Senate Technology Council

End of Year Report 2022-2023

Technology Council Members

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Introduction

In the Academic Year 2022-2023, the Senate Technology Council held monthly meetings. Meetings were held via Zoom. Because the Technology Across the Curriculum (TAC) committee had similar charges, our meetings were combined. The AI subgroup consisted of TAC and Council members.

Standing Charges:

a. Identify the technological needs of faculty.

b. Recommend technology policies and initiatives based on curricular and scholarship needs.

c. Participate in the University's technological policymaking and planning.

d. Liaise with technology administrators on policy, curricular, and scholarship issues.

2022/23 Charges:

- Explore possible collaboration with other task forces, councils, and committees to identify and provide faculty with the resources for remote and in-person teaching and research, with an emphasis on open source and open educational resources.
- Work with the Technology Across the Curriculum (TAC) Committee and the Library to expand faculty use of zero-cost materials, particularly in first-year courses. Recommend to the administration what would accelerate such adoption among faculty.
- Work with the IRT regarding the transition to Blackboard Ultra and training sessions.
- Work with the TAC to incorporate the TAC Lightning Round initiative into the What Works conference in December 2022.
- Promote the use of existing 3D printing and other Immersive Technologies in teaching and learning.
- Investigate the use of AI in higher education and report on implementation ideas for WP.

TAC/Faculty Senate Technology Council Events and Activities
All activities are aligned with their corresponding charge.

- Explore possible collaboration with other task forces, councils, and committees to identify and provide faculty with the resources for remote and in-person teaching and research, with an emphasis on open source and open educational resources.
    - The council sent out a survey to the university community to find out which resources are being used or needed and the level of satisfaction with the technology and the training provided by the university. The results of the survey are attached at the end.

- Work with the Technology Across the Curriculum (TAC) Committee and the Library to expand faculty use of zero-cost materials, particularly in first-year courses. Recommend to the administration what would accelerate such adoption among faculty.
    - We shared the TAC's last year's comprehensive report on the use and the resources of Open Educational Resources (OER) with council members to share with their departments.
- Work with the IRT regarding the transition to Blackboard Ultra and training sessions.
    - Efforts to promote the conversion to Blackboard Ultra were directed at the Blackboard Ultra Institute instead of a stand-alone event.
    - Faculty Senate Technology council members and TAC members promoted the Blackboard Ultra Institute to their departments.
    - For more information about IRT's activities with Ultra: IRT Activities around promoting/supporting Ultra transition
- Work with the TAC to incorporate the TAC Lightning Round initiative into the *What Works conference* in December 2022.
    - Presenters and presentation titles:
        - Ruth Maher: Exploring Spaces: Stories and Mapping in Non-GIS Classes
        - Jim Miles: Web 2.0 Tools
        - Gigi Mohamad: Incorporating VR into Education Using Infiniscope
        - Jenn Hastings: 3D Technology in the Classroom
- Promote using existing 3D printing and other Immersive Technologies in teaching and learning.
    - Open House DBLL Open House Flyer & Report Combined
    - TAC and the Technology Council members discussed and promoted the DBLL event to their students and departments.
- Investigate the use of AI in higher education and report on implementation ideas for WP.
    - TAC/Faculty Senate Technology Council AI Study Group Members: Gigi Mohamad (TAC and Faculty Senate Technology Council), Jaclyn Morrissette, Andy Gladfelter, Ruth Maher, Patrick Ryan (Faculty Senate Technology Council)
    - The Study Group explored the literature and trends surrounding AI and shared their findings with members for discussion.
    - The Study Group wrote a separate document, which is attached at the end of this report, incorporating the feedback from this conversation.

Report on the results of the Technology Survey:

Introduction

The William Paterson University Faculty Senate Technology Council conducted a survey to evaluate the technologies used by the faculty to complete their coursework and their satisfaction with the technology provided by the University. The survey also sought to identify technologies that are missing, barriers to technology utilization, and the frequency of technology-related challenges.

Survey Findings

The survey received responses from 14 faculty members. The results are summarized below.

1. Current technology usage: Most of the respondents (12 out of 14) reported using Blackboard to complete their coursework. Other commonly used technologies include Zoom, MS Office, and Yuja. A wide variety of hardware, such as computers, tablets, phones, webcams, and headphones, were also used.

2. Satisfaction with University technology: The majority of respondents (57.14%) indicated that they were satisfied with the technology provided by the university. 28.57% of the respondents were neither satisfied nor dissatisfied, while 14.29% were dissatisfied.

3. Missing technologies: Most of the respondents (9 out of 14) did not identify any missing technologies. However, those who reported a need for qualitative analysis software, more smart classrooms, better Wi-Fi support for students, access to Google Classroom, an AI writing detector, quantitative analysis software such as NVivo and Dedoose, updated laptops, and an easier video tool to create and edit videos.

4. Frequency of technology-related challenges: A significant number of respondents (57.14%) occasionally encountered technology-related challenges or issues affecting their productivity. 28.57% encountered such issues often, while 14.29% rarely or never encountered them.

5. Frequency of training or support: Most respondents (78.57%) occasionally received training or support for the technology they use. 14.29% rarely or never received training or support, while only 7.14% received it often.

6. Barriers to technology utilization: 42.86% of the respondents reported that there are barriers preventing them from utilizing the technology provided by the University. The most common barrier reported was lack of time, followed by scheduling conflicts for training and insufficient internet access for students.

7. Improving technology infrastructure: 5 out of 14 faculty had suggestions. Limiting the changes to systems we use every day, increasing support staff, improving the ticket system to be more responsive to people in the classroom teaching, and a better way to collect data on student performance (Navigate & Anthology were given as examples).

8. User-friendly technology: The majority of faculty (57.14%) answered that it is reasonably user-friendly.

9. Feedback on the overall technology experience: Rolling out multiple programs at the same time is challenging. More technical staff for faculty. More MAC support. A better and simpler video editing software (Yuja & Zoom were given as examples).

Conclusion

Overall, the survey indicates that while most of the respondents were satisfied with the technology provided by the University, there are still areas for improvement. The survey identified the need for qualitative and quantitative analysis software, better Wi-Fi support for students, and an easier video tool to create and edit videos. In addition, respondents reported encountering technology-related challenges occasionally or often, suggesting that more training and support may be necessary. Finally, the survey highlights the need to address barriers to technology utilization, particularly lack of time and scheduling conflicts for training.

Technology Across the Curriculum and Faculty Senate Technology Council Report on

AI Innovation and Uses at William Paterson University

The Technology Across the Curriculum committee and the Faculty Senate Technology Council have reviewed numerous peer-reviewed publications,[1] primers,[2] and industry resources[3] to gather a list of best practices for the use of artificial intelligence in higher education. This report comprises three sections: 1) general recommendations for the use of AI; 2) AI applications in teaching and learning; and 3) AI applications in student success. The following recommendations should not be considered exhaustive of all opportunities to incorporate AI at William Paterson University. For example, AI has been used in recruitment and enrollment strategies outside TAC's purview. Instead, we hope these recommendations raise awareness of the promises and challenges posed by the adoption of innovative technologies.

Before presenting specific recommendations across these three areas, it is important to keep 6 key questions about the use of AI in mind posed by Elana Zeide at Educause: [2]

1. What functions does the data perform? You can't just see a red, green, and yellow light about student success and take that at face value, at least not if you are the one implementing the systems and you want to do so responsibly.
2. What decisions don't we see? These are decisions not just about the computer processing but also about the categorization and the visualization.
3. Who controls the content? Is it you, or is it the technology provider? How comfortable are you with that? How comfortable are your professors with that?
4. How do we check outcomes in terms of efficacy, in terms of distribution, and in terms of positive and negative outcomes?
5. What gets lost with *datafication?* I use this word to describe doing these things based on data as opposed to on interpersonal or bureaucratic systems.
6. What—and whose—interests do we prioritize?

General Recommendations for the Use of AI

Upon review of relevant material and joint discussion with the Faculty Senate Technology Council, TAC provides the following general recommendations for the use of AI at William Paterson University.

1. **Collaborate with the Library, the Center for Teaching Excellence, the Center for Teaching with Technology, and other relevant units to develop AI literacy programming.** Artificial Intelligence is a tool that can be leveraged to produce positive curricular changes through creative adaptation of existing assignments, such as scaffolding assignments, identifying flaws in AI-generated output, or using AI to assist with brainstorming tasks.[4] The campus community should be encouraged to be critical consumers of AI by applying tools such as the ROBOT test.[5] The University of Florida, for example, developed a comprehensive AI literacy program.[6] Curricular and program development should be encouraged in appropriate units (Provost, colleges, departments) for promoting AI-preparedness (e.g. AI Literacy, AI Ethics, etc.) by developing new courses and credentials (degrees, certificates) centering AI. Raising awareness of the utility and

limitations of AI tools, for all members of the campus community, is paramount to its successful adoption at William Paterson University.

2. **Revise the Academic Integrity policy to include a statement on Artificial Intelligence.** Many instructors are creating course-specific statements on the use of AI in student submissions.[7] Additionally, several universities have published web pages that indicate how use of AI is a violation of the cheating/plagiarism provisions of their academic integrity policies, including AI-created audio/visual media.[8] The administration should prioritize revising the Academic Integrity policy to include an explicit statement about how the uncredited use of AI represents a violation of the policy.
3. **Include a diverse pool of stakeholders to provide input before any new AI tools are adopted.** Diverse inputs may help eliminate some unintentional biases that are inherent in AI. To the extent possible, stakeholders from all levels of the university—students, faculty, staff, and administrators—should consider the benefits and limitations of any projected AI tools.
4. **Continuously evaluate any adopted AI technology to minimize systematic, unintended biases.** AI has been used in numerous sectors for years, and in numerous identified cases, the data used to train AI is subject to unconscious bias.[9] From racial bias in predicting risk of reoffending,[10] facial recognition,[11] and credit card approvals[12] to racial and gender bias in healthcare[13] and hiring decisions,[14] AI implementations can reproduce existing structural inequalities and discrimination. In at least one case, a university stopped using an AI admissions algorithm over concerns about systematic bias.[15] EAB's Navigate has been criticized for labeling black students as "high risk" and steering them toward "easy" majors.[16] It is therefore recommended that any anticipated AI implementations undergo thorough pre-implementation and continuing annual reviews to ensure that the tools are tweaked to eliminate unintentional bias where possible. Additionally, AI tools should be frequently reviewed to ensure that they produce the desired evidence-based outcomes.
5. **Be transparent regarding when, where, and how AI is being used in University operations.** If AI is used for admissions decisions, identification of "at risk" students, or assessment, for example, the administration should consult with a legal expert to ensure that the university is not liable for lawsuits arising from the use of such tools. Additionally, the university should be concerned about privacy issues, such as the outsourcing of student data to third party providers.

AI Applications for Teaching and Learning

6. **Develop pedagogies that anticipate/incorporate AI.** As AI tools make writing and composing more complex and sophisticated processes, TAC proposes investment in curricular development (individual courses, microcredentials, badges, etc.) related to AI literacy. Many writing, music, and visual arts teachers are concerned about AI plagiarism. While several tools exist to try to detect some forms of AI-generated text (such as GPTZero, OpenAI's detector, and Blackboard's safe Assign) these tools may generate false negatives and false positives and we believe they will be rapidly outpaced by AI improvements. TAC therefore recommends reviewing writing/composing assignments to both deepen instruction and reduce incentives to plagiarize, including writing-to-learn, scaffolding, low-stakes assignments, and other initiatives. Writing Across the Curriculum and other workshops can provide faculty resources.
7. **Develop personalized learning systems**. AI can generate customized content depending on student interests and needs. For example, students may be provided with video-based

resources to supplement class instruction. Tools like Nolej.ai can create e-learning modules, including quizzes, flash cards, etc., based on uploaded readings or other content. Adaptive learning platforms like Knewton, Dreambox Learning, and McGraw Hill Connect use AI to analyze student performance and provide tailored content and assessments. Knewton adjusts the difficulty level and sequence of lessons based on each student's progress and mastery.

8. **Assist students with brainstorming, research, and other important tasks**. Tools like fermat.ws, Elicit, Leo, and Wizdom have been created to aid idea generation and review of literature.
9. **Deploy AI-based teaching assistants, tutors, and office hours**. Multiple universities have deployed always-on AI assistants and tutors to help students answer course-related questions.[17] In some cases, AI can interface with LMS and direct students to relevant course materials if they have not reviewed course content related to their inquiry. Carnegie Learning and Squirrel AI are using AI to provide personalized feedback and support to students.
10. **Automate feedback on assignment drafts**. For example, Turnitin has developed a "Revision Assistant" that gives students automated feedback to improve their writing skills.[18] Gradescope automates grading to allow instructors to focus on other tasks like student support and course preparation.[19]

AI Applications for Student Success

11. **Predict student success with analytics**. Several universities have used AI to predict the likelihood of students dropping out of classes or out of college.[20]
12. **Award just-in-time financial aid for students at risk of dropping out**. Georgia State University, for example, through its Panther Retention Grants, awards emergency grants to students who would otherwise be dropped for nonpayment. Over 86% of grant recipients ended up graduating.[21]
13. **Increase retention through personalized touchpoints**. Several AI tools provide high-intensity personalized touchpoints to students at risk of leaving, such as Aible AI.[22] Learning analytics platforms like Brightspace and Blackboard Analytics can use AI to, for example, help faculty members identify students who are struggling with a particular concept and provide targeted interventions.
14. **Apply AI tools to resume review and job preparation**. Most large employers use an Applicant Tracking System to screen out candidates. Several universities, such as Yale, are using AI to assist students with successful resume screening.[23] Additionally, tools are available to provide mock interview sessions with students and score their performance in video recorded interviews.
15. **Deploy chatbots to answer mundane/routine questions**. Ivy.ai, AdmitHub, AskPio, and other chatbots can answer student questions 24/7, book appointments with key offices, and provide information. By serving as an "interactive FAQ," chatbots can be an always-on resource to resolve common student issues that are often time-consuming for staff.

Concluding Remarks

The number and variety of AI tools is vast and growing weekly. TAC therefore cannot provide recommendations for any specific vendors due to the ever-changing landscape of AI in higher education. However, we hope that the above recommendations are useful as the Provost attempts to chart a future for artificial intelligence at William Paterson University.

Prepared by the AI Task Force (Andy Gladfelter, Ruth Maher, Gigi Mohamad, Jaclyn Morrissette, Patrick Ryan) on behalf of the Technology Across the Curriculum committee and Faculty Senate Technology Council.