Conclusion

The push to censor books/Internet is still strong and many groups are driving that push forward. I used to be of the belief that censorship was not only ok, but that it was necessary to achieve a higher moral state in America. But it is not my right to seatbelt the explorations of other people's minds. It is my choice to screen what I do not want, but I should not force that on others by strapping their intelligence with censorship. I am embarrassed when I hear of others that share my moral beliefs taking those standards and pushing them onto people of whom should have their own choice about what to read or not to read. Taking actions such as vowing to burn the Koran, or mutilating Harry Potter books with a pair of scissors in a public square are both actions that embarrass me. This urge to control what others can read stems from fear and is not justifiable. In trying to control what others read, we are making a statement that others are not able to make as wise decisions as we are. This belief is wrong.

Censorship is a difficult issue. It is not, however, a librarians job to push censorship. Instead, libraries must push for the unobstructed freedom to explore ideas. Parents, on the other hand, can make a push to censor what their children see, hear, or read, but should understand that we solidify our beliefs by exploring opposing viewpoints. Libraries need to continue their push to uphold the Freedom to Read and the First Amendment. Anything going against that is censorship and censorship should not be allowed.

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Updating the Professional Development Collection at the Dan River Middle School Library

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Introduction

The Dan River Middle School library is located in Ringgold, Virginia, and serves a student population of roughly 550 students in grades 6-8 and 60 faculty and staff plus parents. The majority of students are from low economic backgrounds; a large percentage of students receive free or reduced meals. The school is a Title I school and receives extra funding as a result. The community is largely textile and farming, and I see a need for

increased reading skills. A significant percentage of students are at or below grade level reading.

The school library has only one librarian and no assistants. If any extra help is available, it is strictly on a volunteer basis. The school district does not have money in the budget to provide aide in libraries where the student population may be lower. Only two elementary schools in the district are funded for aide positions. The school library media center has a decent collection, but it could be better in the nonfiction section. There are many outdated nonfiction books due to budget constraints. For faculty and staff, there are a number of things including audio/visual equipment such as DVD players, VCRs, portable projector, laminator, and professional development resources. Unique items in the collection include local history books from the county historical society and such.

There are a total of 5,000 volumes in the library's collection. Sadly, this number is extremely low for a middle school library. Due to budget constraints, the collection suffers. I believe there should be at least 9,000 volumes in the collection. Of the 5,000 volumes, there are 15 serial subscriptions, 2 newspaper subscriptions, 600 reference volumes (counting every single individual volume), 28 trade book class sets of 30 each, 20 audio books, 167 videos in either DVD or VCR formats, 1,500 nonfiction titles, and the remaining fiction titles. The school library media center offers few services of that of a public or academic library. The library does offer the Internet, word processing, a scanner, printed reference resources, periodicals, audio and video equipment, lamination for teachers, etc.

There is no reserve or interlibrary loan, but a student can ask for the librarian to hold materials if they become available. There is no cost to students unless a book has been damaged or lost. The student shall have to cover the cost to repair or buy a new book to replace the lost. The school library offers very few special programs including storytelling for special needs children, Accelerated Reader tests and prizes, yearly book fairs, and limited library instruction. Special needs children are brought to the library weekly to hear a story read by the librarian and to get a chance to acquaint them to the library. For many years, the school district has employed the use of the Accelerated Reader program to motivate individuals to read. In past years, we kept updated records of reading points and gave out small prizes such as pens, pencils, T-shirts, bags, etc. This past year, we kept a running total of points. The student with the highest point value in each grade received a really nice prize such a portable DVD player.

The librarian schedules two Scholastic book fairs each year to help absorb some costs for collection development. Unfortunately, library instruction at the middle school level is becoming more and more limited. To provide each student to have a set time each week to visit the library, we schedule only the English teachers for library time. Each English teacher of 6th grade has 30 minutes of library instruction each week. Sixth graders receive weekly lessons aligned with curriculum standards. Each English teacher of 7th and 8th grades brings their classes for 20 minutes each week on a set day. Seventh and eighth graders visit the library for a very short mini-lesson (somewhat like a review of reference materials or the Dewey decimal system), check-in and check-out, and Accelerated Reader testing.

The school district uses the Athena library automation system by Follett Software Company. This software offers assistance in circulation, catalog searching (OPAC), cataloging, and inventory. Bibliographies can be created simply by scanning barcodes. Also, overdue notices can be easily searched and a report printed. We purchase materials already barcoded for the system, but we could hand code if necessary. The middle schools

in the district were newly built in 2003; therefore, new building additions and remodeling is unnecessary. There has been discussion of updating the library automation system, but the funds are just not there. With the economy and startling budget cuts in the state of Virginia, this is unlikely to happen soon. As far as new services, we have been working on creating a well-stocked professional development section for faculty and staff. Currently, there is a professional development section, but it is severely lacking in sufficient materials. Most of the materials are really outdated, especially with the emergence of so much technology. As far as new programs go, we have, also, tried to work on a book club for the students.

Objectives

- To perform a background of the library.
- To assess the current professional development collection.
- To evaluate materials based on currency, quality, and authority.
- To research how other school libraries have developed the collection.
- To survey and assess needs for the collection.
- To research materials to add to the collection. To select and purchase materials to add to the collection

Project Background

The socioeconomic background of the majority of the student population creates a specialized need in teachers having a large selection in the professional development collection. There is a professional development section, but it is severely lacking in sufficient materials. Most of the materials are really outdated, especially with the emergence of so much technology. Work has been done to evaluate and update the collection to be useful in all aspects of the school curriculum for faculty.

The library media center is an extension of the classroom. The current concept of the library media center rests in its being an integral part of the total educational program in the school. The program is characterized by its active role in learning. The librarian should not only make a wide variety of media available to teachers and students, but also collects and organizes media to achieve learning objectives. It is imperative that teachers, aides, etc. have available the most current and up-to-date resources for professional development.

Project Method

- Background study of the school library media center, school curriculum, testing standards, technology used, etc.
- Current professional collection assessed and evaluated for currency, quality, and authority. It is imperative the collection is up-to-date with authoritative, quality materials.
- Evaluate each volume in the collection was assessed using a rubric designed to assess all aspects involved including content, usefulness, etc. Weeding followed this step.
- Scholarly research on how other school libraries have developed a professional development collection, including interviewing other media specialists, locating useful articles through online databases, and searching the web for collection development websites.

- Survey and assess the needs of the faculty in the school, including surveying thoughts and opinions on the current collection pertaining to the usefulness of the materials and suggestions for materials needed.
- Research and review materials to add to the professional development collection using a variety of resources, including trade bibliographies, journals, etc.
- Select and purchase materials to add to the professional development collection.
- Catalog, organize, and house the updated materials.

Project Timeline

- Background study of the library 10 hours
- Evaluate current collection based on currency, quality, and authority 50 hours
- Research how other schools have developed the professional development collection 30 hours
- Literature/Information search to read and review journal articles 5 hours
- Surveying faculty and staff for effectiveness of the current collection and assessing needs for professional development 40 hours
- Weeding materials based on the evaluation and surveys 10 hours
- Research materials to add to the professional development collection using reviews, bibliographies, etc. 50 hours
- Selecting and purchasing materials to add to the professional collection 20 hours
- Cataloging, organizing, and housing materials 30 hours
- Total hours worked on project 275 hours

Literature Review

Franklin, Pat and Stephens, Claire Gatrell, "Professionally Speaking: You Need a Professional Collection!" *School Library Media Activities Monthly*, 24 (September 2007):43-44.

This article comments on how library media specialists can, sometimes, forget about including professional development materials for teachers and staff when budgets can be tight. Money invested in materials for teachers and staff can help improve skills and impact student achievement. The article touches on different types of media a professional development collection should contain.

Ahlfeld, Kelly, "Hands-On Learning with a Hands-Off Approach for Professional Development," *School Library Monthly*, 26 (February 2010):16-18.

This article addresses the need for school library media specialists to undergo a project in providing teacher-centered learning opportunities by participating in professional development activities for colleagues. The project consists of integrating lessons for teachers on the use of all of the newest or not so new technologies out there for use in the classroom. To become a school that is fully immersed in technology use in the classroom, teachers need to feel comfortable with using it. The school librarian can take on the role of helping train teachers and staff on the "how-to" of technology.

Young, Terry, "Aligning Collection Development with Instructional and Learning Needs," *School Library Monthly*, 26 (June 2010): 20-22.

This article discusses how the librarian has a unique role of knowing how to support every instructional area for every grade level of the school in which they work. The school librarian has an enormous responsibility to ensure that all curriculum areas are well-balanced in the library collection. In one section of the article, Young discusses how teachers must have a voice in collection development.

Loertschler, David and Rosenfeld, Esther, "The Best Professional Books of 2005," *Teacher Librarian*, 33 (April 2006): 49-50.

This article reviews many professional development books considered the best from 2005 for librarians and teachers. Several of the books touch on strategies for teachers and librarians to work together. A few focus on collection management.

Jensen, Kristi, "Engaging Faculty Through Collection Development Utilizing Online Survey Tools," *Collection Building*, 28 (2009):117-121.

In a study conducted by Jensen, online survey tools were used to get suggestions for collection development. The study was a success based on the responses gathered from the faculty using the survey tools. It was important to have the faculty engaged in the selection process. Also, the survey tools allowed immediate feedback on materials already in the library.

Book, Stephanie, "Equipping Educators with 21st Century Tools," *American Libraries*, 41 (January/February 2010):11-12.

This article promoted by the American Association of School Librarians discusses the role of the library media specialist to strengthen the whole education program by providing the Learning4Life program, a national implementation plan for learning standards. The plan covers four areas, one being professional development.

Collection Assessment and Teacher Survey

The Dan River faculty need a large, varied, and current professional development collection. The material on information and educational technology was particularly outdated. Few books in the collection were newer than five years old. This shows the desperate need for the current collection to be assessed and weeded. Visits to other schools in the district found that other schools had the same lack of currency in the professional development collection. Many teachers have their own material, and library budgets are suffering. If teachers have their own materials, they may not come to the library for resources. The next step was to survey the faculty and staff. There was some lack of participation, and an online survey might have helped solve that problem. The results of the survey indicated that some teachers were not aware of all of the resources the library offered. Several indicated they had looked over the professional development section and did not see anything really up-to-date. Suggestions for resources included topics such as lesson plans, website bibliographies, technology applications and manuals, etc.

Professional Collection Survey Questions

1. Have you every perused the professional development collection housed in the school library? Yes No

2. If you answered YES to question #1, did you find anything useful or interesting? Yes No

1. If you answered YES to question #2, what did you find useful?

1. Please comment on the collection with regards to currency, quality, or usefulness.

1. Is there anything you would like to see included in the professional development collection?

The next step included weeding the collection and then identifying materials to include in the "new" professional development collection. Tools consulted included journal articles, evaluations of other schools' collections, bibliographic lists online, suggestions from faculty and staff, etc., as well as resources such as Follett, Perma-Bound, Amazon.com, etc. A list of resources to include in the collection was compiled.

Items/Topics Added to Update the Collection Literature Study Guides

- The Outsiders
- Bluford High Series
- The Lightning Thief
- The Diary of a Young Girl
- Sharon Draper Series
- A hardbound edition of the Best of Mailbox Magazine
- Classroom management
- Exceptional children
- ESL learners
- American Psychological Association style manuals
- Transitions for the Classroom
- Cooperative Learning Cross-Curricular materials for writing
- Assisting with behavioral problems
- More local history
- A binder of most useful websites for teachers

Conclusion

Initially, it seemed that that updating the professional development collection would be fairly easy, but that was not correct. A large portion of the existing collection was outdated and had to be weeded. It was sometimes difficult to get input from faculty. This project also provided the opportunity to become acquainted with all aspects of school librarianship.

Hidden in the Network: Information Retrieval with the Domain Name System

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Introduction

The Domain Name System, or DNS, is an unusual information system. It was designed and is maintained by humans, but most of its daily use is by computers. Every computer on the public Internet has at least one IP address. While it is an oversimplification, IP addresses can be thought of as something like phone numbers. To reach any computer, someone must first know its IP address. 30 years ago, a single file, called a "hosts" file, contained the names of all the computers on what was then the Internet. It provided a mapping between computers' names and their IP addresses. Without it, everyone would have to know the IP address of any computer they wanted to connect with. But as the Internet continued to grow, such a system became infeasible. Instead of a single file, DNS is hierarchical and distributed, so no single organization controls the whole thing.

At the root of the DNS tree is the ".". This is a special domain which contains all the other ones. Beneath it are several Top Level Domains, referred to as TLDs. One of the most well-known is ".com", but there are many more, including ".org", ".us" and one for most countries. For example, Spain's TLD is ".es" and Germany's is ".dk". To find a record, a user, whether human or computer must first learn which computer on the Internet is responsible for the section of DNS which contains the record needed. Such a server is called an Authoritative server, because it acts as the authority for a section of DNS. The section is called a domain. DNS is actually a hierarchically organized collection of separately-maintained domains.

An example will illustrate this concept. Suppose someone wants to know the IP address of "docs.google.com." (notice the "." on the end of the name). First, it must be found who is authoritative for ".". This special information is embedded in the software which performs DNS queries. Next, the servers for ".com" need to be found. They can then be queried to find out who is in charge of "google.com". Finally, the server responsible for "google.com" can be asked for the IP address of "docs.google.com". This process is called "walking the tree", and millions of "recursive" queries like these are performed every day.

There are several types of DNS records, but a few are more significant. First, the "SOA", or "Start of Authority" record defines a distinct partition of the DNS. This record contains important metadata about a domain, such as the name of the computer on the Internet which is Authoritative for it, as well as the email address of the administrator responsible for it. The record also indicates how long records within the domain are allowed to be kept before they have to be re-fetched. Next, the "A" record maps a name to an IP address. An oversimplified way to look at such records is as a phone book entry giving a number for a name. When a user types an address into a web browser or clicks on a link in

a web page, their computer uses DNS lookups to obtain the actual IP address of the computer the user wants to communicate with by looking up its A record.

Another important type of record is the PTR, or Pointer record. This is just the reverse of the A record, and maps an IP address to a name. Such records are mainly used behind the scenes by computers who want to make sure they are connecting to the appropriate server. For example, to combat spam, many email programs will not send a message to a server that does not have a PTR record mapping its address to the correct name. It is the MX, or Mail-exchanger record, though, which is central to email. This kind of record lists the names of the computers which provide email service for a given domain. So, an email program first needs to look up these records before it can send any mail to a domain. SRV, or Service records point users to where to locate a particular service. Microsoft's Windows Active Directory service uses these records to tell computers where to go for certain functions. The record is different in that it maps a concept, or service, to a location, instead of just translating between names or addresses as other records do. Finally, TXT, or "text" records, store descriptive information about a domain. Spam fighting tools sometimes use TXT records to let email programs know about how best to send email to users in order to avoid unwanted messages.

The DNS database is designed for anyone who needs to access an Internet site, using either its name or IP address. Other record types, such as MX, SRV or TXT point users to a particular location for services or describe useful information about Internet domains. The scope of the DNS consists of the entire public internet. A great many private networks use their own DNS systems as well. While it is designed to be used by people, most of the querying is done by machines. The built-in network functionality used by most networked computers includes the ability to query DNS. In fact, it is essential to do this. If there is a DNS failure for some reason, users are essentially disconnected from the Internet because they cannot look up the IP addresses of any sites.

DNS is unusual in that it is most frequently queried by other computers instead of people. Of course, the queries are performed on peoples' behalf, but it is automated systems which do the actual work. In fact, the only people who directly query DNS are those who are responsible for troubleshooting or maintaining it. Everyone else relies on it with barely any awareness that it even exists. This suggests DNS is a successful IR system, because it is so relied on that most users fail to notice it is there.

There are many possible ways to look at the DNS as an IR system. It can be used as a simple way to map between names and IP addresses. This is, in fact, its primary use each day. Other types of records, such as SOA or MX, can provide details on which groups or organizations manage certain parts of the Internet. Finally, more exotic queries are possible using SRV and TXT records. For example, it would be straightforward to specify Z39.50 servers using SRV records. This technique would have many advantages, not the least of which is that just about every Internet-connected computer would be capable of finding such servers with no additional software or overhead. Arbitrary metadata could be distributed as TXT records. Precision and recall need some consideration in this context. Because A and PTR records map data from names to numerical addresses or back again, a query using them either returns ALL relevant results or none. Other types of records leave a little room for interpretation, but the simplest way to analyze the DNS is to say that a query returns all relevant results or none. So simple queries have a precision of 1 divided by all the domains

on the Internet, or 0. Recall is either 1 or 0. More sophisticated queries that cross multiple domains may have more traditional measurements. For example, asking for all the domains within the ".com" TLD will return many, many results. But some of them will be out of date, or misconfigured. In fact, failure to retrieve meaningful results from the DNS is almost always the result of human error or a software defect. This is due to the fact DNS data is not managed by a single group. There are not indexers responsible for specifying correct values for records. The only centrally-designated aspects of DNS are the domain hierarchy and rules for managing records. There have been isolated cases of entire countries being accidentally made unreachable online because of human error when managing DNS.

To search DNS by hand from a Microsoft Windows-based computer, the built-in program "nslookup" can be used. While most users have a list of servers to query provided for them automatically by their network provider, there are a few publicly-available ones which can be used. One such server is managed by Google and its IP address is the easy to remember "8.8.8.8". Here is what nslookup shows when querying that server for the IP address of "www.google.com":

```
> www.google.com.
```

```
Server: google-public-dns-a.google.com
```

```
Address: 8.8.8.8
```

```
Non-authoritative answer:
```

```
Name: www.l.google.com
```

```
Addresses: 74.125.95.99, 74.125.95.105, 74.125.95.106, 74.125.95.147,  
74.125.95.104, 74.125.95.103
```

```
Aliases: www.google.com
```

The answer contains several pieces of metadata besides the multiple IP addresses shown. For example, the name of the DNS server, "google-public-dns-a.google.com", providing the answer is given. The name "www.google.com" is additionally shown to be a nickname of a computer known as "www.l.google.com", which has the several IP addresses given. Also, the important fact that the answer is "non-authoritative" is included. This means the answers being provided actually originated from a different source than the one being queried. A slightly different type of query can be used to gain interesting information about who manages which parts of the Internet. Restricting the query to SOA records and asking about a special kind of domain that only contains networks shows which organizations manage what part of the Internet. The syntax to only ask for SOA records using nslookup is "set type=soa". To query for whole networks instead of domains, the special domain of "in-addr.arpa" is used. So, to find out who manages the 16 million or so addresses that make up the 193.10 Internet network, the following query is used and results given:

```
> 10.193.in-addr.arpa.
```

```
Server: google-public-dns-a.google.com
```

Address: 8.8.8.8

Non-authoritative answer:

10.193.in-addr.arpa

primary name server = ns1.sunet.se

responsible mail addr = hostmaster.sunet.se

serial = 2010060900

refresh = 28800 (8 hours)

retry = 7200 (2 hours)

expire = 604800 (7 days)

default TTL = 600 (10 mins)

It is seen that this large network is currently assigned to an organization with the domain name of "sunet.se". The ".se" TLD indicates it is located in Sweden. Another Internet database called "whois" can be queried for additional information about sunet.se. The results show all the available metadata provided in a type SOA record. The serial number tracks changes to records within the domain and is updated when any records in the domain are changed. The "expire" value of 7 days means that records from the domain are allowed to be kept for up to a week before they must be thrown away. By default, they should only be held for 10 minutes, as the "default TTL" value shows.

DNS is a system which has held up quite well for over 30 years as the Internet has grown from several thousand computers to several hundred million hosts. Hopefully the example queries above have shown that the DNS contains useful and interesting metadata about the Internet which can be retrieved with some careful searching. The possibilities provided by TXT and SRV records have yet to be fully realized. For example, a domain, such "loc.gov", could host SRV records about various Z39.50 servers across the Internet. A user—or more likely computer—could then automatically query for such records and provide the basis of making such services available on-demand and automatically for interested users. Such users would not even have to be aware of the existence of Z39.50 in order to benefit from using it. TXT records could contain arbitrary information, including even MARC records. So, a query for a special kind of hostname containing an ISBN, such as "0-201-54699-x.loc.gov", could return a TXT record containing MARC information about the book titled "Macroeconomics". If such a system were implemented, almost any computer on the Internet could retrieve bibliographic metadata without any additional software or configuration. Alternatively, software tools currently implemented for such purposes could be made to work much more simply and reliably by depending on the network "plumbing" which has been in place for decades.

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