The main motivation for developing this pedagogy strategy is from a statement made in a retreat happen to be part of by Dean King on 8/20/2024 . “If you are everywhere, nobody sees you”. I thought to myself, You need to pivot and launch (to everywhere). A light bulb came on in my brain Interestingly we had just been treated with some beautiful AI t-shirts and cookies with lightbulbs (show those cookies images if available) as emblematic of the new AI program. I am an information systems and fintech professor and a collaborative faculty in the data science program which is why I was at the retreat in the first place.

Secondly, the information glut with AI proliferation and information overload is making it difficult for students and teachers to focus important knowledge areas. Students are insatiable and looking for more due to the avalanche of information and professors must navigate well to ensure what is needed in today’s businesses are continuously being taught whiles ensuring balance with untapped but potentially distractable information that can depress and derail students learning and industry application. Below is a brainstorming of a new pedagogical strategy called the pivot-and-launch approach to teaching and learning given the background. Pivot is to focus and strengthen the core of the knowledge area, effectively communicate it as a mental reference frame. Its advantage is to allow you to better assess the limits of your ability to extend the application of the core knowledge. Like a seesaw, you can have a controlled extension of how high one goes at the other end. Launch takes the information and the feasible extension boundary and apply to yourself or the other person, whether in learning a new text, doing homework, teaching peers, etc. You should be able to the strategy at the micro levels and macro-levels of pedagogy. see if there are pedagogical references or citations that can be included in developing this strategy. Include motivation and justification. Also, develop it to attract a teaching grant. Let it be applicable to teaching data science, business courses like information systems, Fintech and AI, etc. How does established teaching approaches compare and what makes this very novel. Include and critique say 80/20 rule where 80 percent of what we know or understand stems from 20% of knowledge. This is for an Ivy league teaching proposal.

Pivot-and-launch" pedagogical strategy is an innovative approach that could significantly enhance teaching and learning across various disciplines.

**Concept Development**

**1. Define Core Concepts (Pivot):**

* **Objective:** Strengthen the foundational knowledge in each subject area, making it a robust mental reference point.
* **Method:** Use active learning techniques to ensure a deep understanding of core concepts. This could include problem-based learning, where students solve real-world problems to understand theoretical concepts deeply.

**2. Extend Application (Launch):**

* **Objective:** Apply the core knowledge to new and diverse contexts, enhancing adaptability and problem-solving skills.
* **Method:** Encourage projects, case studies, and peer teaching sessions that require students to apply their foundational knowledge in new, challenging scenarios.

**Motivation and Justification**

* **Motivation:** The rapid evolution of fields like Fintech, AI and Blockchain demands a pedagogy that not only strengthens core knowledge but also enhances the ability to apply this knowledge flexibly and innovatively, on the go
* **Justification:** Educational research suggests that deep understanding of core concepts combined with the ability to apply knowledge in varied contexts leads to better long-term retention and adaptability in professional settings. Citing educational theories such as Bloom's Taxonomy and Constructivism could strengthen your argument.

Tasks involved is critical the

Giving them different

Chronological approaches

Talk to Kaitlin about the learning objectives – questions about

Context of ideas after the core knowledge is defined -- for critical reflections

A -term

**Pedagogical References**

* **Research Existing Models:** Investigate existing educational models that emphasize core knowledge and application, such as the Flipped Classroom and Experiential Learning.
* **Literature Review:** Conduct a thorough review of academic literature on effective teaching strategies in higher education, focusing on your target disciplines.

**Application to Specific Fields**

* **Data Science:** Use case studies from real-world datasets to teach statistical theories and machine learning algorithms.
* **Business and Information Systems:** Develop simulations that mimic business environments where students can apply IT solutions.
* **Fintech:** Introduce software tools for financial modeling and blockchain applications in practical, hands-on sessions.
* **AI:** Use project-based learning where students create AI models to solve actual problems.

**Grant Attraction Strategy**

* **Proposal Writing:** Clearly articulate the benefits of the pivot-and-launch approach in your grant proposal, emphasizing innovative teaching methods and potential for high impact.
* **Collaborations:** Seek partnerships with technology companies and other educational institutions to provide resources and credibility.
* **Outcome Measures:** Define clear metrics for evaluating the success of the teaching methods, such as student engagement, retention rates, and performance improvements.

**Implementation**

* **Pilot Programs:** Start with pilot programs in specific courses to measure effectiveness and gather data.
* **Feedback Loops:** Establish mechanisms to collect feedback from students and educators to continuously improve the teaching methods.

**Conclusion**

By aligning the pivot-and-launch strategy with current educational needs and future industry demands, you can create a compelling case for a teaching grant. This strategy not only promises to enhance educational outcomes but also prepares students to thrive in rapidly changing professional landscapes.

RMRP

**Title:** "Pivot-and-Launch: A Novel Pedagogical Strategy for Enhancing Teaching and Learning in Data Science, Business, and Fintech"

**Executive Summary:** The "Pivot-and-Launch" pedagogical strategy is an innovative approach that combines the strengths of core knowledge and application to enhance teaching and learning in data science, business, and fintech. By strengthening the foundational knowledge in each subject area and applying it to new and diverse contexts, students will develop a deep understanding of the material and the ability to adapt to changing professional landscapes.

**Background:** The rapid evolution of fields like fintech, AI, and blockchain demands a pedagogy that not only strengthens core knowledge but also enhances the ability to apply this knowledge flexibly and innovatively. The "Pivot-and-Launch" strategy is designed to meet this need by providing students with a robust mental reference point and the skills to apply this knowledge in new and challenging scenarios.

**Concept Development:**

1. **Define Core Concepts (Pivot):**
   * Objective: Strengthen the foundational knowledge in each subject area, making it a robust mental reference point.
   * Method: Use active learning techniques to ensure a deep understanding of core concepts. This could include problem-based learning, where students solve real-world problems to understand theoretical concepts deeply.
2. **Extend Application (Launch):**
   * Objective: Apply the core knowledge to new and diverse contexts, enhancing adaptability and problem-solving skills.
   * Method: Encourage projects, case studies, and peer teaching sessions that require students to apply their foundational knowledge in new, challenging scenarios.

**Motivation and Justification:**

* Motivation: The rapid evolution of fields like fintech, AI, and blockchain demands a pedagogy that not only strengthens core knowledge but also enhances the ability to apply this knowledge flexibly and innovatively, on the go.
* Justification: Educational research suggests that deep understanding of core concepts combined with the ability to apply knowledge in varied contexts leads to better long-term retention and adaptability in professional settings. Citing educational theories such as Bloom's Taxonomy and Constructivism could strengthen the argument.

**Pedagogical References:**

* Research Existing Models: Investigate existing educational models that emphasize core knowledge and application, such as the Flipped Classroom and Experiential Learning.
* Literature Review: Conduct a thorough review of academic literature on effective teaching strategies in higher education, focusing on the target disciplines.

**Application to Specific Fields:**

* Data Science: Use case studies from real-world datasets to teach statistical theories and machine learning algorithms.
* Business and Information Systems: Develop simulations that mimic business environments where students can apply IT solutions.
* Fintech: Introduce software tools for financial modeling and blockchain applications in practical, hands-on sessions.
* AI: Use project-based learning where students create AI models to solve actual problems.

**Grant Attraction Strategy:**

* Proposal Writing: Clearly articulate the benefits of the pivot-and-launch approach in the grant proposal, emphasizing innovative teaching methods and potential for high impact.
* Collaborations: Seek partnerships with technology companies and other educational institutions to provide resources and credibility.
* Outcome Measures: Define clear metrics for evaluating the success of the teaching methods, such as student engagement, retention rates, and performance improvements.

**Implementation:**

* Pilot Programs: Start with pilot programs in specific courses to measure effectiveness and gather data.
* Feedback Loops: Establish mechanisms to collect feedback from students and educators to continuously improve the teaching methods.

**Conclusion:** By aligning the pivot-and-launch strategy with current educational needs and future industry demands, you can create a compelling case for a teaching grant. This strategy not only promises to enhance educational outcomes but also prepares students to thrive in rapidly changing professional landscapes.

**Budget:** The budget for this project will include the following:

* Personnel: $200,000 (salaries and benefits for faculty and staff)
* Materials and Equipment: $50,000 (software, hardware, and other materials needed for the project)
* Travel and Training: $20,000 (travel and training expenses for faculty and staff)
* Miscellaneous: $10,000 (other expenses, such as marketing and outreach)

Total Budget: $280,000

**Title:** "Pivot-and-Launch: A Novel Pedagogical Strategy for Enhancing Teaching and Learning in Data Science, Business, and Fintech"

**Executive Summary:** The information glut with AI proliferation and information overload is making it difficult for students and teachers to focus important knowledge areas. Students are insatiable and looking for more due to the avalanche of information and professors must navigate well to ensure what is needed in today’s businesses are continuously being taught whiles ensuring balance with untapped but potentially distractable information that can depress and derail students learning and industry application. The "Pivot-and-Launch" pedagogical strategy is an innovative approach that combines the strengths of core knowledge and application to enhance teaching and learning in data science, business, and fintech. By strengthening the foundational knowledge in each subject area and applying it to new and diverse contexts, students will develop a deep understanding of the material and the ability to adapt to changing professional landscapes.

**Introduction:** The rapid evolution of fields like fintech, AI, and blockchain demands a pedagogy that not only strengthens core knowledge but also enhances the ability to apply this knowledge flexibly and innovatively. The "Pivot-and-Launch" strategy is designed to meet this need by providing students with a robust mental reference point and the skills to apply this knowledge in new and challenging scenarios.

**Background:** The "Pivot-and-Launch" strategy is rooted in the concept of "deep learning," which emphasizes the importance of understanding the underlying principles and concepts of a subject area. This approach is particularly relevant in fields like data science, business, and fintech, where the pace of technological change is rapid and the need for adaptability is high.

**Objectives:** The objectives of the "Pivot-and-Launch" strategy are to:

1. Strengthen the foundational knowledge in each subject area, making it a robust mental reference point.
2. Apply the core knowledge to new and diverse contexts, enhancing adaptability and problem-solving skills.
3. Develop students' ability to think critically and creatively, and to apply their knowledge in innovative and practical ways.

**Methodology:** The "Pivot-and-Launch" strategy will be implemented through a combination of active learning techniques, including problem-based learning, case studies, and peer teaching sessions. These methods will be used to teach students the core concepts and principles of data science, business, and fintech, and to provide them with the opportunity to apply this knowledge in new and challenging scenarios.

**Expected Outcomes:** The expected outcomes of the "Pivot-and-Launch" strategy are:

1. Improved student understanding of the core concepts and principles of data science, business, and fintech.
2. Enhanced student ability to apply their knowledge in new and diverse contexts.
3. Increased student engagement and motivation, as they are challenged to think critically and creatively.
4. Improved student retention and graduation rates, as they are better prepared for the demands of the workforce.

**Evaluation:** The effectiveness of the "Pivot-and-Launch" strategy will be evaluated through a combination of quantitative and qualitative methods, including:

1. Student surveys and focus groups to assess their understanding and application of the core concepts and principles.
2. Analysis of student performance data to assess their ability to apply their knowledge in new and diverse contexts.
3. Faculty and staff feedback to assess the effectiveness of the strategy in enhancing teaching and learning.

**Timeline:** The implementation of the "Pivot-and-Launch" strategy will be phased over a period of three years, with the following milestones:

Year 1: Development of the strategy and implementation in a pilot course.

Year 2: Expansion of the strategy to additional courses and programs.

Year 3: Evaluation of the effectiveness of the strategy and planning for future implementation.

**Budget:** The budget for the "Pivot-and-Launch" strategy will be $280,000, which will be used to cover the following expenses:

1. Personnel: $200,000 (salaries and benefits for faculty and staff).
2. Materials and Equipment: $50,000 (software, hardware, and other materials needed for the project).
3. Travel and Training: $20,000 (travel and training expenses for faculty and staff).
4. Miscellaneous: $10,000 (other expenses, such as marketing and outreach).

I hope this draft proposal meets your requirements. Please let me know if you need any further assistance.

Pivot-and-Launch: A Novel Pedagogical Strategy for Enhancing Project-Based Learning in STEM and Business Fields

Brief Description of Project Idea (maximum of 80 words):

The "Pivot-and-Launch" pedagogical strategy is an innovative approach to project-based learning (PBL) that combines the strengths of core knowledge and application to enhance teaching and learning. The strategy is specifically designed to address the challenges posed by information overload and the rapid evolution of fields like data science, business, and AI. By strengthening foundational knowledge and applying it to diverse contexts through PBL, students will develop a deep understanding of the material and the ability to adapt to changing professional landscapes.

Why are you interested in being a PBL Faculty Fellow?  
*How will your work through the fellowship benefit your scholarship, teaching, outreach, or other professional activities?*

I am interested in being a PBL Faculty Fellow because I believe that the "Pivot-and-Launch" strategy has the potential to transform the way we approach teaching and learning in higher education. I am particularly excited about the opportunity to collaborate with other faculty members who are passionate about PBL and to contribute to the development of resources and best practices that can be shared with the wider academic community.

The fellowship will provide me with the opportunity to:

-Refine and formalize the "Pivot-and-Launch" strategy, drawing on the expertise of the Center for Project-Based Learning and other PBL Faculty Fellows.

-Develop a comprehensive set of resources and materials that can be used by other faculty members to implement the "Pivot-and-Launch" strategy in their own courses.

-Disseminate my findings through publications and presentations, contributing to the growing body of knowledge on effective PBL strategies.

-Network with other PBL practitioners and build collaborations that can enhance my teaching and research activities.

**For work that includes project assignments, tools, modules, or approaches for instruction:** Describe the product you will create for the Center.  For what users would it be useful? How will it benefit student learning? To what extent could it be adapted for other courses or contexts?

I will create a comprehensive toolkit for implementing the "Pivot-and-Launch" strategy in higher education. This toolkit will include:

- A detailed explanation of the "Pivot-and-Launch" framework, including its theoretical underpinnings and practical applications.

- A collection of PBL project ideas and assignments that are aligned with the "Pivot-and-Launch" approach.

- Assessment tools and rubrics that can be used to evaluate student learning in a PBL environment.

- Case studies and examples of successful implementations of the "Pivot-and-Launch" strategy in various disciplines.

This toolkit will be useful for:

- Faculty members in higher education who are interested in implementing PBL in their courses.

- Instructional designers and curriculum developers who are looking for innovative approaches to teaching and learning.

- Administrators and policymakers who are interested in promoting PBL as a means of enhancing student engagement and success.

The "Pivot-and-Launch" strategy will benefit student learning by:

- Strengthening their understanding of core concepts and principles.

- Enhancing their ability to apply knowledge in diverse contexts.

- Developing their critical thinking and problem-solving skills.

- Increasing their sustained motivation and engagement in the learning process until critical knowledge application is crystallized.

The "Pivot-and-Launch" strategy is highly adaptable and can be used in a variety of courses and contexts. The core principles of the strategy—strengthening foundational knowledge and applying it through PBL—are relevant across disciplines. The specific PBL projects and assignments can be tailored to the particular learning objectives and content of a course.

This work will provide faculty with a practical and effective framework for implementing PBL in their courses. The "Pivot-and-Launch" strategy addresses a critical challenge in higher education: the need to balance the acquisition of core knowledge amidst information overload with the development of applied skills. By providing concrete examples and resources, this work will empower faculty to design and deliver engaging PBL experiences that promote deep learning and prepare students for success in their chosen fields.

**For work that includes scholarly articles, research briefs, or research studies**:  
*Describe the value of this work to faculty. What issue will you address? What would you like to learn?  What methods/approaches will you use?*

This work will provide faculty with a practical and effective framework for implementing PBL in their courses. The "Pivot-and-Launch" strategy addresses a critical challenge in higher education: the need to balance the acquisition of core knowledge amidst information overload with the development of applied skills. By providing concrete examples and resources, this work will empower faculty to design and deliver engaging PBL experiences that promote deep learning and prepare students for success in their chosen fields.

The "Pivot-and-Launch" strategy addresses the following issues:

- Information overload and the need for students to be able to filter and apply relevant information effectively.

- The rapid evolution of knowledge and the need for students to be able to adapt to changing professional landscapes.

- The challenge of balancing the acquisition of core knowledge with the development of applied skills.

Through this fellowship, I would like to learn more about:

- Best practices for implementing PBL in various disciplines and contexts.

- Effective strategies for assessing student learning in a PBL environment.

- The impact of the "Pivot-and-Launch" strategy on student motivation, engagement, and academic achievement.

I will use a variety of methods and approaches to develop and evaluate the "Pivot-and-Launch" strategy, including:

- Literature review to identify best practices in PBL and relevant educational theories.

- Collaboration with other PBL Faculty Fellows and Center staff to refine the strategy and develop resources.

- Pilot implementation of the strategy in my own courses, with a focus on data science, business application of blockchain technology, business intelligence, and AI applications in innovative teaching.

- Collection and analysis of student feedback and performance data to evaluate the effectiveness of the strategy.

- Dissemination of findings through publications and presentations.