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# Northwestern University's Experience in Leveraging Bluepulse, a Formative Feedback Technology, for Continuous Instructor Development

Jenny Chen, Office of the Registrar, Northwestern University;  
Raluca Druta, Explorance





# Overview

- Rationale and Background
- Bluepulse at a Glance
- The Bluepulse Pilot at Northwestern
- Instructor Story
- Wrap-up & Questions



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# Rationale and Background

*Office of the Registrar  
Searle Center for Advancing Teaching and Learning*





# About Northwestern University

- ❖ 3 campuses
  - Evanston, IL
  - Chicago, IL
  - Doha, Qatar
- ❖ 2,500+ courses evaluated per quarter across 11 schools (not including Medical), administered through Blue by the Office of the Registrar

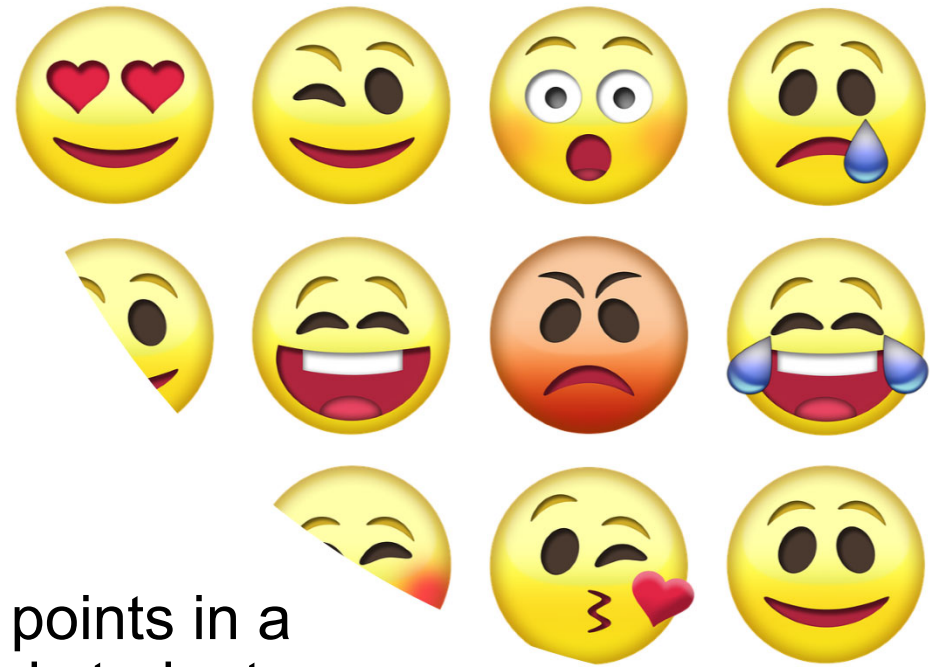




## End of term Student ratings @ Northwestern

- ❖ Not immediately actionable
- ❖ Not focused on students' experience of learning





Student feedback collected at different points in a course is beneficial for both faculty and students (formative feedback)





## They can help....

- ❖ Faculty reflect critically on their own teaching and their students' experience of learning
- ❖ Faculty improve their teaching in the short- and long-term
- ❖ Promote interaction between the instructor and students
- ❖ Encourage students to think critically about their own experience of learning (including their own strengths, gaps and weaknesses)
- ❖ Increase student motivation, engagement and sense of investment in the course
- ❖ Improve students' sense of diversity, equity and inclusion
- ❖ Improve students' help-seeking behavior
- ❖ Enhance students' sense of fit and belonging
- ❖ Ensure that all students have a voice in the class.



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# Bluepulse at a Glance

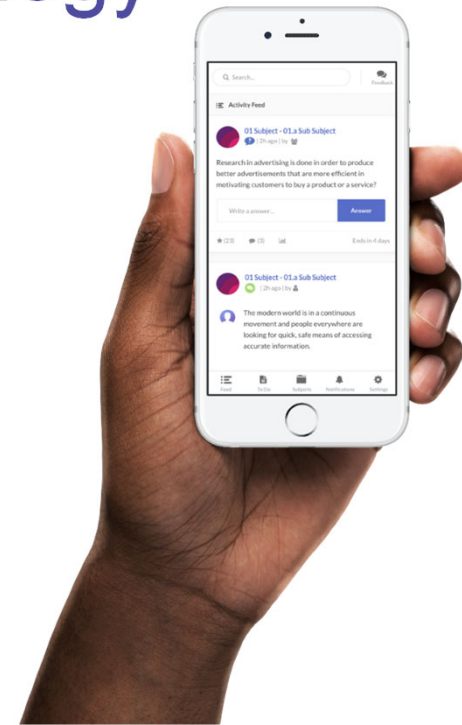






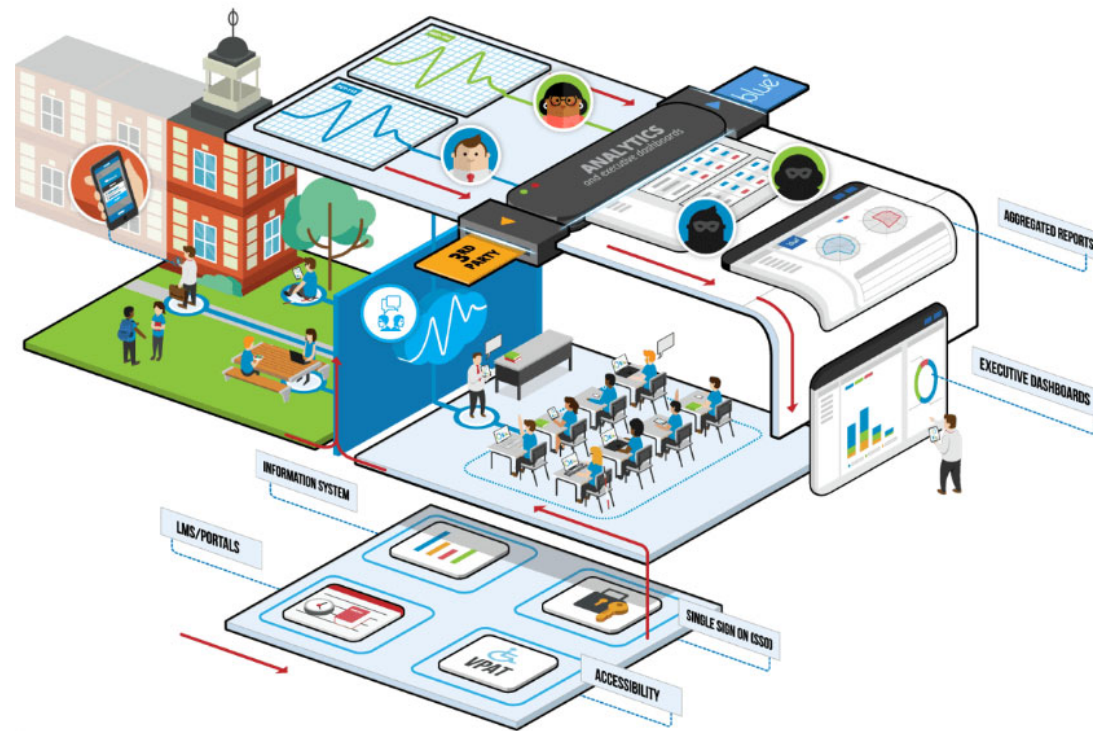
# Formative Feedback Technology

- ❖ Live social feedback
- ❖ Two way communication
- ❖ Confidentiality
- ❖ Integration with LMS
- ❖ Mobile friendly





# How it works



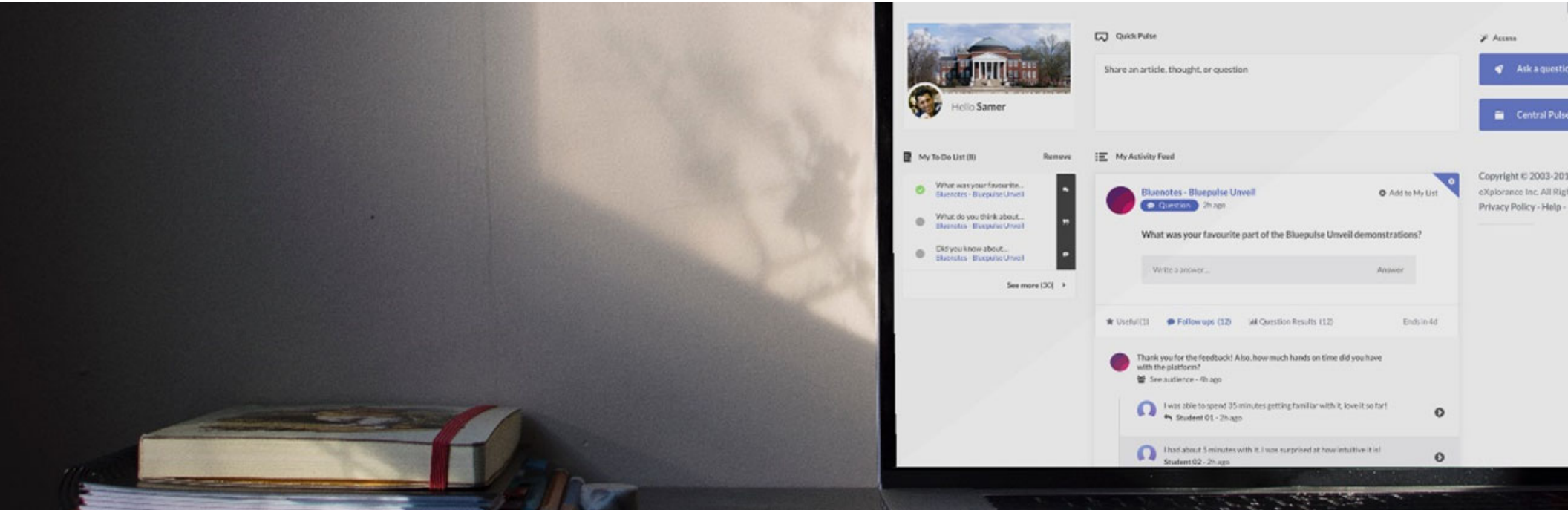


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# The Bluepulse Pilot @ Northwestern

*Office of the Registrar  
Searle Center for Advancing Teaching and Learning  
Explorance*





## Spring 2019 Pilot

- **8** courses and **8** faculty:
- Humanities, Social Sciences, and STEM fields
- Focused on sizes of 50 and above
- 1 online course, 1 non-credit course





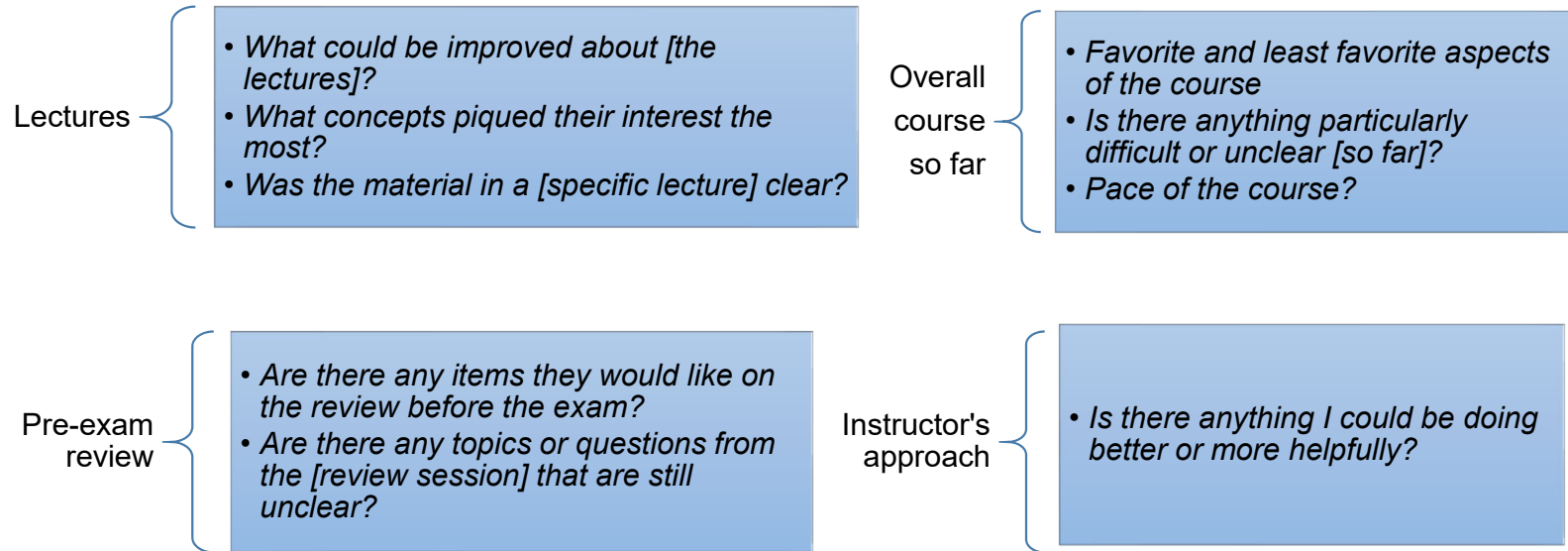
# Orientation and Pilot Structure

- ❖ One on one or small group instructor onboarding
  - Watch demo video (recorded by Nitin!)
  - Talk through usage of the tool from the student and instructor side, and through CANVAS
  - Provide recommendations (common types of usages and question formats, include in syllabus, relay expectations to students, etc.)
- ❖ Let them loose
- ❖ Mid Term and End of Term surveys





# Questions Asked





# Positive Instructor Experience

- Instructors found the BluePulse tool easy to use with the mean of **5.63/7** (1= Extremely Difficult to 7= Extremely Easy).
- 3 instructors specifically noted that they liked the “anonymous” student response feature of the tool.
- It is an easy tool similar to posting anything on social media...





## Some Challenges

- ❖ Some hiccups in figuring out how to view student follow ups and how to share results
- ❖ Limited LMS integration
- ❖ Should we allow the non-confidential option?
- ❖ 1 instructor noted that only a very small percentage of their students used the tool even though they were encouraged to do so (tech fatigue?)





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# Instructor Story

*(Stephanie Knezz – Assistant Professor, Chemistry)*





# Anonymous polling and following up

 **2019SP\_CHEM\_142-0\_SEC01**  
Question from Stephanie Knezz

Now you've gotten to Acid/Base Titrations in class. How confident do you feel about analyzing titration curves and doing titration calculations after seeing it in lecture today?  
Edited

< All

TOTAL **12** MEAN **2.33**

Is there a specific question you have about the process or something we could emphasize that would be helpful?  
See audience - a month ago

Follow-ups Options **Send**

Poor	<div style="width: 25%;"></div>	3
Fair	<div style="width: 33%;"></div>	4
Good	<div style="width: 25%;"></div>	3
Very good	<div style="width: 16.6%;"></div>	2
Excellent	<div style="width: 0%;"></div>	0



Add to my list

2019SP\_CHEM\_142-0\_SEC01  
Question from Stephanie Knezz

You all finished your first lab report-type assignment, and that is really awesome!

For the last lab report (final assignment of the quarter), I want to make sure you're set up for success. What do you feel like was missing that could have helped you with your first lab report? (Resources? Clearer instructions? Different schedule for office hours?) Any feedback would be very much appreciated.

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All Unread TOTAL 4

I wish we got a heads up that we had to write a more formal lab report. I was taken aback and probably started it later than I should have. A sample lab report would be nice to see formatting and stuff  
Answer from Anonymous

I think that more office hours would be helpful! There are not always TAs in the resource room and I feel that the amount of office hours offered currently is kind of limited, especially planning around other classes.  
Answer from Anonymous

I didn't understand if you were supposed to write both the materials and the procedure and the TA's were confused on that as well. I think making sure to be more transparent with that will be important.

# Requesting Feedback from students

I found that the resources for lab report guides and helpers were all very spread out, and you had to look in many different modules and posts to get all the lab information. If there was one place for all formal lab report guides I think that could be helpful  
Answer from Anonymous



2019SP\_CHEM\_142-0\_SEC01  
Question from Stephanie Knezz

Because you are all answering clicker questions so well, I am worried I might be going too slow in lab lecture. How is the pace from your perspective? Is there anything I could be doing better or more helpfully?

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Word cloud Results

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TOTAL 16



I think the pace is good which is why we are answering so well.

Answer from Anonymous



I think the pace is perfect.

Answer from Anonymous



I really enjoy lab lecture. It's a good review and I don't dread going to class

Answer from Anonymous



I think the pace is actually really good. Lab lecture is easy to follow and the questions are actually asking about the material at hand so its beneficial. I feel like I am learning a lot and feel prepared for lab. Pace doesn't seem too fast or too slow. I guess the clicker questions can be slightly more difficult but I think they are fine being left the way they are.

Answer from Anonymous



# Requesting Feedback from students



I think that the pace of the material and the difficulty of the questions could be increased slightly, but overall, I like the review and it helps consolidate what I already know.

Answer from Anonymous



The pace is good! Thank you!

Answer from Anonymous



The pace of the lecture is appropriate and manageable.

Answer from Anonymous



I think the pace is just fine right now. If it was any faster, I think I would be lost and I would not be able to comprehend what is being said the way I do right now.

Answer from Anonymous



the pace is perfect please don't go any faster!! I personally fear that if it goes faster I will be lost.

Answer from Anonymous



I do feel like we are moving a little slowly and almost in circles in lab lecture. From my perspective, it would be useful for you to explain what this experiment should look like and what concepts we should be connecting to these experiments.


Answer from Anonymous








# Anonymous requests from students

Add to my list


 **2019SP\_CHEM\_142-0\_SEC01**  
Received 8 days ago


 Hello, could you please make alum video 3 due at midnight as well? It would be greatly appreciated! Thanks!  
Confidential

★ 0    1    [FEEDBACK](#)

 Can do! Thanks for asking :)  
 See audience - 7 days ago

Add to my list

 **2019SP\_CHEM\_142-0\_SEC01**  
Received 17 days ago

 I think a lot of us underestimated how big the AB lab report was going to be and that we would greatly appreciate it if you extended the deadline to Tuesday at midnight.  
Confidential

★ 0    1    [FEEDBACK](#)





## Presentation @ Northwestern University

- ❖ Introduction of tool and pilot
- ❖ Demo and discussion
  - Interest in using Bluepulse for cohort groups
  - Feasibility for advising?

The logo features the word 'TEACHx' in a white, bold, sans-serif font, set against a solid purple rectangular background.

TEACHx

*TEACHx sparks innovation in teaching and learning by showcasing experiments and celebrating successes in a community-oriented environment.*

*This annual symposium brings together instructors, students, learning designers, and technology specialists to make connections, begin collaborations, and learn from their peers.*



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# The future





## Next Steps

- ❖ Analyze student and instructor survey results to determine best use
- ❖ Preparation for future pilot using new/improved functionality
- ❖ Usage of Question Bank?
- ❖ How does this fit in with Northwestern's process of reevaluating the evaluation process?

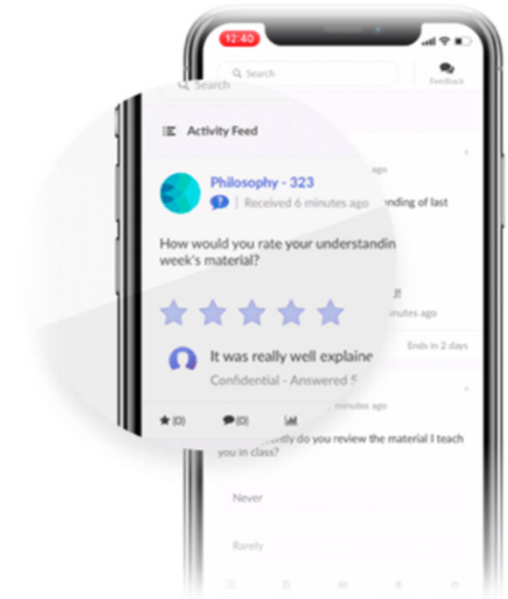






# Social Network for Educational Experience

- Engagement and Social features
  - Discussions
  - Gamification
- Embedded Machine Learning capabilities
  - Sentiment analysis on feedback
  - Redacting





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# Questions?

