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Old school versus new school? Are visually stimulating syllabi more effective in retaining course information in contrast to text-based syllabi?

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Old school versus new school? Are visually stimulating syllabi more effective in retaining course information in contrast to text-based syllabi?

An Undergraduate Creative Project Thesis
in the School of Human Environmental Sciences

Submitted in partial fulfillment of the requirements for the
Honors Program in Dale Bumpers College of Agricultural, Food, and Life Sciences

By

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Major: Hospitality Management

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Abstract

The students of Generation Z have been affected by the increase in technology and no longer have the same learning methods and techniques as former generations. These students notice improved knowledge and comprehension when using modern approaches in education. However, there is more room for updates in education. Instructors are accustomed to traditional, text-based syllabi that are overloaded with information, making it difficult to read and understand, while lacking conciseness.

With the use of technology, students have adapted to the use of visually stimulating methods. In the integration of modern-day learning, syllabi have not been updated to follow these standards. In this study, participants were evaluated to assess the benefits they found in the use of infographic syllabi in their college courses.

Keywords:

Syllabi, infographics, generation z, visuals, reader engagement, learning strategies

Chapter 1

Introduction

A syllabus is defined by Suffolk University, Boston, (n.d.) as a roadmap of a course, containing information that will guide you through the expected outcomes of the class and keep dates and important factors within a single guide. Most syllabi are written in text style, with large text blocks and very little to no detail to draw the eye. In general, these syllabi contain many key factors to know before starting the course. Instructors name and proper titles, class time and location, schedule, homework assignments, grading rubrics, and more are amongst the many things contained in any given syllabus. However, the more textual information included inside syllabi, the less attention grabbing they may be. According to a study on skim reading, many experiments have examined reading paragraphs, in the vast majority of reading experiments, participants only read a single line of text and as such, do not have to integrate information across multiple sentences (Marchant, Hawton, Stewart, Montgomery, Singaravelu, Lloyd, Purdy, Daine, & John, 2020). Therefore, a change in the way important information such as syllabi are formatted should be changed, integrated to benefit the reader's comprehension.

Informational graphics, or infographics for short, are visuals such as bar graphs and pie charts to give a quick and informative bit of information. They are usually colored or in shapes, offering visual interest unlike a typical text paragraph would. The graphics can range from easy to read and comprehend to complex, depending on the content used in the infographic, which can be tailored to the demographics and level of information needing to be shared. By alternating between formats of text and infographics, it strings the reader along, creating better comprehension of the material. Explained by the Dual Coding Theory (DCT), learners who

encode information in verbal and visual forms are more likely to be able to remember the information in the long-term, as it provides more images to connect with the texts, whereas abstract texts alone require more mental energy (Guo, Zhang, Wright, McTigue, 2020).

Many studies have indicated that the issue with reading comprehension from students (mainly Generation Z) stems from smartphone addiction. Students no longer read books for fun, which handicaps their reading abilities. With movies, games, and other stimulating options available at the touch of the button, the desire to read is often lost. When the amount of reading as a hobby reduces and it is only used for scholarly work, negative stigma is often connected with the task. In the research article by Gezgin, Gurbuz, and Barbuoglu (2021) research indicated as smartphone addiction grows, interest in reading activities lacks. As children are provided phones at younger ages, the issue only grows. Mental stimulation has changed, and text simply does not offer enough stimulation to hold the focus of Generation Z students.

When it comes to syllabi, the information provided is often critical to the success of the students taking the course. If students cannot read the information and retain it, it often leads to confusion and issues like missing assignments and key details. When confusion or lack of understanding occurs, it usually results in more instruction time by the instructor; answering questions and explaining things verbally as well as dealing with the repercussions of missed deadlines or incorrect work. By inputting a little more time and creative effort prior to the class when creating an eye grabbing syllabus filled with infographics and small bits of text; can help students in the long run to encourage retention of information.

Problem Statement:

College students are having a hard time remembering information presented in course syllabi.

Purpose of Study:

The purpose of this study is to determine if college students remember syllabi information presented in an infographic or visual syllabus as opposed to a “traditional” text-based syllabus.

Assumptions and Limitations:

It is assumed that participants in this study will answer the questionnaire honestly and accurately and that they understand the purpose of course syllabi. It is also assumed that the participants will also have some knowledge course syllabi and the importance of information on the course to be successful in the course. The scale of research will be limited for the following reasons:

- The participants of the study will be limited to people who are current students at the University of Arkansas; therefore, the results cannot be generalized outside of this target population. It is possible that people may have had different experiences.
- There is no way to conclude whether all the answers given by the respondents represent a true experience.

Chapter 2

Literature Review

With traditional syllabi, text is used to convey the guidelines and expectations of both the student and teacher during a particular course. When creating a syllabus for their course, instructors often condense crucial information into the smallest space possible, to hopefully capture their students' eyes while providing the information needed related to a course. Students often are found to just scan over the given syllabus, only noting a few key details and often missing important information. Typical syllabi contain information including instructors name, title, contact information and preferred contact methods and time. Also found are grading rubrics, assignment details and overviews, course descriptions and expectations, required materials, and policies and procedures. With text-based syllabi, there is little organization and visual appeal to guide readers other than bold headers and paragraph chunking.

Traditional syllabi tend to be long and mundane with information that is necessary to the university's policies and procedures, yet useless facts such as weather policies, Covid-19 protocol, and privacy statement blurring out the details including late work policies, attendance, and etiquette, which typically fall high on the list of priorities for the instructor. Excess content tends to add more distraction and leads the reader to be more likely to lose focus and miss key details, resulting in confusion, and in turn, ensuing complications such as missed assignments. Issues such as this also can also lead to inefficient use of time for the instructor, as they continue answering students' repetitive questions and dealing with the consequences of mistakes and missed deadlines by students.

This common struggle between students and instructors has led to a new way of designing course syllabi; help from informational graphics that help guide the reader, draw attention, and provide detailed information in a more efficient way. With infographics, instructors can provide a compact and organized way of distributing this information. Regardless of the information type, infographics can offer the most content whilst using the least amount of space. “While still being precise and clear, because they are visual presentations as opposed to oral or text presentations, they can quickly tell a story, show relationships, and reveal structure” (Abbazio and Yang, 2022). Grading scales, for example, are more helpful to visualize using pie charts. By using infographics, students visualize the content that will make up their course grade and be able to process that information faster and more effectively than if one were to present the percentages of what each piece of content is worth.

Benefits of Syllabi

By providing course syllabi to students, instructors have a plan and a legal contract for students to follow to meet the expectations of the instructor and the class. In addition, the syllabus holds the instructor to their own word, avoiding any unfair and unexpected assignments or content (within reason). The Cambridge Guide to Teaching English to Speakers of Other Languages explains that a syllabus plan is made up of four elements: aims, content, methodology and evaluation (Breen, 2010). This plan shares the essential sections to deliver necessary information to convey knowledge to readers. By incorporating infographics to expand on information, content is assembled in a functional way to guide the reader and use more of the readers senses, offering stimulation to their brain, resulting in better comprehension and memorization.

An article by Lamb and Johnson (2014) explained the four most beneficial uses of infographics in reading. First, organizing ideas; one can add structure and emphasize key points with infographics, using methods to draw the eye to display and provide information in an easy to navigate format, guiding the reader to the appropriate spot to place emphasis and prioritize material. Second, one can show complex relationships that may be hard to exemplify with just words; arrows really draw out correlations in how it might affect other things. Third, one can also compare information; data and key notes can be defined and separated more effectively than simply by text. The data can be made more meaningful and emphasized appropriately for its purpose. Fourth, infographics can help tell a story. Using photos and examples help convey the imagery to the reader, leaving more mental energy to be used on key information.

Abbazio and Yang (2022) stated that “Providing visual stimuli helps bridge the gap between knowledge producers and those who consume it”. By offering an extra bit of information can help to guide a reader’s thought process and visualize goals, ideas, and purposes, leading to less mental strain. In turn, this provides a way to help maintain the attention span for greater amounts of time, ensuring that all the necessary content is seen and retained by its readers.

An article in the International Journal for the Scholarship of Teaching and Learning shared data from students and their experiences regarding course syllabi and how they reacted to information. Some of the syllabi sections most searched for at the beginning of the course were test dates, number of tests, and course content. While a lower, yet still prominent number of students, searched for information about required writing, course requirements, and grading rubrics. The results also showed students frequently revisited the syllabus prior to completing assignments and class time, to note what was expected at the class period time (Calhoon and

Becker, 2008). The study exemplified the importance of a syllabus, indicating the need for a properly organized and intentional use of space when creating the syllabus. If instructors were to use this data to create infographics, a course overview could be curated to weed out the extra information to provide that brief overlook that students tend to often search for. The remaining necessary information could then be designed to offer details in a more efficient manner to create guided reading of the syllabus for the students.

Similarly, teachers would benefit from this organization of course syllabi helping to direct students to key course information. By providing infographics and overviews to guide readers, students are more likely to direct attention to the syllabus than contacting the instructor with repetitive questions. Instructors typically insert the needed content when creating their syllabi; therefore, by taking an additional step to organize the content, students are more likely to find the information themselves. This benefits the instructors, as they will be able to use their time more efficiently for other needs.

Generation Z Learning Styles

The fifth generation, known as Generation Z, Gen Z, or Digital Natives is the first generation born into an Internet-connected world. Because their use of technology has developed the visual ability portion of their brains, visual forms of learning are more effective for these learners. Furthermore, the use of fast-paced multimedia has affected the ability of these learners to focus and analyze complex information. Also, technology use has had a significant impact on attention span. With online text, learners now spend about eight seconds picking hyperlinked keywords to find answers instead of reading the whole text, which calculates to 4.4 seconds per

100 words of text. Instructors teaching in 2020 must be prepared to teach using software, hardware, and digital, technological, and social media (Rothman, 2016).

Some research has shown that the brains of Generation Z (Digital Natives) are structurally different than those of earlier generations. This has nothing to do with genetics and everything to do with how we use our brains to respond to things in our environment. The brains of Generation Zs have become wired to sophisticated, complex visual imagery. As a result, the part of the brain responsible for visual ability is far more developed, making visual forms of learning more effective. Auditory learning (lecture and discussion) is very strongly disliked by this age group. Interactive games, collaborative projects, advance organizers, challenges, and anything that they can try and see are appreciated (Rothman, 2016).

Research has suggested that the implication of technology such as YouTube, e-learning, webinars, smart boards, and smart phones contribute to the lack of attention span (Nicholas, 2020). By offering high amounts of information in short spurts in ways such as videos, where there are multiple visual stimuli, students are accustomed to the same methods when it comes to comprehending information, whether it be in the scholastic setting or just for entertainment. These blurbs of information are quite like infographics. Infographics and these technology advances offer compact information with eye-grabbing details such as colors, fonts, patterns, and more. The details work together, create a story in your head, piecing together crucial information. These characteristics are also associated with boosting memorization practices (Samra, 2021).

Generation Z college students have grown up around technology, and are quite tech savvy, making it easy for them to adapt to these technological advances. Rothman (2016) stated that when Gen Z learners are shown online text and content, they want to look at color images

and read less than 20% of text. That calculates to 4.4 seconds for every 100 words on the page. Forty-three percent of teenagers want to learn on the Internet and not use paper-based materials. Thirty-eight percent prefer blended learning and 16% prefer using books to learn.

It is important that educational methods keep updating to encourage learning. Many materials that assist learning have evolved with these technological advances. Students find themselves unable to learn from traditional teaching methods and end up going home from their classes to find resources such as YouTube videos and such that utilize different styles of teaching. While many instructors are trying to update their methods of teaching to encompass all students' learning types, there are still great lengths to go. Embracing new methods of teaching and learning, such as technology and how information is presented to students, can be a powerful tool to improve the performance of both students and universities

Chapter 3

Project Development Plan

Planning and development for the research design began in fall of 2022. A quantitative approach was used in this study to develop a non-experimental research design for the purpose of exploring the preference of university students regarding syllabi used in freshman and sophomore level courses. The research design utilized for this study consisted of a non-experimental descriptive survey. Because typical survey studies are used to assess attitudes, preferences, opinions, practices, procedures, and demographics (Gay & Airasian, 2003), a descriptive survey research design was deemed appropriate for this study. A short questionnaire was designed and distributed to the participants via electronic delivery (Qualtrics) and via flyers with a QR code that was distributed to multiple classes with freshmen and sophomores at the University of Arkansas.

Population and Sample Selection

The target population selected for analysis consisted of students (freshmen and sophomores) enrolled in sections of UNIV 1001 University Perspectives, HOSP 1603 Introduction to Hospitality and HOSP 2603 Foodservice Purchasing and Cost Control who have presumed means and ability to participate in the data collection.

Instrumentation

The instrument design consisted of a descriptive, online (electronic) survey. A self-administered questionnaire was developed for this study. The questionnaire consisted of four

questions related to the infographic syllabi that was used in their class compared to a traditional text written syllabus they may have used in other classes. There was one open ended question and three questions where participants were given answers to choose from.

Data Collection Techniques

The planned method of data collection for this study consisted of students via an online/electronic survey. The respondents were informed that participation was voluntary, and all information gathered because of the survey was confidential. No names or identifying information of any kind was obtained.

Data collection began by posting on Blackboard in the announcement section. The posted PDF included a QR coded linked to the survey administered in Qualtrics. Once data collection was complete, the data was imported was analyzed in Qualtrics as well.

Data Analysis

The data collected was analyze using descriptive statistics, percentages, and frequencies.

Response Rate

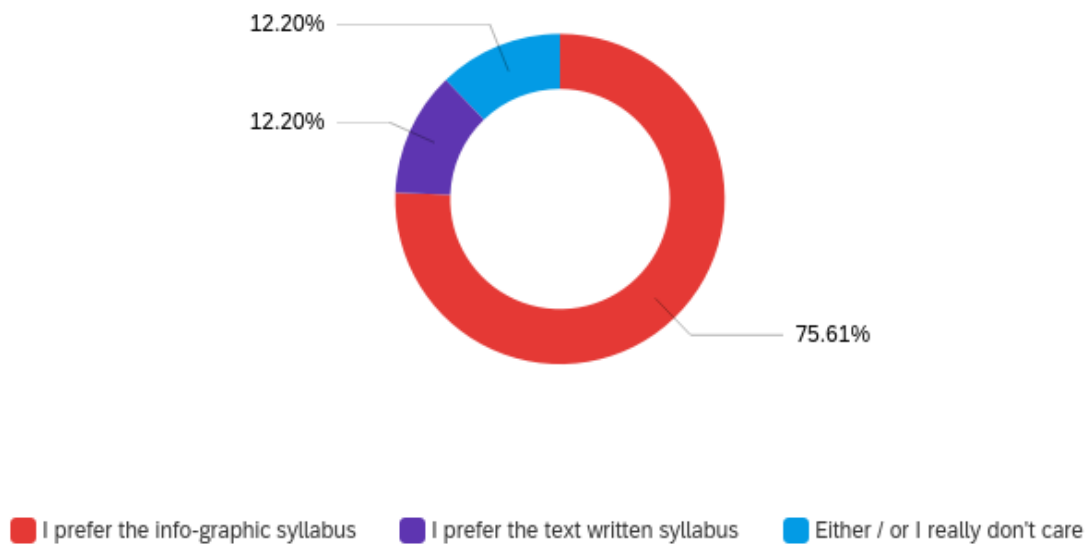
This study had a response rate of 50% for completed surveys. A total of 325 electronic surveys were emailed to the sample population, 164 surveys were returned. Data was collected over two academic semesters in the years of 2022-2023.

Chapter 4

Results and Discussion

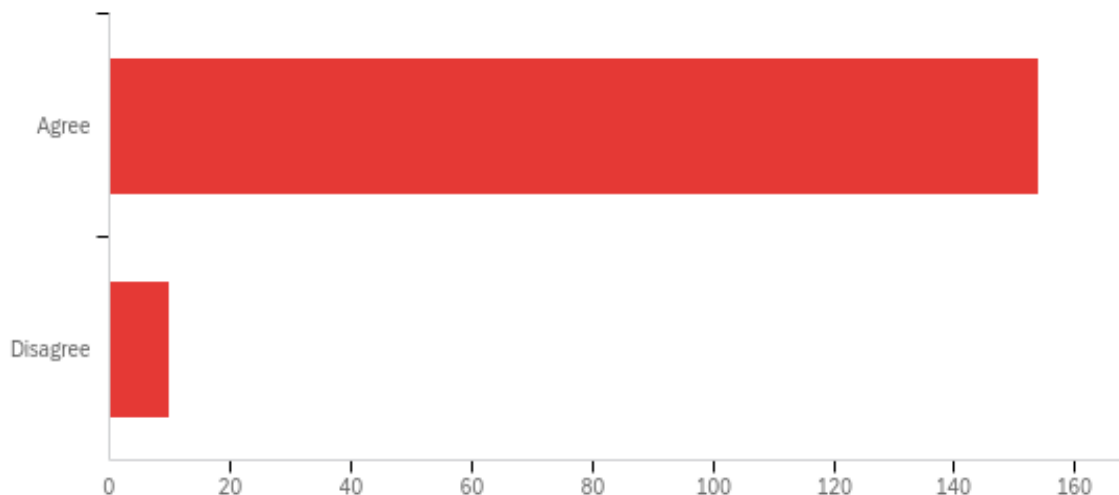
Following the data collection and analysis, patterns were found in the survey pool and their tendency to prefer a modern take on syllabi. The first question considered students overall thoughts on the presence of an organized syllabus, featuring infographics and snapshots of what each individual week's expectations were.

TABLE 1



Results indicated that 124 (76%) of the 164 participants would rather the updated syllabus style, with infographics and details to guide the reader along, showing example of what their upcoming workload entails. In contrast, 20 respondents (12%) preferred the text-based syllabus, while 20 students (12%) had no preference on the syllabi style.

TABLE 2



The next question in the survey focused on the thoughts of students and whether they considered it acceptable to relocate the university policies section to an appendix section, rather than hiding class specific information students search for. Once again, majority reigned that the policies section would be beneficial for it to be relocated to another area. 154 (94%) of the 164 participants agreed on relocating extra information to the appendix section. Only 10 students (6%) wanted to keep the information inside the syllabus with other course information.

Table 3

“Eye catching and made things stick to my brain longer, less to read which makes it easier”

“It is easier and more engaging to read”

“It’s not as overwhelming”

“It’s more enjoyable to look at and read”

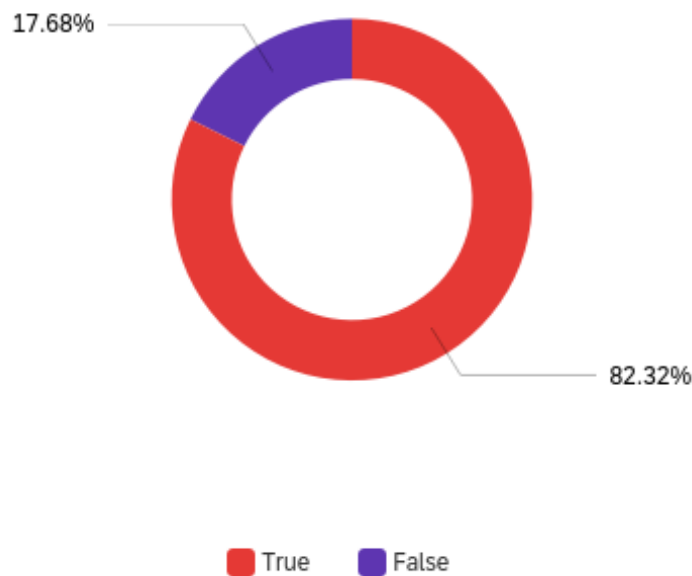
“Text written syllabi are boring. I often miss information because I don’t want to read them.”

“The graphics help “break up” the information into smaller, more readable sections.”

“I am a visual person and it works better when information is colorful. For me, it makes it more engaging”

The third question offered an open-ended discussion on why students may prefer the infographic delivery method over a text-based syllabus. The results above are quotes from the survey participants. Students state that it helped them as visual learners to process information and offered ease of finding the content for which they were searching. In addition, students noted that it tends to be less overwhelming than text-based syllabi. A few respondents also explained that the graphics add a bit of excitement and are more interesting. Most of the student's responses indicated that the infographic syllabi served its purpose, saying it was concise, easy to read, attention grabbing, and even exciting.

Table 4



The final question in the survey asked students if they would prefer info-graphic syllabi in all their courses rather than the traditional and text-based offerings. 135 (82%) of the

respondents indicated they would rather the modern take on the syllabus. Only 29 (18%) of students preferred sticking to the original style of syllabi in their university courses.

Conclusion

Research was to analyze the student's thoughts and opinions on making changes in the delivery of course syllabus. With results shown from this survey, instructors receive insight to methods to better the learning experience for students and create a way of learning to benefit the evolving technology.

Interpretation of Findings

With clear results in favor of the infographic-based syllabi, this study proved that students' methods of learning are changing and need to be catered to. With technology consistently on the rise, the access to utilize graphics is consistently becoming more easily attainable for most. Free software creates charts, graphs, and such with little time and effort. The implementation of modernizing syllabi is considerably simple and can be done by most instructors without extensive education in technology.

Students' methods of learning are constantly evolving, as well. The takeover of technology has changed much of Generation Z and the way the process thoughts, feelings, and emotions. It is crucial that these behaviors found in Generation Z are taken into consideration, to help benefit and create success for the future.

By researching and implementing changes to benefit the learning styles and methods of the students, it can result in stellar performance and high brain function. With the ability of

Generation Z and their understanding of technology mixed with former content and communication, great discoveries and pathways can be created.

Recommendations

As shown in the research, students express that they comprehended things clearly when using the info-graphical syllabi approach. Instructors should continue to utilize this information in creating content for future students, enabling students to learn. As suggested in the survey results, condensing down crucial information and relocating commonly known and rarely searched for information to other areas are beneficial. By arranging course syllabi to feature important, highly sought-after information such as assignments, deadlines, grading rubrics, and instructor contact information, less information is lost in the process. Colored, attention seeking details and photos entertain the mind and encourages students' creativity. By including considerate placement of the eye grabbing details, students are more likely to easily understand content and not lose attention span. By curating the creative environment for students by simply integrating modern technology in syllabi, brain activity is at an all time high.

Recommendations for Further Research

In this research, the primary goal was to seek answers on students' preferences of syllabi delivery methods. Further research could address the impact on instructors, whether the infographics and organizational methods caused more stress on the instructor and if it outweighed the benefit of better communication and comprehension of students. In addition, if researchers were to utilize a diverse participant pool, there may be opportunities to analyze

different personality types and characteristics, and how the impact on their preferences and learning styles can differentiate from the participants used in this study.

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