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Changing Pedagogy for Contemporaneity with New Design Platforms

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ABSTRACT

For centuries, the mighty pen dominated classroom pedagogy in academia. In the 1980s, PowerPoint emerged as a significant tool to enhance in-class presentations. For the most part, academic presentations were confined to the four walls of the classroom. In 2019, the Coronavirus pandemic emptied the campuses, causing a pivot in the classroom experience. ZOOM, and other video tools, proliferated as channels for sharing oral and visual information, but there are better communication channels. We posit that academics should utilize graphic design platforms that provide more capability than PowerPoint technology. They exceed the typical slide projection capability, and they allow for more flexibility when integrating course content with social media. Graphic design platforms can be used to create Facebook posts and covers; they can be used to create invitations, cards, resumes, business letterheads, invoices, websites, logos, newsletters, brochures, business proposals, videos, worksheets, and infographics. In this paper we discuss and exhibit two specific communication strategies (that is, live videos and social media postings), and examples are provided using Canva. However, the same examples could have been created using other design platforms such as Stencil, Crello, Picmonkey, Snappa, Easil, Adobe Spark, and Pablo.

Keywords: *PowerPoint, Canva, graphic design platform, teaching, visuals, study abroad*

INTRODUCTION

Academic classroom instruction via lectures and diagrams has been a staple of university education since the founding of the world's first university, the University of Al Qarawiynn, in Morocco (Hoque & Abdullah, 2021). In the recent past, technology changes have given lecturers more capability to illustrate and demonstrate information using computers and presentation software. Most recently, the COVID pandemic has shocked the academic environment, causing a sudden shift in pedagogy, the utilization of online platforms to enable knowledge transfer, and consequently the early adoption of video and Internet conferencing tools such as ZOOM. However, Internet conferencing tools do not meet all the needs, expectations, and personalities of the student audience (García-Morales *et al*, 2021). As major users of "everything social media," college students are accustomed to a wide array of audiovisual options on the Internet. ZOOM in its current design is rife with problems for large audiences, for example, echoes during class meetings, slow screen refresh, and connectivity failure, via the webcam or audio transmission.

Additionally, using ZOOM for classroom communication pedagogy demands a new strategy for effective student engagement. The web classroom removes participants from the emotionally rich, in-person, social interaction; eye contact, facial expressions and physical gestures, and are just not as engaging online. Speakers cannot react to small nuances of expression from the audience as effectively. Absent the physical presence of lecturer and students, capturing the attention of a listener, especially young listeners, can be more challenging. Even when using ZOOM, absenteeism and "pretend" attendance, where students sign in but do not pay attention, hiding behind their identification photo, may be quite high.

College professors are also challenged with a more diverse student population, distracted with multiple responsibilities, obligations, and shorter attention spans. The onus is on the professor to deliver course content in a relevant and engaging manner, utilizing the most effective technology.

Another issue in the college classroom is the need for more practice in critical thinking and communication. There is an increasing need for universities to produce students with a set of technical skills across all disciplines that better prepare them for the workforce.

In this paper we describe pedagogical strategies that can be implemented in online learning, which are also relevant for in-person learning, to (i) create more engaging classroom learning experiences; (ii) develop superior communication skills for both professors and students; and (iii) provide students with more relevant skills for the job market.

LITERATURE REVIEW

Increasingly, the college student population is more diverse ethnically (Crisp *et al.*, 2015), and more inclusive in terms of race, gender, economic circumstances, and family experience in higher education. One of the characteristics of the new college population is that a significant portion of students are not prepared for college, nor are they experienced learners (Chang *et al*., 2020; Ives & Castillo-Montoya, 2020). Students increasingly face new challenges (Nartiningrum & Nugroho, 2020). A substantial percentage of students assume financial and family obligations that prevent them from total academic immersion. Economically disadvantaged students, even when awarded generous financial aid packages, may lack other resources that are useful for success. Missing resources may include access to high-speed Internet at home (Auxier & Anderson, 2020), money for incidentals, and experienced family mentors. Changes in technology also impact the way students interact socially, the way they choose recreational and social activities, the way they shop and the way they learn. As college professors design their courses, they need to recognize the learning resources, skills, and interests of their audience (Chiu, 2022).

College education is changing rapidly. Societal shifts occur as a function of technological developments, economic circumstances, and demographic change. The COVID pandemic created a major shock to academic life (Daniel, 2020). College students were required to migrate from the physical classroom to the virtual online classroom. Students were disrupted regarding their mental, physical, and emotional comfort levels, as well as their personal strategies for learning. Likewise, college faculty also needed to adjust and modify their lecture presentations to fit the new paradigm. For the most part, the subject matter may have remained the same, but knowledge delivery and interpersonal communication had to be modified rapidly. Quite often, when presented with a new environment, many people experience additional stress, which in turn creates even more mental health issues (Yang *et al.,* 2021). This is also noted in a study with high school students (Chiu, 2022). The academic environment has built-in stressors such as the need to succeed, discovering oneself, selecting a career, and fitting in socially. The learning experience is further complicated by the changes in the learning environment, and the need to learn new technology (von Keyserlingk *et al.,* 2022). Stress makes it more difficult to stay motivated and engaged (Wang *et al.,* 2019). Ryan & Deci (2000) proposed a psychological model that is used to explain human motivation.

They suggested three dimensions: (i) autonomy through self-control; (ii) competence as demonstrated by skill and confidence; and (iii) relatedness by feeling love and connected. When all three factors are established, students feel comfortable in their learning environment. When the learning environment suddenly shifts, it may be necessary to consider the emotional impact of the new environment and adjust strategies to create effective learning. In shifting to the online learning environment, a student may feel less connected through lack of physical interaction, less competent in the need to master new technology, and less autonomous with reduced control of what happens in the classroom.

Shifting to a new pedagogy requires a reevaluation of student needs. Technology changes create more distant learning, an explosion of information beyond college repositories and an emphasis on teamwork and collaboration (Leskes, 2004). More changes have impacted the education experience since Leskes (2004) study. This calls for a need to reevaluate classroom pedagogy.

Academics must be agile and timely in their adoption of new pedagogical methods to effectively address the new college experience (Santos et al., 2019). Not only does content change over time but methods that foster learning need to maintain and improve effectiveness. Live video and visual displays enhance presentations.

DISCUSSION

Engaging Students

To make the online classroom experience more engaging, some lecturers utilize video clips, frequently linked from Youtube. This requires a significant commitment of time by the lecturer for the required searches and there is no guarantee that an appropriate video will be found. The new graphic design packages that are available can provide an alternative solution. Lecturers can use the software to create their own videos. There are great benefits to this strategy. First, the videos can be fully relevant to what the lecturer wants to demonstrate. Second, the entertainment and engagement value of the video will increase as the lecturer personalizes the video. If the lecturer can recruit students to participate in the video creation, the engagement and entertainment value will increase further (Greene and Crespi, 2012). Given that a ZOOM class can be hosted from any place in the world, it is possible to infuse lectures with international and cultural practices. For example, a professor visiting an island in the Mediterranean creates audiovisual material for his lessons. The videos can be used both asynchronously and synchronously. The professor might visit businesses, interview local entrepreneurs, and talk with local customers. Two video links are provided below that demonstrate this idea:

- https://youtu.be/JV2ufkhO52c (about an emigrant who returned to his birthplace to run a scuba diving company); and
- https://youtu.be/Q3S3nPEXuCM (about small business entrepreneurs earning a living on the same island).

By transmitting from the field, the professor integrates the students into the experience, as if they too were on the island. Students can also pose questions to the locals half a world away.

Instead of case studies on paper, the students have live lessons interspersed with additional video clips from the field. In one live lesson, advertising students were able to witness how an art director and copywriter collaborated to create an ad for *Jello*. The shaking J*ello* erupts into a volcano while a rocket takes off. The camera pans to kids joyously eating *Jello,* savoring the sweetness. The song “Happy days are here again…”. plays in the background. The graphic design produced in the studio comes to life on the students” smartphones and laptops. Students were able to interact and ask questions to the advertising agency personnel.

Field Trip Experience

Using videos provides a new strategy for bringing students on a field trip. Although a real field trip may be more memorable, the timing, coordination and cost can be substantial. It is more financially efficient for one person, the professor, to visit an ad agency and share his interaction on video. It would also be possible for individual students or small groups of students to visit their own points of interest, video record their experience, and share them with the class. Applying this strategy, an instructor only needs a modest amount of money to transport and set up equipment to create virtual field study. The only required equipment would be a smart phone and a laptop.

The Internet serves as a primary research tool. Google and sites like Wikipedia provide students with immediate data gathering capability, and Google has reduced the value of the traditional professor. The professor's unique knowledge in a discipline decreases in relevance when everyone has immediate access to the information. How will professors maintain their relevance, value, and unique position in society? We suggest professors should develop skills in connecting the application of theoretical knowledge to solving practical problems, specifically as they apply to social and economic issues. Integrating field experiences into course content and creating unique audiovisual effects will create a superior learning experience. Graphic design software is critically important in this type of communication.

Role of the University

Centuries ago, the university served as the repository of world knowledge. Those members of society who were fortunate enough to join the university represented the most privileged and brightest. However, the needs of society evolved over the centuries, as did the purpose of the university. As higher education became more ubiquitous for advancing the quality of life in society, a variety of pedagogical changes evolved, especially over the last 100 years. One of the most significant changes was the democratization of the college experience. In America, a much broader slice of society was given an opportunity to participate in the college education experience. A college degree provides an opportunity to help a person rise within society. The demand for a college education caused a proliferation of higher education institutions. Competitive forces among institutions created a need to provide students with a more comfortable, enjoyable, convenient, and entertaining environment, such as: nicer dorms, recreation centers, sports stadiums, comfortable libraries, electronic game rooms, commuter lounges, computer labs, IT walk-in clinics, attractive landscapes, and mental and health services. This has significantly raised the cost of education. To cut costs, universities look for less expensive methods for delivering content in training a diverse population of students through more flexibility and choice.

Technology has made it possible to provide lectures across the world. Poor enrollment for a course at one university can be compensated for with students from other universities, making it financially viable for universities to join forces and offer what would otherwise have been a low enrollment course on a single campus. Unpalatable as it may sound, especially in a unionized setting, professors may be forced to compete against professors across partnering universities. More competition among a larger pool of qualified faculty will require more effort by a professor who aspires to teach a course across partnering universities.

Creating a live field experience, such as a cooking demonstration by an esteemed chef, or a well-established physician performing a complicated surgical procedure is a reasonable strategy. This would enhance student engagement and complement appropriate readings. Real-life, real-time interaction is useful for replacing the stale settings of the unadorned ZOOM experience. For study abroad courses, live streaming techniques can be embedded into the curriculum, particularly effective for students unable to physically attend the overseas program.

The Pen and the Visual

The post pandemic university classroom tools and teaching methods will change the university experience. As effective and as powerful as the written word is at communicating social opinion, visuals are even more effective. The brain is primarily visual, not textual (Aycock, 2020; Borst & Kosslyn, 2008; Hanna *et al.,* 1999). Visuals communicate information faster than text. The brain processes image elements simultaneously while language proceeds in a sequential manner. Visuals are more easily processed and are more believable than text. The success of social media such as YouTube and Tik Tok reinforce these phenomena. Today, printed articles and textbooks include more diagrams since many ideas require a visual explanation (Rohwer *et al.,* 2021). Illustrations augment comprehension.

The Student Presentation Experience

A common college assignment requires students to solve a given problem and present their efforts to their peers and the professor. They are expected to exercise both critical thinking and creative design as they explore different solutions and develop an effective strategy for resolving the proposed issue. This is a worthy activity, but there is an additional benefit, that is, giving students an opportunity to communicate their work creatively to an audience. Success in life is highly dependent on effective communication.

Clarity of thought is of paramount importance. For a typical writing project, incorporating visual imagery is helpful for adding clarity to the written text. This is also true when delivering an oral presentation. The audience will develop a more complete understanding of the topic when effective visuals are incorporated. Hence, the routine use of the slide show for oral presentations.

PRESENTATION TOOLS

Visual slide shows, such as PowerPoint, have become the *sine qua non* of oral presentations. Overall, they are effective at enhancing information transfer, although there is an important issue. In an academic context, the effort to dazzle creates a potential issue, over-endorsing the effectiveness of pictures (Hallewell & Lackovic, 2017). Academic presenters should exercise caution in their visuals, utilizing them to enlighten, rather than persuade others with their biases.

On the other hand, there are many societal situations such as in marketing, entertainment, tourism, politics, where the need for dazzle is important. Graphic design platforms have useful advantages that enhance the learning experience and provide more flexible visual context (Carney & Levin, 2002; Carpenter *et al.,* 2020).

Graphic Design Platforms

Academics, professors, and students alike, should be encouraged to create superior visual presentations rather than rely on PowerPoint templates. Graphic design platforms can be used to replace PowerPoint. Students can easily embed their own photos, edit visual content, and use drag-and-drop features. Examples of such software can be found on a plethora of web sites, for example: Crello, Picmonkey, Snappa, Easil, Adobe Spark, Pablo, Stencil and Canva. These sites also carry millions of stock photos, many of which are royalty free. They typically carry many template designs, icons, graphics, and Google Web fonts. These options are also available for online meetings and communication.

The online, Australian-based web site, Canva.com, is a versatile graphics design tool. It features an easy-to-use drag-and-drop interface (Donaldson, 2020). Upon launching the web page, the user starts by entering the custom dimensions. For a ZOOM meeting, one would select a size that fits

the ZOOM screen. One establishes a background which is repeated from slide to slide. One may instead alter some of the slide backgrounds. Canva offers several background color categories and textures including gradients, patterns, and abstracts. Background colors can be selected that match or reinforce an organization's colors or themes. For example, for university communications, one can select colors that match the university's identifying colors, thus reinforcing the affiliation with the university. The University of Rhode Island (URI) uses navy blue as a predominant background color. It contrasts with white print. To increase aesthetics, additional shades of blue can be added into the background. The URI athletic department adds Keaney blue, that is the light blue historically used by URI athletes, to its sports clothing and memorabilia. A URI academic designer may add streaks or a wavelike line of these colors at the edge of each slide to enhance the image. Figure 1 demonstrates an example of this graphic design tactic developed by the main author, using royalty free images.

Figure 1: Illustration of how Wavelike Lines Complement the Main Color

Using the *upload* function on Canva, the designer could add a small picture of the university logo and display it in a corner of each slide to further reinforce university affiliation.

One can mount several royalty-free and/or open source images on one canvas. In Figure 2 the main author designed an image which consists of a face, a flower, and the word "smell" coming

together as one composite photo embedded on Cleveland State University's green colored background.

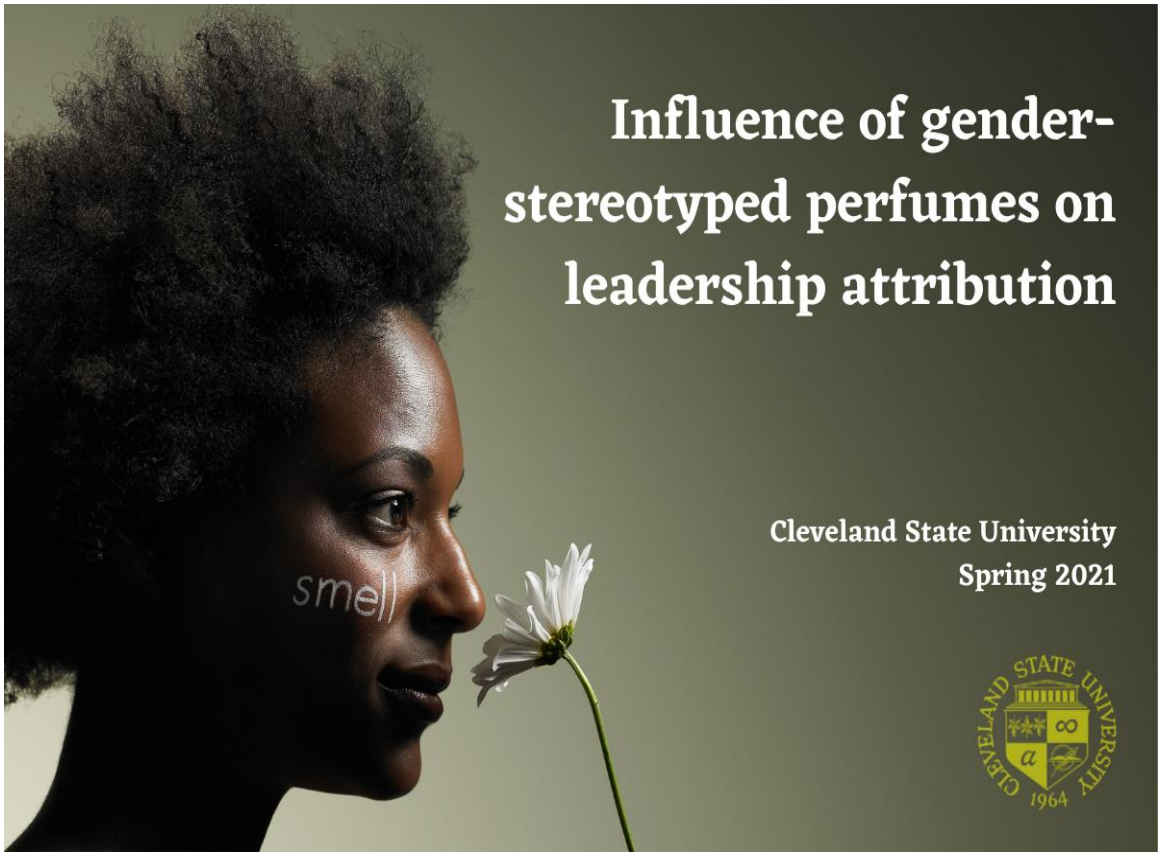

Figure 2*:* Illustration of Another Collage Faithful to Another University's Color

In a class presentation scenario, where several presentations are made in the same class, it is beneficial to differentiate one presentation from another. Creating more personal slides, utilizing the unique characteristics or interests of the presenters will facilitate this effort. Figure 3 demonstrates a slide from a student presentation regarding the use of robotics in healthcare settings. The presentation opened with a collage of pictures, the student inserted herself amid the robots and added a few humorous touches: a mouse on her shoulder, a nurse's hat on the robot and a robot in the background engaged in conversation.

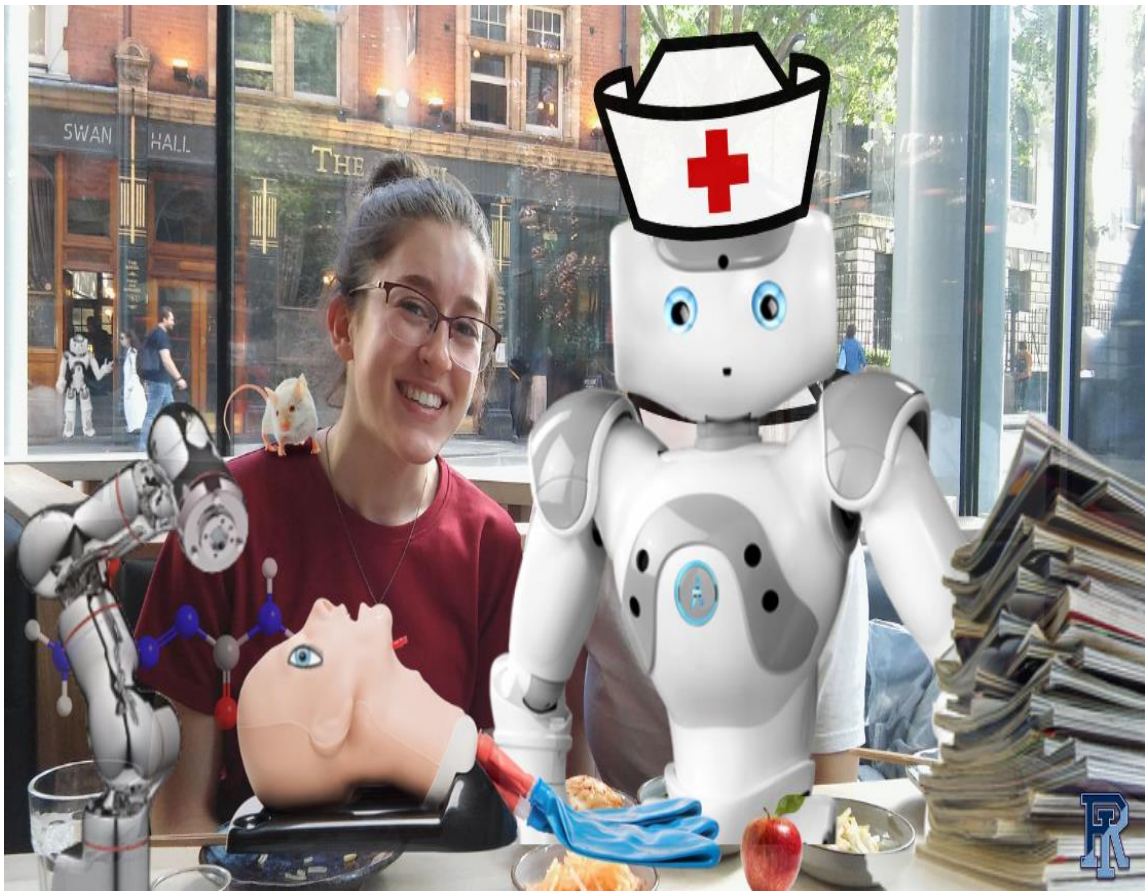

Figure 3*:* Project Presenter Inserts Her Photo Amidst the Robots

* *Graphic presented with author permission*

Adding text to slides should be kept to a minimum. Text should be used to highlight the speaker's words rather than merely repeat them. Words should only be added when a visual fails to convey the full message. Figure 4 presents a slide referring to the Nobel Prize winners, Richard Axel and Linda B. Buck, reflecting their scientific contribution to the sense of smell. The illustration of the smelling process is augmented with the text describing the olfactory process. Likewise, the success of the two scientists is clarified with the text describing their accomplishment.

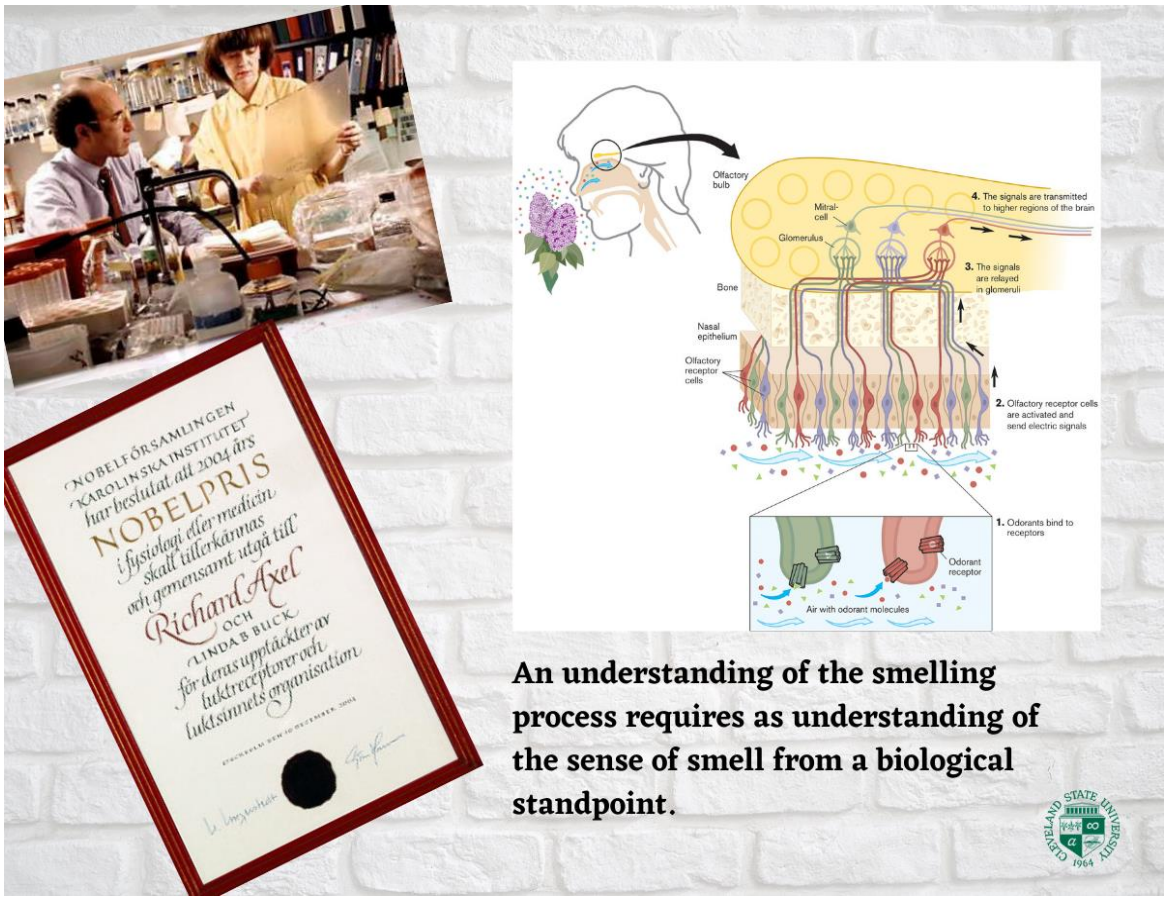

***Figure 4**:* Text enhances the meaning of the visual

** Graphic presented with author permission*

Graphic design platforms allow for more sophisticated visuals such as the following open-faced sandwich bakery business (in proximity of the University of Rhode Island). Several marketing documents were created in Canva for the purposes of illustration in this article, that help an audience to visualize the business model. The visuals included:

- A menu of the open-faced sandwiches (See Figure 5).
- An FAQ about the bakery's offerings.
- Several billboards advertising the bakery.
- A poster, with two open-faced sandwiches, which lists the bakery as a sponsor of a related exhibition on campus (See Figure 6).
- A blog article about the bakery.

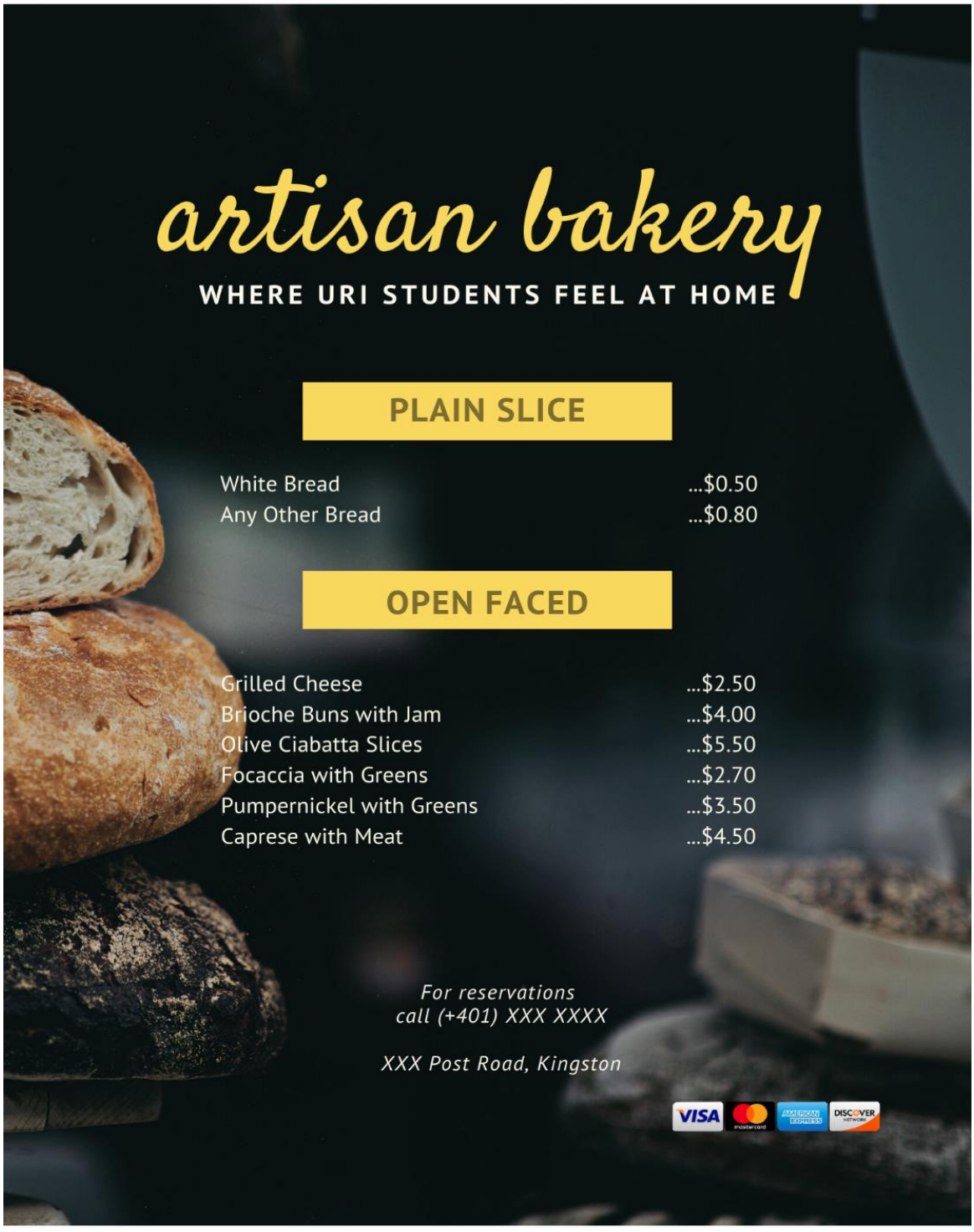

Figure 5: Illustration of Food Menu

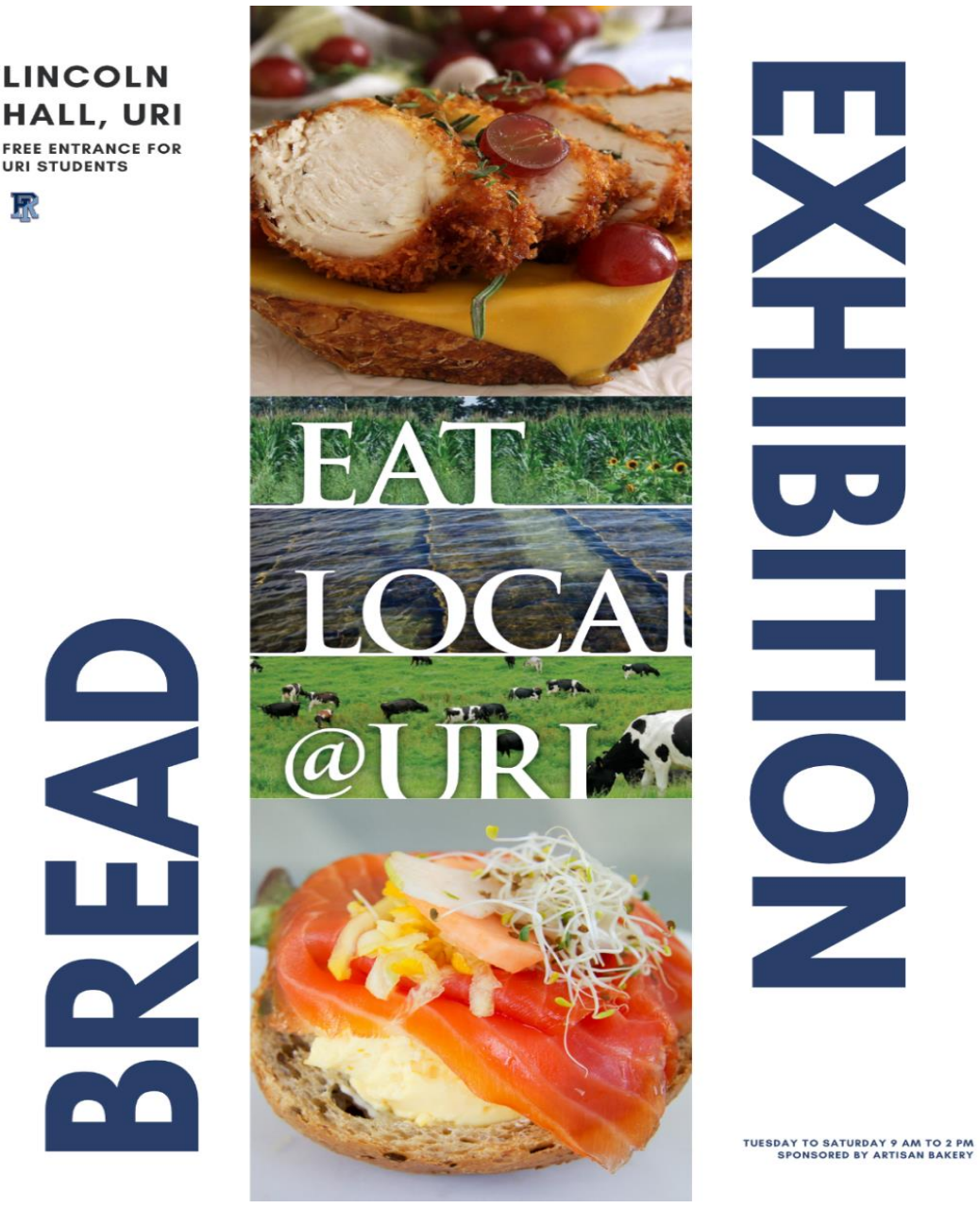

Figure 6: Illustration of Exhibition Poster

Graphic design platforms offer extensive tools for creating visuals. Canva has five general categories:

- Social media (e.g., YouTube channel art, LinkedIn banners, Facebook posts and covers, and Instagram stories and posts).
- Personal (e.g., invitations, t-shirt designs, cards, schedule planners, postcards, and resumes).
- Business (e.g., business letterheads, invoices, business cards, presentations, websites, and logos).
- Marketing (e.g., newsletters, posters, brochures, flyers, proposals, and infographics), and
- Education (e.g., class schedules, bookmarks, classroom décor kits, videos, worksheets, and certificates).

Using a graphics design package can enhance both online and in-person instruction. Additional versatility for creative design, creative instruction, creative learning and communicating are key benefits of these tools.

Need for Visualization

Visualization represents a graphical code of data and concepts (Colin, 2012). It makes learning more effective, extraordinary, and engaging (Harper, 2002). Prior studies have concluded that visualization plays a critical mediating role for learners to help synthesize concepts and contexts (Lowe, 2004). Therefore, educators should consider incorporating visual tools in their lecture design with the expectation that it will help students improve their visual literacy (Eilam, 2012). The time has come to incorporate the full graphic design platform. GDPs continue to evolve, including innovations ranging from animated logos to TikTok videos, from Zoom backgrounds to Pinterest and Tumblr graphics. The platforms promote creativity through colorful Facebook posts and covers, invitations, cards, resumes, business letterheads, invoices, websites, logos, newsletters, brochures, proposals, videos, worksheets, and infographics.

As the pandemic forced professors to walk away from traditional in-class pedagogies, the post-pandemic era will demand superior presentation technologies. PowerPoint has played an important role in supporting visual presentations (Simons, 2004; Tufte, 2003). However, graphic design platforms will eventually replace the older technology (Udell, 2006). The new platforms allow users to present ideas in an even more engaging and meaningful manner. Electronic technology for the sake of education and communication can take advantage of both audio and visual senses. Creating brochures and visually oriented newsletters in hard copy format also engages the sense of touch. Not only should educators have a tool that is more robust for teaching, but learners should have an opportunity to experience relevant material in a more engaging manner, one that is filled with live lessons linked to demonstrations, the thoughts of experts, discussions, and visualization. Students need to master new technologies that add value to their skill sets when they enter the workforce.

CONCLUSION

Technology is rapidly changing our capability for communicating. Social changes have also impacted our ability, desire, and interest in sharing physical space. Hence, we need effective tools for communicating across the Internet, in virtual meetings and in-person. And yet, there is a reluctance among consumers to adopt new technologies which enhance their current communication challenges. The rationale for adopting graphic design platforms has remained largely unexplored (Buckley & Nerantzi, 2020). PowerPoint made sense in the 1980s. It allowed for more dynamic communication, easier to construct and deliver, but technology has moved on. The Internet prompted an explosion of visual communication tools which provide more functionality and versatility than PowerPoint. We posit that PowerPoint is no longer servicing college students effectively.

Future Studies

Universities must keep pace with modern technology. As Enfroy (2022) notes, a college instructor operating on a limited budget the cost of subscriptions for graphic design software prohibitive. Adobe Photoshop is a top-quality tool, but the cost is substantial. However, there are free software tools like Inkscape, capable of producing effective designs. Instructors who engage students in collaborative projects should consider utilizing cloud based options.

Future research should explore the extent to which the tools for classroom instruction differ from the tools for online instruction. Online instruction requires an increased use of message boards and emails. Self-grading, automated exams are also more popular in online classes. Effective education calls for master instructors with state-of-the-art technology, utilizing extensive graphic design platforms. We need to revisit the knowledge transfer paradigm in the face of new technology developments, rapid changes in the education environment, and a shift in consumer expectations. We need to consider how learning audiences receive and process information. We need to incorporate methodologies that are proven to be successful and evaluate how the environment supports the efficacy of the construction and delivery of knowledge. It is wise to investigate which technologies are best at adding value to the student skill set upon entering the job market.

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