# Assessment Times Newsletter

# "This Time, We Wrote a Book!"

Harold Washington College Assessment Committee

# Fall 2020

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	and on Twitter @hwlearns

## A Note from the Chair By Erica McCormack

Since March, many members of our Harold Washington College community have experienced the heartbreaking pain of losing loved ones to COVID-19, along with the other pandemic-related challenges of planning virtual memorial services and canceling other events that would typically involve family and friends sharing embraces and close space. For those of you grieving those losses, our hearts go out to you and your families.

We on the Assessment Committee are grateful to the members of our college community who have worked diligently, both on our college campus and in our respective homes and neighborhoods, to minimize the pandemic's reach by social distancing, wearing masks, and cleaning hands and workspaces. We know that the experiences we and our students have each had in the pandemic, and the risks that we are each required to take, are not distributed equitably but are instead distributed along predictable lines of race, gender, and socioeconomic systemic inequities. We are therefore proud of the ways our college has managed to support many of our students and colleagues in the transition to primarily-remote instruction and student services, but we also want to continue to examine the areas where improvements must be made to ensure equitable opportunities as well as outcomes for all our students.

Much of the work conducted under the aegis of the Assessment Committee this semester has involved creating opportunities to elicit and better understand experiences students have as multi-dimensional human beings at HWC. Some of the same questions we have asked students are ones that it might be fruitful to engage our entire community—staff, faculty, and administration—in considering how HWC can better support all of us and our intersectional identities as human beings who share this physical and virtual space with each other.

Our General Education Objectives and Student Learning Outcomes are undergoing a process of revision based on the prior semesters' reflections and discussions within the Assessment Committee (and in response to both glowing praise and recommendations from the Higher Learning Commission on our last successful accreditation visit).

While those new outcomes are being developed and refined, we have been piloting a new General Education process that involves a pre-assessment stage of inquiry, which we are calling a Query Project, designed to involve a greater number of student voices in shaping our assessment questions.

In determining our Query Project question for this semester, we took into account the feedback that our own Student Government Association received from a subset of the student body about their experience with remote learning and accessing various services since the pandemic hit. We have been thrilled to have Tetiana Seely, SGA president, representing students so ably at our meetings this semester, and we hope to continue to strengthen our committee's connections to SGA.

This semester, we asked students a Query Project question about belonging: "Thinking about all of your experiences at Harold Washington College (HWC): What can we do to help you feel comfortable, safe, valued, and/or able to be yourself in all HWC physical and virtual spaces? [please use as much space as you need to respond...the text box will expand as you write]."

716 students responded to the survey, and committee members have been reading, analyzing, and reflecting on what the responses these students shared with us suggest we as a community are already doing well and what we need to work on fixing. Student respondents shared their perceptions of areas in which HWC is succeeding in meeting their needs as well as areas in which HWC can improve to better meet their needs and help them feel valued, safe, and comfortable on campus.

Because the question was open-ended, it generated a truly remarkable array of observations, suggestions, complaints, and praise, which we think is extraordinarily important for us to not just have but to make actual use of to address some of the issues that they describe. We appreciate all the members of our community who are committed to being part of those conversations as well as parts of the actions that will need to be generated in response.

We consider the HWC Assessment Committee to be a significant component of the larger HWC community, particularly as it continues to help members feel a sense of camaraderie that is difficult to achieve in our increasingly virtual work-life. While we can no longer lure people to our meetings with snacks, the

pandemic has revealed that the major draw for participants to join the Assessment Committee (every Wednesday from 3-4 PM!) has always been *us*—the people. With weekly meetings that include faculty from every academic department, staff, students, and administrators, it is a unique committee. Having an opportunity to maintain weekly human connections and engage in meaningful conversation is something we cherish, so we thank those of you who have joined us for Assessment Committee meetings any of the Wednesdays of this semester. Whether you joined for a single meeting or are a regular member, your presence and contributions are so deeply appreciated.

Thank you, reader, for all the ways each of you contributes to our phenomenal Harold Washington College community, and thank you for sharing our Assessment Committee commitment to continuous growth and learning.





TOM GAULD

Source: https://twitter.com/tomgauld/status/1292407532611407883

# Group Photo: Wed, Nov. 25, 2020



The weekly Assessment Committee meetings (3-4 PM on Wednesdays) continue in the era of remote learning! (Screenshot from Wed, Nov. 25, 2020--the day before the break) The camaraderie that we experience in a regular semester on campus through the HWC Assessment Committee is something that helps many of us power through ordinary weeks of the semester, so the opportunity to continue to engage with our beloved colleagues is especially meaningful now.

**Top Row:** Fernando Miranda-Mendoza (Mathematics)), Erica McCormack (Humanities & Music), Yev Lapik (Biology), Ignatius Gomes (Biology), Jack Whalen (Social & Applied Sciences)

**2nd Row:** David Richardson (Humanities & Music), Loretta Visomirskis (English, Speech, Theater & Journalism), Tetiana Seely (Student Government Association), Ingrid Riedle (Social & Applied Sciences), Jennifer Vogel (Advising),

**3rd Row:** Bridgette Mahan (Business), Amy Rosenquist (English, Speech, Theater & Journalism),Roberta Anelli (Biology), Jeffrey Swigart (Mathematics), Matthew Williams (World Languages & ELL)

**4th Row and Bottom Row**: Ellen Goldberg (Transfer), Mick Laymon (Humanities & Music), Todd Heldt (Library), Paul Wandless (Art & Architecture), Carrie Nepstad (Social & Applied Sciences), Ukaisha Al-Amin (English, Speech, Theater & Journalism)

### Assessment is for Everyone By Jack Whalen, Coordinator of Adjunct Outreach

A little over a year and a half ago, a colleague suggested I check out HWC's Assessment Committee. Immediately I had two thoughts: aren't committees for full-time faculty? And, even though I had some knowledge about assessment, what could I possibly contribute to the group? As it turns out, committees are *not* just for full-time faculty members; and, contributing to the group was pretty easy and provided a sense of community.

Attending HWCAC meetings for several semesters has led to my current role as Coordinator of Adjunct Outreach. The position entails keeping part-time faculty members updated on HWCAC projects, disseminating findings on student learning, and encouraging additional adjunct participation in the committee. If you have any questions pertaining to assessment work being done at HWC or want any more insight into the committee, please reach out to me: jwhalen@ccc.edu

I also act as a liaison between HWC's adjunct community and the HWCAC, providing adjunct faculty representation on the committee. While I am not the only adjunct faculty member of the committee, we can always benefit from additional adjunct voices and insights. This semester, we have often had up to five adjunct faculty from a range of academic departments participating in each meeting.

Adjunct participation on HWCAC is vital because, as the majority of faculty members at HWC, we are the front-line to student learning. Indeed, part-time educators reach the broadest range of students, including those who attend weekend and evening classes. Thus, adjunct participation in discussions involving student learning is crucial to the overall development of assessment at HWC. Without our involvement and our insights, the picture of student learning will never be complete.

Since joining HWCAC, I have gained a better understanding of how assessment enriches student experience. Students find learning more enjoyable (and as a result are more engaged and have higher rates of success) when outcomes are well-developed and clearly stated.

Additionally, becoming more conversant in assessment vocabulary and processes is important professional development that can serve us well in pursuing those rare full-time faculty positions in the future.

Moreover, the student-centered, faculty-driven nature of HWCAC makes understanding student learning an all-inclusive endeavor. Adjunct faculty can and should be integral to the process of assessment. I invite you to join us Wednesday afternoons from 3-4 (during weeks 2 through 15 of each semester) using this zoom link: https://cccedu.zoom.us/j/96628975540

### A Tale of Two Questions By David Richardson, Vice-Chair of GenEd

Once, when I was tending bar on a boring afternoon, some decades ago now, I asked a customer I was serving—a relative stranger who had wandered in that day, with whom I had chatted amiably for a bit already—"What do you do?" Before my customer could respond, I was immediately, and dramatically, called down to the end of the bar by one of our regulars who always wore Gucci loafers and frequently ran out on his tab.

"Superdave," he said, "one must never ask boring questions, and you just asked a boring one. Not only that, it's a terrible question—if the person wants to tell you such a thing, you won't be able to stop them, but if they don't want to tell you, they've now been put in an uncomfortable position. Do not ask that question again. And also..." he finished, twirling the ice in his empty glass.

Another time, in a different bar, also some years ago now, at an end-of-the-fall-term gathering, a faculty colleague turned to me and said, "What are your demons, Dave?"

"Such an interesting question!" I thought—neither boring nor bad (at least not in the same way that mine had been), though I had no answer (or too many?) at the time. Anyway, occasionally, the question pops into my mind and I think about what I might say at the moment it does. I like that particular question so much because I can keep coming back to it, trying again, and learning new things about my past and current thinking.

I love good questions—it's how I fell in love with philosophy—and I try to avoid bad ones.

So, it makes sense that I keep getting drawn back to assessment work since it revolves, first and foremost, around questions, and one big one in particular—a key question that drives so much of our professional reflection—namely, what are students learning (and how do we know)? And it is to questions that we turned when, after assessing our assessment practices in the wake of our re-accreditation in Spring of 2018, we considered whether we might want to try a new way of assessing students' general education learning.

Turns out that, after some discussion and reflection, we *did* want to try something new—but we had no idea what that might mean or look like. So, we got to work trying to find the right questions and answer them so that we might make something new that still honored the principles behind our best work and carried forward the hard-earned knowledge we'd gained over the fifteen years of the committee's existence. Two big questions jumped out: 1) Is there a different way to conceive of General Education at Harold Washington, in terms of Objectives and Outcomes?; and 2) Is there a different process for assessing General Education that would help us avoid recurring problems with our old one?

If you attended my session on the subject at Faculty Development Week, you heard me make the argument for and initial presentation of a revision of our General Education Objectives, and since then, we have been hard at work on developing an exciting new set of general education learning outcomes that we hope will more accurately, more comprehensively, and more interrelatedly reflect the aims and critical outcomes of our courses across all of our disciplines and answer—most fully—that famous assessment question: "What do we want to be certain that students learn in their time at Harold Washington College?" More on that project (which I am delighted to hand off to the extremely capable hands of the committee and English faculty member and incoming Vice Chair of General Education, Ukaisha Al-Amin) in 2021!



Source: https://www.smbc-comics.com/comic/bias

Alongside and in concert with that effort, we have *also* been trying to figure out what a new General Education Assessment process might look like. For years, questions have been at the center of it—as every assessment began with our learning questions, but then we had a thought—what if the first voices of the process were *student* voices? What if the assessment questions we asked came out of the things that students told us about their experiences at Harold Washington?

Thus was born the first phase of our pilot Gen Ed process, known as the Query Project, which we tried for the first time back in late February and early March, and tried again in a full blown version this past semester. As "Stage 1" of our new process, it is <u>not</u> an assessment, which is to say there is no tie between the Query Project and any specific General Education Objective, nor between the Query Project and a learning outcome (or set of them). So what *is* it?

The Query Project is the college asking students to dialogue. It is an invitation to students to tell us something about their experiences at Harold Washington that then becomes the garden from which our questions about learning would bloom. To effect the change we sought to make, we decided that, in general, Query Project questions should aim at being more open-ended than closed, associated with some issue of salience or concern at the moment of its asking, be readily understandable (and answerable), and be a guestion that would be received as an expression of genuine interest in *them*, the students, and what they have to say. We would know we asked a good question, we figured, by the amount, breadth, and quality of the responses we got when we posed the question to the student body at large.

Our process both in the spring and this fall was to (briefly) discuss and then select a theme (or general direction), and solicit questions we might ask from all members of the committee. Those questions then went on a ballot for a multi-stage voting process, including a Bordo Count methodology for identifying priority questions that have broad, strong committee support.

Once the list was narrowed down, a question (or two) were selected and shared first by willing committee faculty (with their classes). Unit level liaisons then encouraged their departments to share the Query Project question with their students, and the HWC Assessment email extended the same request to all faculty; and then, after a brief period for personal, instructor-to-student encouragement, the question was shared with students, thanks to the help of Director of Student Activities, Aja Humphreys, through the "washingtonannounce" email.

After some delays (blame 2020!) and some revisions, the committee settled on the following question for our initial college-wide Query: "Thinking about all of your experiences at Harold Washington College: What can we do to help you feel comfortable, safe, valued, and/or able to be yourself in all HWC physical and virtual spaces?"

We received 859 responses, 716 of which were unique and associated with valid student IDs, which is more than our original goal of +10% of the student population. What's more, of those responses, almost half (47%; n = 333) were three sentences or more, and initial analysis suggests that more than half (n= 414) expressed (unprompted) satisfaction with their HWC experiences in relation to one (or more) of the topics in the prompt, while almost as many (n= 394) provided suggestions for things the college could do! Analysis of the responses is ongoing at the time of this writing, but, taken together, we think the question we asked has and will provide us with a number of really interesting topics for exploration and investigation.

Students had a lot to say about things that are within control of various aspects of the college—including faculty, advisors, security, administration, staff, and students—that could improve students' sense of comfort, safety, value, and identity, which are, as significant bodies of equity-related research suggest, powerful levers of student achievement. Initial readings suggest that many students focused their responses and suggestions on issues related to the ongoing pandemic and their sense of security and safety both now and when we return, as well as issues related to remote/online instruction, school outreach to students, student activities—current and potential, tutoring, and more.

Keep an eye out for more on the Fall 2020 Query Project results in the coming weeks and early part of 2021, as well as the exciting next steps of the Assessment Committee's work. Hopefully it will turn out that on some future day we might be able to say that the assessment work we are doing then is a far, far better thing than we have ever done! And if not, well, we'll just have to try, try again to find better questions and better answers.

#### Query Project Qualitative Analysis By Phil Vargas, Research Analyst

"If you want to know about a cow, ask a pig" --Unknown author. I had a professor in graduate school that would make very adept sayings and then attribute them to an ancient Chinese parable to give them more weight. This was always one of my favorites, and I've started more than a few discussions with it. I found it quite apropos a few weeks ago when the Assessment Committee set out to try our hand at the qualitative research method of "coding".

As part of the query project being led by the general education Vice Chair, Dave Richardson, the assessment committee surveyed the HWC student population with an open-ended question in regards to safety and comfort. While you can read Dave Richardson's section on the project for more details, this posed an interesting problem for the research analysts whose backgrounds are more aligned with quantitative research methods. However, the analysts led a professional development session on the process, and a few other intrepid committee members are attempting to hone our qualitative research skills and code over 700 responses from our students.

As we expected, this was a difficult challenge for everyone that attempted it. Despite these challenges, as the data trickles in, it looks as though the group was able to pull out some interesting themes, and we are looking forward to synthesizing these results. In addition to getting this additional insight into our student body, our committee was able to come together to attempt to learn a new skill. This is one of the great strengths of the assessment committee, it is composed of an amazing group of faculty that are always interested in improving their craft.

#### Reflections of a Stimulating Journey By Fernando Miranda-Mendoza, Research Analyst

Before relocating to Chicago and joining HWC, I had the fortune of working at a 4-year institution where I served in my department's assessment committee (that school had a university-level assessment committee that directed departmental committees investigations).

Due to this experience and advice from several colleagues, I decided to join the HWC Assessment Committee (HWCAC) meetings as soon as I arrived at HWC, in the fall of 2014. Little did I know that the experience would be so enriching! Almost right away, in the Spring 2015 semester, I started serving as the first unit-level liaison to the Mathematics Department and remained in that role until the Fall 2016 semester. This invaluable experience introduced me to the unique assessment culture at HWC that values faculty-driven inquiries, as opposed to administratively mandated research.

Then, in the Fall 2017 semester, I transitioned to my current role as a research analyst. This second experience has been a truly remarkable one. Although my PhD is in applied mathematics and I had experience with various statistical methods, as an analyst I encountered data analysis techniques used in social science research for the first time. Unlike the approaches I was most familiar with, which typically dealt with quantitative experimental data, HWCAC investigations often gave rise to qualitative observational data from which we anticipated to make causal inferences (and, as the famous maxim states, "correlation does not imply causation" yet causation is what we needed!). It was such an enriching experience to learn about the strengths and limitations of statistical methods when applied to these type of data, especially with regards to the hype, confusion, and misjudgment that surrounds p-values (e.g., see the American Statistical Association statement on p-values at

https://www.amstat.org/asa/files/pdfs/P-Value Statement.pdf). These limitations should be a warning for future research analysts and, as the Committee moves away from its traditional approach to general education assessment and looks for ways to better assess student learning, a call to try cautious approaches to data analysis.

The time has come for me to take a break from my research analyst position after serving these past three years, and I will be stepping down by the end of this Fall 2020 semester. I would like to thank everyone in HWCAC for their unwavering support and encouragement. You all made this stimulating journey all the more enjoyable! I look forward to continuing my contributions to the committee's endeavors in the years to come, now as a general member.



#### Source:

http://phdcomics.com/comics/archive.php?co micid=1271

#### Becoming a Zoomologist!

By Jennifer Vogel, Coordinator of Cocurricular Assessment

During the first half of the Spring 2020 term, the Harold Washington Advising Department & Transfer Center offered various services to students. We offered one-on-one advising appointments, drop-in services, group orientations, registration, and transfer workshops all in their traditional in-person formats. We previously offered online advising services, but very few students utilized them compared to our in-person services. In March 2020, like so many other student-facing departments at HWC, the Advising Department transitioned from in-person to virtual services in 24 hours.

We quickly learned how to use Zoom on our last day in the office before remote work started. We needed to strategize on how to move all of our services virtually. It started with appointments and drop-in advising services and then moved on to larger group sessions for registration workshops and new student orientations. As we got more and more savvy using Zoom, the Advising Department coined a term to encapsulate our new skill – *Zoom-ology*. We could all claim the new job title Zoomologist!

Since this time of rapid change, the Advising Department created a survey to assess whether we were meeting the needs of our students through virtual services. The students were asked various guestions, some of which evaluated our services and Zoom platform. Other questions centered around the student experience and whether they still learned something and received the services they sought when they approached virtual advising. Overall, the student responses were positive and they felt their needs were met. 74% of students surveyed said they found their session helpful and 84% said they would use Zoom for advising services in the future. Some examples of student responses included:

> "It was great It is always nice talking to my advisor [name redacted] because she always guide me for my better future."

*"I had two drop in zoom advising sessions, both with different advisors. They were both helpful in getting me registered for classes…"* 

"It was really good because I got my tasks done. And the help was such great quality."

Awesome! The advisors I had for drop in and scheduled appointments were sweet, informative, and helpful.

[Name redacted] was amazing! She made me feel so supported, and was so understanding and patient. Honestly the best advising experience I've had at any university or college. Harold Washington College is so lucky to have her as an academic advisor. The Advising Department made some changes to how it delivered virtual services in response to the survey results. Originally, each advisor had their own personal drop-in advising Zoom link. This became difficult for students to navigate, especially if they did not know who their advisor was or did not have an assigned advisor. After the survey, we transitioned to having one main drop-in advising Zoom link. Advisors are now placed into breakout rooms by a host, typically our amazing clerical staff and student ambassadors. Students access the advising drop-in Zoom link through the Virtual Student Services page on the CCC main website and are then routed to an available advisor. This has allowed for our Advising services to be more accessible during remote work.

Time will tell if students continue to utilize virtual services once we go back to campus. I do believe many of our students miss the face-to-face interactions they have with staff, faculty, and other students. This sentiment was expressed by student responses in our survey and numerous times in individual appointments. It will be interesting to see whether students want more in-person or virtual services in the future. But for now, HWC College Advisors will continue to refine and embrace their new *Zoom-ology* skills.



"I know it's not ideal, Ron, but complaining solves nothing. So on the count of three everyone howl."

Source: https://www.facebook.com/WillSantinolllustration/pho tos/pb.279320238760695.-2207520000../5267574213268581/?ty pe=3&theater

# Illinois Equity in Attainment (ILEA) Summit Reflections

By Carrie Nepstad, Erica McCormack, David Richardson, and Jeffrey Swigart

In late October, several HWC Assessment committee members attended the 2020 ILEA Virtual Fall Summit. In particular, we attended the session presented by <u>Estela Mara</u> <u>Bensimon</u>, Director of the Center for Urban Education at the University of Southern California. Bensimon developed the "Equity Scorecard - a process for using inquiry to drive changes in institutional practice and culture". Her talk focused specifically on a tool called the <u>Syllabus Review</u>, which is a process that

> "promotes faculty inquiry into teaching approaches and practices especially how they impact Blacks, Latinx, Native Americans, Pacific Islanders, and other racially/ethnically minoritized students; facilitates a self-assessment of these teaching approaches and practices from a racial/ethnic equity lens, and allows faculty to consider changes that result in more equitable teaching approaches and practices" (p.3).

The Syllabus Review is a practical tool that is interesting to explore, especially in consideration of how it may align with the <u>Harold Washington College Equity Plan</u>, specifically, Strategic Objective 2: "Demonstrate equitable practices and processes among faculty, staff, and students through comprehensive, systematic, and curricular improvements".

Of course, the work of the Assessment Committee is not directly to design curricular changes. Rather, <u>the Charge</u> of the HWC Assessment Committee is to conduct assessment activities to improve learning. This is the primary function of the committee, yet there are many intersections between the committee's assessment work and ongoing pedagogical/curricular/equity work within the college community. To participate in a professional development experience, such as this summit, as an "Assessment Person" opens the door to thinking about how the information presented may inform assessment processes, which often influence our teaching approaches and practices.

The committee has been engaged in an ongoing Query Project this past year as part of the newly revised General Education assessment process. The query is an intensive, ongoing conversation with the goal of seeking information directly from students about their learning experiences that will inform our assessment practices. In many ways, by seeking direct input from students, we are participating in a more equity-minded assessment practice. There is still much to learn, and we look forward to the continued conversation.



MOVIES AND SHOWS THAT ARE VAGUELY SET IN "THE PRESENT" WILL BE AWKWARD FOR A WHILE.

Source: https://xkcd.com/2384/

# Program Outcomes Assessment By Carrie Nepstad

The <u>Child Development program</u> is housed within the Social and Applied Science Department. The Associate of Applied Science Degree in Preschool Education is nationally recognized through the Higher Education Accreditation system of the National Association for the Education of Young Children (<u>NAEYC</u>).

Our program at HWC was one of the first in the country to be nationally recognized and, along with its sister programs across CCC, it was the first program in Illinois to be nationally recognized.

Like all accreditation systems, this process requires an initial self study with peer review in order to earn accreditation, and then subsequent submission of annual reports. This year, our program is going through the renewal process with a full self study report due in March, and a peer review visit during the fall 2021 semester.

The main goal of the accreditation process is to align student learning outcomes with NAEYC standards for professional preparation. In order to demonstrate that alignment, we must design at least 5 key assessments in order to collect student learning data that directly reflects student learning related to the program learning outcomes. In other words, program learning outcomes illustrate what students should know and be able to do upon completion of the program, and the key assessments are the mechanism we use in order to collect that assessment data.

The Key Assessment Curriculum Map and the Chart of Key Assessments Aligned with NAEYC Standards below illustrate this alignment.

Key Assessment	Assignment and rubric	Course in which it is administered
1.	Observing Early Childhood Development and Learning	CD 101: Human Growth and Development
2.	Child Study Project	CD 201: Observation, Documentation, and Assessment
3.	Personal Philosophy of ECE and Professional Development Plan	CD 258: Principles and Practices of Preschool Education
4.	Activity Planning, Implementation, and Reflection	CD 259: Practicum
5.	Family/Practitioner Interview and Collaboration Plan	CD 262: Child, Family, and Community

#### Key Assessments Curriculum Map

Standard 1: Promoting Child Development and Learning		Key Assessment						
	1	2	3	4	5	6		
1a. Knowing and understanding young children's characteristics and needs, from birth through age 8.	х	х	х					
1b. Knowing and understanding the multiple influences on development and learning.	х	х	х					
1c. Using developmental knowledge to create healthy, respectful, supportive, and challenging learning environments for young children.		x		x				
Standard 2: Building Family and Community Relationships Key Elements		Key Assessment						
		2	3	4	5	6		
2a. Knowing about and understanding diverse family and community characteristics.	х	х			х			
2b. Supporting and engaging families and communities through respectful, reciprocal relationships.					х			
2c. Involving families and communities in young children's development and learning.				х	х			
Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families	Key Assessment							
Key Elements	1	2	3	4	5	6		
3a. Understanding the goals, benefits, and uses of assessment—including its use in development of appropriate goals, curriculum, and teaching strategies for young children.	x			x				
3b. Knowing about and using observation, documentation, and other appropriate assessment tools and approaches, including the use of technology in documentation, assessment, and data collection.								

# Chart of Key Assessments Aligned with NAEYC Standards and Key Elements

3c. Understanding and practicing responsible assessment to promote positive outcomes for each child, including the use of assistive technology for children with disabilities.	х					
3d. Knowing about assessment partnerships with families and with professional colleagues to build effective learning environments.	х			х		
Standard 4: Using Developmentally Effective Approaches		Ke	ey Asse	essme	nt	
Key Elements		2	3	4	5	6
4a. Understanding positive relationships and supportive interactions as the foundation of their work with young children.			х	х		
4b. Knowing and understanding effective strategies and tools for early education, including appropriate uses of technology.				х		
4c. Using a broad repertoire of developmentally appropriate teaching/learning approaches.				х		
4d. Reflecting on own practice to promote positive outcomes for each child.				х		

	Ke	Key Assessment				
Standard 5: Using Content Knowledge to Build Meaningful Curriculum Key Elements	1	2	3	4	5	6
5a. Understanding content knowledge and resources in academic disciplines: language and literacy; the arts-music, creative movements, dance, drama, visual arts; mathematics; science, physical activity, physical education, health and safety; and social studies.				x		
5b. Knowing and using the central concepts, inquiry tools, and structures of content areas or academic disciplines.				Х		
5c. Using own knowledge, appropriate learning standards, and other resources to design, implement, and evaluate develop- mentally meaningful, and challenging curriculum for each child.				х		

Standard 6: Becoming a Professional		Key Assessment						
Key Elements	1	2	3	4	5	6		
6a. Identifying and involving oneself with the early childhood field.			х					
6b. Knowing about and upholding ethical standards and other early childhood professional guidelines.			х					
6c. Engaging in continuous, collaborative learning to inform practice; using technology effectively with young children, with peers, and as a professional resource.			x					
6d. Integrating knowledgeable, reflective, and critical perspectives on early education.			х					
6e. Engaging in informed advocacy for young children and the early childhood profession.			х		х			

Although we collect program learning outcome data from the administration of the 5 key assessments across the program, we analyze the data based on the specific key elements of each NAEYC standard, which are linked to the student learning outcomes at the course level.

At a glance, this may seem overwhelming and in many ways it is overwhelming! However, because the course SLOs are aligned with the NAEYC standards, and the key assessments are designed to assess the key elements of the standard, the specific outcomes become very familiar to all of us involved in the program.

The language of the standards/outcomes show up in our mission, in our courses and assignment descriptions, and in our assessments across all ten courses of the program - not just in the courses in which the assessments are administered.

In many ways, the outcomes have become a way of life because they are embedded in everything we do, and are important to us when we think about what we would want our students to know and be able to do upon completion of the program.

If you are working on developing an assessment process, a good place to start is at the end. For example, we started with our capstone course, 259 Practicum, in order to determine program learning outcomes. We asked ourselves what we want our students to know at the end of the program. Once that was established, we worked our way backwards through the series of courses to see where students have multiple opportunities to learn and demonstrate those skills.

This has taken a long time to develop, and we still think of it as a work in progress! The most important part is that the assessment process gives us some tools that help us to learn about, and support student learning.

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# Pandemics and Proactive Preparedness By Jeffrey Swigart

The coronavirus lockdown has shown us the importance of investing ahead of time in what is important. Think of how much better our current situation might be if we had better invested in pandemic preparedness, better stockpiled personal protective equipment, and better researched vaccines.

As I consider student learning at Harold Washington College, however, I am thankful that our administration has, for the past several years, made significant investments ahead of time rather than waiting until problems arise. Since 2003 our college's Assessment Committee has received support in the form of release time and stipends for a wide range of projects dedicated to student learning.

I have the honor of overseeing the ten unit liaisons who work with their academic departments on targeted assessments according to their specific questions about student learning. For example, Paul Wandless is working with the art department to make sure students understand the vocabulary of 3D design, Camelia Salajean is working with the math department on how to teach cutting-edge methods of solving quadratic equations and address common misconceptions, and Ingrid Riedle is working with the Social and Applied Sciences department on how to harness the current political awareness of students into their classes. In the other articles here you will find more information on all ten of the diverse unit liaison projects.

More broadly, here are some stats that we on the Assessment Committee are really proud of:

 47 different people have served in committee leadership positions from 2003 through 2020, attesting to how the Assessment Committee is an important avenue of professional development, focusing on skills of both assessment and leadership.

- Our committee has had weekly meetings since 2003, with average attendance of 15.8 people per meeting. Put another way, about 15.8 people per year have been involved for the past 18 years, and this totals to about 284 person years of assessment experience.
- Our average meeting attendance for this current Fall 2020 semester has been higher than ever, with about 24.8 people per meeting. Our attendees this semester include fulland part-time faculty from every academic department, including the library, a guest faculty member from another CCC campus, a representative from advising, a representative from academic support, and two student government representatives. Our previous record for meeting attendance had been Spring 2017 with about 20.9 people per meeting. This is at least in part due to Jack Whalen's efforts as coordinator of adjunct outreach and Erica McCormack's hard work reaching out to new folks to get them involved.

We believe the support we get pays out many times over in the form of natural professional development for faculty and staff. More importantly, our assessment projects give us space to explore what student learning is going on at our college within units ranging from courses to programs to the institution itself The more we learn about our students and their learning, the better equipped we are to advocate for changes in pedagogy and curriculum that can continue to benefit them.

# What Is That? Applying 3D Design Terminology

### By Paul Wandless, Art & Architecture

#### What is that?

3D Design has several core concepts among the principles and elements of design that can be assessed. How to identify and apply the terminology, concepts, ideas and aesthetics of 3D/Sculptural art are outcomes that can be effectively assessed and measured. These cognitive-based activities are considered critical thinking within the program and course-level outcomes.

# Program Learning Outcomes - Critical Thinking

• Apply a vocabulary that demonstrates an understanding of the visual elements, principle of design, techniques, and materials appropriate to their respective discipline.

# Course Student Learning Outcome - Critical Thinking

• Demonstrate an understanding and knowledge of the elements and principles of three-dimensional design through assignments, papers, quizzes, and tests.

• Demonstrate an understanding and comfort using the 3D lexicon to describe and write about any three-dimensional works of art objectively and insightfully through writing assignments, visual journal and class discussions.

#### **Assessment Tool and Rubric**

The assessment tool will use two formats of questions; Multiple choice and fill-in-the blank. Each will yield different types of data.

Multiple choice should score higher than fill-in-the-blank, since students will have a word bank provided for the images. Students will still need to recognize and apply them correctly, but they don't need to recall the actual terms. This will provide good data about retention of the information learned.





David Smith, *Cubi IX*, stainless steel, 1961 What 2 kinds of form are represented in this sculpture? A) Organic B) Geometric C) Rectilinear D) Curvilinear

Recalling and applying the terms properly with no provided information is the most desired outcome and the more challenging one as well. Fill-in-the-blank questions will provide data regarding the students' ability to recall information on their own and properly apply it to the image presented to them. This replicates the real life application of this information. When a student goes to a museum or gallery, this is what they will be doing during the visit: looking at a sculpture and (hopefully correctly) identifying and speaking about different aspects of the artwork. The pilot assessment will run as a summative assessment in week 16 once all core concept information has been covered and reinforced. Once we analyze the results, we look forward to discovering which areas students already do successfully and which may need to be given greater emphasis in instruction



Source: https://xkcd.com/2370/

# A Million Dollar Question: How Do We Motivate Our Students? *Linking SLOs to Student Motivation* By Farah Movahedzadeh, Biology

A collaborative effort between HWC and other higher education institutions has found that a lack of student motivation or interest is a critical factor in determining student success or failure at the college level. The results of these findings have been presented and discussed at the annual higher learning commission conference in Chicago for several years, and that work informs this unit-level assessment in Biology. These critical discussions revealed that students, faculty, and academic leaders all strongly agree that it is not realistic to expect students on their own to maintain a level of self-motivation that is adequate to complete their academic goals. Rather, this responsibility must be shared by instructors and college administrations by building a curriculum that provides courses and programs that will motivate students to invest their time and energy in the learning process. The two major barriers to this ideal curriculum are determining the factors that can motivate students at both the group and individual level and to effectively employ

these factors in a system where there are far more students than faculty to teach them.

Over the last several years I have attempted to uncover some of these factors by implementing a simple approach to motivate my students to achieve their academic goals. In this method, a survey is used at the beginning of the class to get to know each student and their goals in life. This is followed up with another survey at the midterm of the semester accompanied with a brief face to face meeting to reflect on their progress in the course.

I carried out this approach in all my classes from 2013 to 2019 and with Sandy Vue's and Fernando Miranda-Mendoza's help, I used the OpenBook portal to obtain the transfer rate to 4-year institutions (Data obtained from the National Student Clearinghouse portal, which is linked to the OpenBook portal), and the persistence rate (percentage of students enrolled on day 1 who went on to complete the course with a grade "C" or higher) as important indicators of student success.

The overall transfer rate to 4-year institutions was 93.3% and the persistence rate was 93.4%. In the Fall of 2020, I managed to reach out to some of those students who had transferred and ask them to participate in an indirect assessment to determine which student learning outcomes (SLO's) of my class they considered to be motivational factors that helped them succeed.

The 70% of students surveyed indicated that the SLOs connected to laboratory procedures were the biggest motivating factor. Other SLOs considered to be motivational factors included those pertaining to the role of microbes in infection and diseases, immunity and vaccinations, and signs and symptoms of major infectious diseases.

This data reveals that courses with well-developed, hands-on laboratory experiences and learning objectives that have real world relevance are important in student motivation and success.

Finally, the students were allowed to leave comments on these questionnaires, and the following is just one example of these comments: "I am about to finish my Bachelor's Degree in Microbiology and I can confidently say this class motivated and changed my life to make that my career choice!". This positive feedback led to a final, unexpected, conclusion of this study: by making efforts to enhance the motivation of my students, my students have enhanced my motivation to be a better instructor.

### Walking the Walk By Bridgette Mahan, Business

Fall 2020 has been very intense for the Business Department from both a program level and unit level assessment perspective. By year-end 2020, we are submitting our self-study to the American Bar Association (ABA) in anticipation of the ABA's initial accreditation review and virtual site visit of the Harold Washington College Paralegal Program. This accreditation is critical in ensuring our paralegal program's long-term viability and the success and recognition of our program graduates. In addition, the accreditation of our Business programs with the Accreditation Council for Business Schools and Programs (ACBSP) is also up for reaffirmation review in the Fall of 2011. We are up for reaffirmation every 10 years and must submit a robust self-study in accordance with ACBSP guidelines. These guidelines address unit and program level student learning outcomes, student retention and success, stakeholder identification and engagement, evaluation and quality of instruction tools, and curricula development.

What we have learned as a focus of this work is the importance of student learning assessment as the driver of the design of our programming and its delivery. Without robust student learning assessment at both the unit and program level, we cannot effectively fulfill the student learning requirements of our students/curricula or meet our accreditation standards. The emphasis of our work is always on the assessment of student learning. Without that focus, we know we can not successfully meet the expectations of our programming.

To this end, we have been working with fellow faculty members and HWC Research and Planning to assess and build tools to generate assessment stakeholder data. Our stakeholders include current students, alumni, apprenticeship partners, and four-year universities/colleges and credentialing bodies. The data we are collecting is related to the assessment of the viability and fulfillment of our student learning outcomes. Highlights of this work have focused on the need to identify the areas in which student learning needs to be improved via the evaluation of the impact of modes of instruction on the deliverance of student learning outcomes and program curricula and the building of stakeholder reporting tools to help identify needed curricula and unit level changes. This assessment is particularly relevant given that Harold Washington College now offers a completely online Business AA degree in addition to our other Business degree offerings.

This Fall, in both the paralegal and general Business-related areas, we are documenting our process for measuring and analyzing student learning and performance. Our review has consisted of assessment of course success within our three existing ACBSP accredited programs and the identification and matching of existing paralegal student artifacts with ABA designated student learning outcomes (SLOs). The effort has involved faculty across all disciplines and we have made progress in defining and capturing data that can provide insights about program and unit level learning in accordance with the six stages of assessment: identification, tool design, pilot assessment, conduct full

assessment, data analysis, and supporting evidence-based change.

As an example, we are currently between stage three and four with two assessment tools we have designed. The first tool is an assessment exam we have designed to examine and evaluate student performance in Business related courses delivered online versus face to face. This tool was designed based on faculty raised concerns related to potential disparities in learning for traditional online students versus face-to-face students in the achievement of student learning outcomes.

At present, we are planning to compare the results obtained for the Spring and Fall 2020 semesters to determine the overall viability of the pilot exam questions and whether it is an appropriate tool given our desire to utilize it across online, remote learning, and face to face modalities. With the remote learning shift experienced during the Spring 2020 semester due to COVID-19 and its impact on faculty, the Business Department had made the decision to reduce the number of course sections which would deploy the assessment tool. However, given continued remote learning in Spring 2021, we have reversed that decision. We will now expand our course sections in Spring 2021 to push forward our assessment tool roll-out with the hope of final deployment in Fall 2021.

The second tool is designed as a capstone model to assess overall business program learning from the introductory level (Business 111) to degree completion. This survey is targeted to assess student learning both early and later in their college tenure. There was department-wide agreement that there was value in trying to assess at multiple points in a student's tenure at Harold Washington College how they performed against a standard set of questions that covered a broad spectrum of business-related topics that hopefully all students could successfully answer prior to matriculating from the college.

The goal was to see if there was a demonstrable difference from "early tenure" versus "late tenure" students and see (depending on the response rate) if there were demonstrable differences between on-line and traditional formats generally. Included questions de-emphasize specific accounting and business mathematics knowledge to expand inquiries about functional business areas and topics such as marketing and international business. The revised thirty question assessment has seven questions devoted to business mathematics, seven questions devoted to accounting, and sixteen questions allocated to introductory topics such as marketing, operations, and economics. The tool has now been designed but has not been formally deployed across most of the department's sections. In light of all the additional work necessitated by remote learning requirements, most faculty have not found availability to offer it in their courses this semester without negatively impacting their existing required course content. As a result, faculty in the department have agreed that the full-scale roll-out will work better in Spring 2021, when they can plan to incorporate it into their course schedules from the outset of the semester. Related business faculty are considering next steps for Spring 2021.



Source: <a href="https://smartercx.com/cartoons/">https://smartercx.com/cartoons/</a>

# Under Pressure: A Short Play about English Assessment By Ukaisha Al-Amin, English, Speech, Theater & Journalism

#### Characters:

Host- The English Instructor: Always seen with camera on.

**Co-Host**- The Narrator- Monitors the chat, has screen share abilities. Sometimes seen on camera. **iPhone User**- The student- Is only seen on camera when they are in the grocery store. **Student A**- Never seen on camera, adequately participates, never has questions.

#### Act One- Scene One 'Class'

The stage is set up to replicate a large Zoom session. When a character is on screen, they are standing in the center front stage, and they are projected to the audience via a large video display. When a character is off screen, their voice should project throughout the audience via surround sound.

#### HOST:

#### Enters stage left. Wears overhead headset with mic.

Hello class. Now that you've chosen your research topic, it is time to make sure that you place it in a real-world plausible situation. This will help you figure out your purpose and audience. It is important that your final research essay have a clear purpose and audience and a structure that supports the rhetorical situation of your essay. I will give everyone some time to discuss this with each other to figure this out, and then we will share out.

Exits stage right. CO-HOST:

(not on camera)

I've started the breakout sessions.

(The screen projects the SLOs. Rhetorical Knowledge: Analyze how audience and purpose dictate information included: the order of information, voice, language, and style. Apply conventions of format and structure appropriate to various rhetorical situations.)

The English 102 class is meant to build on skills from 101. The final research essay is a summative assessment that tends to measure most of the categories of the student learning outcomes. The essay is then graded using a personal rubric or tool created by the instructor and/ or the assessment data sheets used by the department that measures specific elements of the rhetorical knowledge outcome. The data sheets have one section for rhetorical knowledge called rhetorical techniques.

#### HOST:

#### (Enters stage right.)

Welcome back. Let's hear what your rhetorical situations are. iPhone user, go ahead.

#### IPHONE USER

"I am a first-year college student. Looking at my research paper so far, in the real world it wouldn't really affect many people. And If I knew that this paper would be out in the open, I'd keep it the same. Because I know the only person that's going to read my paper is going to be the professor, but even then, I write it as if anyone was reading it. Mostly because I don't exactly know the professor too well and what they like, but even if I wrote it directed towards the professor, it would be heavily biased. My audience is anyone who is interested in horror games, or just interested in horror in general. I want to show people how these horror games work, and to make you appreciate these games a lot more."

Thank you, iPhone user, for sharing. While the research essay does have guidelines from me, I want you to think about how your topic connects to the real world outside of this class. If you are choosing your topic, you should choose something you care about. Maybe think about the psychology of fear or why the horror genre is popular. How have we as society used horror to understand the world? Keep working on it. Student A you're next.

#### STUDENT A

"As a first-generation Mexican American, the real-world plausible situation that I have created within my own research project is motivated by the situation in which many people of my identity are silenced and need empowerment. It is truthful that society is rather whitewashed, which has affected me and many others. Although there have been many advances and us Chicanos are currently the most educated that we have been in history, my purpose is to show that we are also less likely to be immersed in literature due to many factors, such as income, education level, and cultural norms."

#### HOST

Thank you, Student A. I really appreciate how you've added details about the issue and included a specific audience. As you continue to work on this, remember to add perspective into the conversation.

#### CO-HOST

#### (Enters stage left. Wears earbuds with mic.)

During remote learning, it has been interesting to see the topics that students choose and whether that helps them understand the purpose of their essays. What is even more interesting is that students can write about the pandemic, the social unrest, the election, and technology, and it feels relevant to them. On the other hand, students may feel that it is just an assignment and has no real-world value. In order for the rhetorical knowledge to stick, students need to make this connection to a real audience, even under the pressure of remote learning.

#### Act One, Scene Two 'The Meeting'

#### HOST

Once we gather the assessment sheets for students that have passed the final research essay with a 70 percent or higher, I want to take a look at what they scored in the Rhetorical Techniques category specifically. This category is measured using the following scale. Let me share my screen:

#### Rate each student using this scale: 5 Excellent | 4 Good | 3 Fair | 2 Poor | 1 Unsatisfactory

Rhetorical Techniques 5 4 3 2 1

#### CO-HOST

Yes, I can see your screen. This looks straight forward. What do we do after we cross check all these sheets?

#### HOST

Next, we will read the essays and use the Decision Tool for Rhetorical Knowledge created by Dr. Kristin Bivens. Let me share my screen.

#### The screen is blank. I don't see anything.

#### HOST

#### Oh, sorry about that. Let me pull up the right document.

Rhetorical knowledge is the ability to analyze and act on understandings of audience, purpose, and contexts in creating and comprehending texts.

- 1. Start by reading either an ENG 096, 101, or 102 text.
- 2. Then, use either the Rhetorical Knowledge Decision Tool for Audience or Purpose.
- 3. Start by answering the **bolded question** in the upper left hand corner of the Rhetorical Knowledge Decision Tool.
- 4. If the answer to the question is "yes," then move to the right square, mark it with an "X," and answer the next question.
- 5. If the answer to the question is "no," then move down one square, mark it with an "X," and answer the next question.
- 6. Repeat steps 4 and 5 until you reach "End."
- 7. Once you have reached the end, note the number of the color square on the student's Rhetorical Knowledge Sheet.

<b>O</b> Avoids	1 Standard	2 Attempts	3 Standard	<b>4</b> Approaches	5 Standard	6 Meets	7 Standard	8 Exceeds	9 Standard
Avoi Stand	ids lard	<ul> <li>Failure to</li> <li>Unethical</li> <li>Does not</li> </ul>	match audienc aspects or app state a thesis/p	e's information n roach. urpose.	eeds.				
Atten Stand	npts lard	<ul> <li>Failure to</li> <li>Unintenti</li> <li>Does not</li> </ul>	match audienc onal, but uneth state the thesis	e's information n ical aspects or ap /purpose.	eeds, despite obv proach.	vious attempt t	o do so.		
Approa Stand	Approaches       • Some mismatches to audience's information needs.         Standard       • Questionable ethical approach to the situation.         States the purpose/thesis unclearly.								
Mee Stand	ets lard	<ul> <li>Adequate</li> <li>Ethical ap</li> <li>States the</li> </ul>	match to the a oproach to the s thesis/purpos	udience's informa ituation. e mostly clearly.	tion needs.				
Excee Stand	eds lard	<ul> <li>Excellent</li> <li>Ethical ap</li> <li>States the</li> </ul>	match to the au oproach to the s e thesis/purpos	idience's informa ituation. e clearly.	tion needs.				



As you can see, the scale is similar but offers a more in depth look at what exactly we are looking for when we assess a student's use of rhetorical knowledge. Also, as a general tool, I would like to see how effective this tool can be.

#### CO-HOST:

Can you put the link to the documents in the chat? I can't read the squares.

#### HOST:

Sure. Here you go.

#### CO-HOST:

Thanks. Okay, I see how each square asks a question about purpose. For instance, the first square says, "Does the writer identify a purpose or thesis statement in their first paragraph?". If I answer 'yes' then I move over to the right, and the next square reads, "Does the writer explicitly state a guiding idea in their introduction?". If I answered 'no' to the first question, I would move down and the square beneath the first square asks the same question. I would then continue to move over to the right or move down based on my answer to each question.

#### HOST:

Exactly. The key with this stage is to try to get as much buy-in from the other English 102 instructors. So, let's get to it.

#### (Exits stage.)

(The video display reads: This meeting has been ended by host. Co-host then exits the stage.)

#### Act One, Scene Three 'Next Steps'

#### CO-HOST: (Not on screen)

By the end of 2020, there would have been 81 sections English 102 taught at Harold Washington. This means, I will need to go ahead and sign up for the Grubhub subscription that I've been putting off. There are many late evenings of reading and sifting through these essays ahead.

#### HOST:

Door dash has better coupons, Co-host. Plus, I don't foresee us having to read all 81 sections, but I know we will have at least 10 sections to use for this assessment project. I hope to understand more about how students are learning and applying rhetorical knowledge and whether the tools we have accurately measure the student learning outcomes.



Source: https://xkcd.com/2348/

### The Time-Us: A 'Socratic' Dialogue By David Richardson, Humanities & Music

#### (On the sidewalk outside HWC)

Swigartes: Ah, right on time, as expected.

Philodave: I'm not late?

Swigartes: Of course you are—Richardson Standard Time is the perfect time for chores and fights—long and well after the time when tasks and fists are being dispersed! Has there ever been a deadline you haven't missed?

Philodave: Deadlines are arbitrary, and they say that time is relative, both of which make it very difficult to be as consistent as I have been, a quality that the ancients might have found admirable!

Swigartes: Not if they were putting together a newsletter about assessment, speaking of which, what news of the Humanities and Music Department assessment?

Philodave: Exciting times, Swigartes, exciting times, indeed. How many hours do you have?

Swigartes: About 1/10th of one, actually.

Philodave: Of one standard hour? Base 12?... I take it from the look on your face, that it is—ok, I'll make it quick, or at least relatively so. You are aware, are you not, of the pestilence that disrupted the springtime?

Swigartes: (clears throat)

Philodave: Of course you are, this going quickly thing is new for me, apologies. Well, as I was saying, the spring disruptions were particularly challenging for our music faculty and students, but they found a way to carry on quite impressively. In fact, despite the challenges of emergency remote teaching, our faculty still managed to figure out how to hold end of semester juries—observed by their private lesson instructors and another faculty observer for 35 of the 64 of the private lesson students—that's fifty something percent, if my math is right.

Swigartes: 54.7% to be exact.

Philodave: Is it now? Well, those are some of my favorite numbers—did you know that if you take five from seven, you end up with exactly half of four and if you take that number and cube it, or just take four and square it, you end up with the sum of the three numbers you started with?

Swigartes: I do, Philodave, but what does that have to do with your musical assessment work?

Philodave: Well both are numerical, for one—I'm talking about quantification! Speaking of which, we were relieved to note that the performance trends for the juried students—in terms of their ability to demonstrate the intended outcomes for the different levels of instruction—were right in line with previous semesters—just under 90% of students successfully demonstrated the primary performance outcome, which was actually a little higher than they had been in the fall of 2019! Granted, not everybody was able to complete their jury, so the picture is incomplete, but we definitely did not confirm a disaster. We did not disprove the null hypothesis, it's true, but we didn't prove it either!

Swigartes: I guess that's a good outcome for a time of pestilence and challenge.

Philodave: Indeed, and speaking of good outcomes, we also found another interesting result. For the first time ever, 100% of the students tested on sight reading demonstrated the outcome!

Swigartes: Well, I'd be more impressed if you included an N value there...how many students was it that passed? All 35?

Philodave: Ha HA! I guess I have to wake up pretty early in the morning to slip a misleading statistic past you, Swigartes.

Swigartes: Well early enough to get to our meeting on time, anyway. But, back to the business at hand because *tempus fugit*—how many students were tested?

Philodave: Alas, it was only seven of the 35, and we were both surprised and a little disappointed in that finding. If you'll permit me to borrow your umbrella and a bit of the dirt patch to your left, I'd like to make a little chart for you. You might remember that a few years ago we discovered, rather serendipitously, that we were not testing private lesson students on their ability to sight read as much as our music faculty thought we were—in fact only about 15% were tested in the spring and fall of 2017. Once we made that discovery, the numbers improved dramatically before falling off a little in the fall of 2019 and then a LOT in the spring COVID.

(Philodave bends down and takes Swigartes' umbrella by the tip and with a quick twist pops it out of Swigartes' hand and proceeds to draw the following chart in the dirt using the handle of the umbrella.)



Swigartes: That chart is so beautiful that it is almost enough to make me forget that you are scratching up the handle of my umbrella, a handle that I carved and polished myself from a Montana Lodgepole pine. Please stop.

Philodave: Oh! So I am! So sorry—I knew I shouldn't touch the handle for I'm all out of wipes, so I thought that would be better, but I suppose it isn't, assuming one has concerns for anything other than the quality of their soul.

Swigartes: I am quite focused on the quality of my soul, as well as the quality of my mathematics and my umbrella handle, thank you very much. I can do more than one thing at a time.

Philodave: It's true! I have seen it with my own eyes! And, again, you have provided the most marvelous segue, for I, too, have been doing more than one thing at a time! In addition to the music assessment, I have been revising and repiloting an effort to reproduce a scientific finding of sorts! A few years ago, I discovered the work of Saundra McGuire, a now retired Chemistry professor from LSU and author of a book called *Teach Students How to Learn*.

Swigartes: Did you read her book?

Philodave: Oh, no. But I will one day, I hope. Anyway, it was in a different book that I found her "Quiz Prognosis" Survey or something like that and I wanted to adopt it for my logic class. I rewrote it a bit and added some stuff—because more is more, you know, and less is a bore, as they say.

Swigartes: Why write fifty words when you can use 1500 for the same price?

Philodave: Exactly! You understand me completely, Swigartes. So, I added some things—questions about student preparation for the exam related to certain activities that I believed led directly to student success in logic, and, once I shared it, my philosophy colleagues were excited about the possibility of using it in their logic classes. Assuming, of course, that I would first confirm that the survey had some prognostic value for Harold Washington students, as it had for LSU students, in my class, at least. But last fall, when I tried it out, the numbers came out terribly! There seemed to be no relationship between the student answers and their scores. I was reluctant to believe that the

steps and behaviors I was asking about did not actually matter in terms of student achievement, though.

Luckily, a little examination of the data gave me some clues about how things had gone wrong—I had to change the tense of a few questions (so that it did not allow for some aspirational future event) and tweak a few more, but still, last spring, the survey was uncorrelated with scores. But then it hit me! I had only been offering students two possible responses—yes and no. That was partly because I was crunched for space and wanted the survey to fit on one side of a single page, but also, because that's what the original survey had. But some students were putting an X in the middle, or circling both or writing, "yes, but not all the time" when the question had asked if they "attended class consistently (i.e. missed two classes or less)" or "studied logic at least five days of the week." Maybe students didn't want to give me an answer that made them look bad, or maybe they didn't want to disappoint me, or maybe it was something else altogether, but when I digitized the survey for this fall, I threw in a third answer for some of the questions—like the attendance question. The responses became, "yes, no, and sometimes but not consistently," the last of which was just a euphemism for "no."

#### Swigartes: And?

(Philodave reaches for the umbrella again, but Swigartes pirouettes gracefully to his right toeing a stick into Philodave's grasping hand, which he picks up as if he meant to do exactly that all along)

Philodave: And they answered as they wished, and it looked like this:

1. I consistently worked through the assigned chapters (AND at least some of the exercises)
 BEFORE the class meeting in which we covered the material.
 20 resonses



4. I consistently attended class, actively participated, AND "made" notes in class, processing the instructor and text-author's words into writing and/or putting concepts and definitions in my own words, diagrams, images, etc. 20 resonses



True
 False
 I attended, but not CONSISTENTLY (i.e.
 I missed more than two classes)

Philodave: "I analyzed their answers according to what they meant—treating all those maybes as the basic equivalent of "no" and when I did, the correlations between "Yes" answers and higher quiz scores, rose to a Pearson r value of .5233 (moderately positive) for all of the questions in relation to their quiz scores, and to .7519 (fairly strongly positive) when considering the five most impactful--Attendance, Connecting ideas to prior knowledge, Completion of problems, Recursion (deliberately returning to previous topics and ideas of the course), Implementation of study and learning advice (which they read about in an assigned essay). And before you even ask, yes, yes—it was a small sample this fall, so we're not throwing a party yet to announce the department-wide adoption of the thing, but I was relieved to see, for example, that forming a study group was no longer negatively correlated with success, and that the things that I told my students would make a difference in their success actually seemed to be doing so, based on the preliminary statistics.

Swigartes: Well, I wouldn't go quite that far, Philodave—you must know, don't you, that correlation is not causation? The decline of

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the number of pirates sailing around the oceans has correlated with rising sea temperatures, but certainly one did not cause the other, as the Flying Spaghetti Monster can tell you.

Philodave: Dream crusher! Is that what you use that umbrella for? To protect yourself from the tears of those whose dreams you crush?

Swigartes: If only it could protect me from torrents of words!

Philodave: Well, if it could, then you wouldn't hear me say that you're right, Swigartes—it is just a correlation and not in itself proof of cause, but that is where Dr. McGuire comes in. She has significant research showing how students who went from fewer to more "yes" answers, also went from lower to higher achievement in her classes! So, I'm hoping to find something similar happening in mine when I offer it again toward the end of the semester. The long term hope is that we will find consistent statistical outcomes—the most recent prognosis was (Philodave scratches numbers quickly in the dirt with his stick) something like this:

# Initial Philosophy Exam Prognosis Table (Provisional)

#### YESSES

14+	27.8	(93%)
11-13	25.9	(86%)
8 to 10	21.8	(73%)
7 or less	15.9	(53%)

Which looks pretty good to me. And if it holds up, and seems to also show that as students change what they do, their scores go up, then I can tell students early in the term about their agency with respect to their learning and use the survey to teach them how to learn and succeed in the class. And if we try it in others' classes and it works, we'll know something about student learning in their classes, too. And if it turns out not to work—but the instrument still seems sound, that may turn out to be important information about the tests or the teaching or the learning that might, in later semesters, get changed!

Swigartes: Well, Philodave, that is all, indeed, rather exciting stuff! Unfortunately, it's time for me to go, so I will have to leave you here with your charts and your dreams, while I head off toward the times and places to come. And you, I believe, are late for your next meeting are you not?

Philodave: I shall hope we meet again, Swigartes, and that when we do, you will have more time, so we can have a proper chat and I can, perhaps, have reason to attend one less meeting. Farewell, my mathematical friend. May the numbers be ever in your favor.

Swigartes: And yours, Philodave, and yours.



Source: https://xkcd.com/2371/

### Quadratic Quandaries By Camelia Salajean, Mathematics

Since Spring 2019, the Mathematics Department has been looking into students learning related to solving polynomial equations and inequalities in our College Algebra course, Math 140. Understanding these concepts is key to learning the essential concepts of precalculus.

There are different methods of solving quadratic equations that are summarized and used in this course, such as: factoring, completing the square, quadratic formula, etc. The fact that there are different ways of solving these equations causes confusion for some students who then start mixing aspects of the various methods.

Additionally, several mathematics faculty as well as myself have noticed in recent years the occurrence of a new set of errors that students are making and for which we have had trouble identifying the origin. We therefore have decided to address all these commonly made mistakes in our Math 140 assessment. We were pleased to discover that the students performed rather well: up to 70% selected the correct solution, while less than 3% of them selected the new pitfalls. This is a positive outcome for us since it is possible to address the source of the students' confusion by helping them understand the concept (finding the two solutions of the equation) and explaining the differences and similarities between the various methods.

Exploring deeper into our methodologies of teaching the topic, we discovered that the new errors come from the 'completing the square method' which is the most challenging for students to grasp. Here is a paper written by Suzanne Kelton that sustains our point, <u>An Introduction to Teaching Mathematics at the College Level</u> (see page 27: Completing the square to solve an equation).

Solving quadratic inequalities is one of the most challenging topics for students to get a handle on. Only 25% of the respondents solved the assessment's guadratic inequality correctly, and about 35% identified the correct solution of an inequality from the graph. This is not a surprise since the concept is based on prior knowledge and skills. It is important to note however, that solving polynomial inequalities algebraically (finding the sign chart) is an essential concept (since it is a prerequisite for further courses) that students need to assimilate in order to perform adequately in higher level math courses such as Calculus. For this reason, we must spend considerable time and preparation in teaching this concept.

One positively surprising result of this assessment was how students responded to solving an equation graphically. The originally posed question in the pilot had solution options comprising the correct answer, which is the values of x only where the two graphs intersect, and an intermediate step which states *both* coordinates (x and y) of the points of intersection. It is important for students to discern that when asked to solve an equation, what they are supposed to find is the specific value of the variable x, not the full coordinate location (x and y) in 2D space. These values of x are found graphically by identifying the points of intersections (that is, both x and y) and then isolating the x values on the horizontal axis.

Most students, namely 56%, were able to identify the intersection points, but they did not make the mathematical distinction between "coordinates" and "equation solution," and therefore picked (x, y) coordinates of the intersection points which was not the final (and hence correct) answer. This error suggests that those students understood the process of finding the answer, but they got confused about the terminology. As opposed to those 56% of students who got most but not all the way to the correct answer, only 33% of students picked the option that specified only the values of x (the correct answer) when we administered the pilot in the Spring of 2019.

To more effectively assess whether students understand the concept of solving an equation graphically and also help students while addressing the tricky nature of multiple choice questions, we eliminated the option of (x, y) answer for the points of intersection as an answer for the final assessment in Fall 2019. Consequently, about 72% of students chose the correct answer for both the Fall 2019 and Spring 2020 assessments. This is a clear indication that we should use multiple choice questions carefully and judiciously.



#### Source: https://xkcd.com/2367/

Are you aware, dear colleague, that a <u>new</u> <u>method</u> of solving quadratic equations was discovered in 2019 by Dr. Po-Shen Loh? (<u>The</u> <u>10 Biggest Math Breakthroughs of 2019</u>). Mathematics educators are always trying to develop easier procedures to solve problems in order to help students understand concepts better. Do you think a brand new way of solving quadratic equations will help our students learn the concept? Would you be willing to try it in your class?

#### Example

Solve x^2-34x+288=0

Using the factoring method, we need to find two numbers with product 288 and sum -34:-18 and -16. Notice those numbers may take a long time for students to find. (x-18)(x-16)=0 x-18=0 or x-16=0 x=18 or x=16

Using the new method, we need to focus on the opposite of b=34 and find two numbers (the solutions of the equation) that add up to 34 as the form: 17+b and 17-b. Their product is (17+b)(17-b)=288Solve for b: 289-b^2=288 b^2=1 b=+-1 The two numbers, therefore the solutions are

18 and 16. Notice this method might seem longer, but it

works even though factoring over integers is not an option and it's likely *quicker* for many students.

# Deepening Learning and Prioritizing Outcomes in Chemistry By Samar Ayesh, Physical Science

I remember when I first joined the Physical Science department as an adjunct in fall of 2009, I was asked by the Chair at that time to use one of the ACS (American Chemical Society) Standardized Exam as a Final Assessment for my CHEM 201 course. I was told to leave the Scantrons and all the scratch paper in a folder in his office. I wasn't sure what, if anything, was done by the data collected.

Two years later, I joined as a full time and I kept using the same assessment. I was giving the exam, using the grades as a final exam and putting them aside. Unfortunately, I never examined the results in detail nor did the department. Sometimes I would quickly glance at the results to check which question was missed the most. I always wanted to dig deeply but never seemed to have the time.

Fast forward to 2017, when Allan Wilson became the first Assessment Liaison for the Physical Science Department. He was able to analyze the data of this ACS assessment from several semesters. The results showed that our students' scores are slightly lower than the national averages (our students answered, on average, 19 questions correctly out of 40, compared to 24 nationally). The results also showed us in detail the topics that students struggled in the most.

This led Allan to design a new assessment that focused on stoichiometry. It consisted of 3 stoichiometry questions with a range of difficulties. Results of this new assessment were not very encouraging since a big portion of students used the wrong algorithmic procedure to solve a "typical" question. It implied that students might benefit from more conceptual stoichiometry questions – questions that they cannot solve mathematically and must use a conceptual understanding instead.

In fall 2019, I took over the Assessment Liaison role for the Chemistry courses within the Physical Science department. Based on all the great work that Allan did, it was clear to me and others teaching CHEM 201 that student learning seems to be missing some important component. The results of the ACS assessment clearly indicated the areas that students are challenged. So I designed several "Learning Activities" which were meant to engage students in exploring the big ideas and concepts in order to develop the desired understandings, knowledge, and skills that they should come away knowing by taking CHEM 201. These activities were meant to be used in the classroom, so I am hoping to use them once we go back to face-to-face instruction. In the meantime, I will share them with all faculty teaching CHEM 201 and start using them next semester and get initial feedback.

The first steps towards an effective assessment plan is to establish goals and develop specific measurable learning outcomes. It is very important to first determine what we faculty expect students to learn. The master syllabus for the course shows only 14 student learning outcomes. So this semester I used the survey that Allan designed earlier, in which he went through each chapter of our textbook, asking if this topic or that concept was being taught, and created a specific SLO for every topic that faculty taught.

Using Wiggins and McTighe's "Understanding by Design", I asked the faculty to classify the SLOs as critical, important, or desirable, based on the following definitions.

- Critical outcomes (CRO) are considered to be vital and of fundamental importance. They are outcomes in which an enduring understanding is needed, such that students will remember them long after the details have faded.
- Important outcomes (IMO) are more specific and pertain to ideas or skills that the student must know or be able to do. Student learning is incomplete without mastery of these essentials.
- Desirable outcomes (DO) are recognized as worth knowing, but the aim is exposure, not mastery.

The table below shows a few of these SLOs from different chapters. The first column is based on the survey conducted by Allan Wilson in 2017. It shows the number of faculty teaching a specific topic.

Торіс	Student Learning Outcome	SLO Classification
Unit conversions involving units in the denominator (for instance, converting m/s to m/min)?	1. Apply derived units, such as volume and density, to perform calculations.	<u>CRO</u>
Yes_6_ No	2. Utilize conversion factors to conduct unit conversions.	<u>CRO</u>
to a power (for instance, m <sup>2</sup> to cm <sup>2</sup> )? Yes_6_ No	3. Apply dimensional analysis toward solving problems with multiple steps or conversions.	<u>CRO</u>
Do your students memorize SI prefixes other than kilo, centi, milli, and micro? Yes_3_ No_3_	4. Utilize SI unit prefixes.	<u>CRO</u>
Relating atomic weights to isotope abundances? Yes_6_ No	Calculate the average atomic mass of an element given the atomic mass and relative abundance of each of its naturally occurring isotopes.	DO
Calculating empirical and molecular formulas?	1. Determine the empirical formula of a compound from percent composition or from combustion analysis data.	<u>CRO</u>
Yes_6_ No If yes to the above, do your students learn to solve combustion analysis	2. Determine the empirical formula of a compound using combustion analysis data.	DO
Yes_4_ No_2_	3. Utilize the empirical formula and molar mass to determine the molecular formula of a compound.	IMO
Do your students memorize strong/weak acids and bases? Yes_4_ No_2_	Identify weak and strong acids and bases.	DO

Calculating oxidation numbers? Yes_5_ No_1_	Apply oxidation number rules toward determining the oxidation number of each element in a compound or polyatomic ion.	IMO
Calculating the molarity of electrolytes (for instance, the sodium of sodium sulfate)?	Calculate the molarity of a solution and molarity of ions in solution.	<u>CRO</u>
Yes_6_ No		
Bohr model of the hydrogen atom?	Apply Bohr's theory of the hydrogen atom to calculate energy levels.	<u>CRO</u>
Yes_6_ No		
Do your students memorize the ideal gas law?	1. Use the ideal gas equation to determine the pressure, volume, moles, or temperature of a given all of the other values.	<u>CRO</u>
Yes_4_ No_2_		
lf yes to the above, do your students memorize relationships such as Charles's Law, etc?	2. Use the ideal gas equation in stoichiometric calculations.	IMO
Stoichiometry involving the ideal gas law?		
Yes_6_ No		

Since we were able to classify our SLOs for CHEM 201, I believe now we have a better understanding of what exactly we want our students to learn. We should be able to design an assessment that is tailored to our own department and students. Using these measurable SLOs, and based on their importance, we need to design an assessment that should help us determine the extent of student knowledge.

I intend, with the help of other faculty, to write a "Final Exam" for the course that could be used as an assessment for CHEM 201. The questions should be written to measure specifically each (or most) of the SLOs and should be able to determine what students learned. The results of this assessment should help us answer questions such as: "What should students come away understanding, knowing, and be able to do?", "What evidence can show that students have achieved the desired results" and "What would count as evidence of successful learning?"

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# Scientific Reasoning Skills in General Education Physical Science Courses By Phil Vargas, Physical Science

The Department of Physical Science is continuing to shift its thinking around how to assess student learning outcomes in the general education courses from content-based assessment tools to process-based tools. While many faculty members have adopted this philosophy years ago, the transition to having full scale adoption of a process of a single assessment tool to acquire this data has been a longer process.

The most prevalent tool utilized for this has been the Lawson Classroom Test of Scientific Reasoning (CTSR) developed by Anton Lawson in 1978. This tool measures scientific reasoning in the form of proportional thinking, probabilistic thinking, correlational thinking, and hypothetical-deductive reasoning. This tool is a good fit for assessing the program-level learning outcomes: 3) Analyze and interpret data using mathematics and computational thinking; and 4) Construct explanations and engage in arguments from evidence. It has also been extensively validated and administered to multiple institutions. This data is warehoused in PhysPort website and is constantly updated by participating faculty members and institutions. This allows comparing results with similar courses at other universities in addition to benchmarking them against our program-level outcomes.

The largest hurdle in the implementation of this project has been the data collection process, as many of these courses are taught by adjunct faculty members or by faculty members across the City Colleges in the online modality. Providing clear instructions on how to administer the tool, collect the data, and how to send the data have presented problems in scalability and continuity. However, with all physical science classes moving entirely remote, a herculean task in training and professional development, the potential to incorporate a digital process is now much more likely. This would entail either converting the CTSR to a Brightspace quiz that can be deployed from the college's learning management system or using a free third-party system. Utilizing Learning Object Repositories (LORs), faculty members can easily copy this assessment into their course shell. This will allow consistent deployment and acquisition of the results. The goal of this process will be to make this a more routine process and part of the department's culture.

This process will be piloted at the end of this semester across a few different general education courses. This pilot will not yield a sufficient sample size to perform any analysis but will assist in refining the deployment for Spring 2021 where this tool will be deployed as both a pre- and post-semester test for all of the physical science course sections. The goal of the pre- and post-test strategy is not to measure growth, a common approach, but to get baseline data on whether scientific reasoning skills correlate with course selection. This information can ultimately help shape the curriculum of these courses to best serve our students.

# Political Awareness, Knowledge, and Participation: First Steps of an Inquiry By Ingrid Riedle, Social & Applied Sciences

Perhaps more than ever before, these past few months have shown how important it is to engage actively in the political process, buoyed by trustworthy information and with a clear understanding of how crucial issues affect society. As various events test the very foundations of our democracy – including a contentious election and a pandemic - one of the most important aspects of education may be to bring current events discussions into our classrooms, especially in - but not limited to - social science disciplines, so that our students can apply themselves confidently.

To what extent are my department's curricula contributing to this confidence? Are we offering learning opportunities that stir students' knowledge, awareness, and political participation? Last semester, I itemized Social and Applied Sciences' student learning outcomes (SLOs) based on all three concepts (knowledge, awareness, participation), formulated in the following research questions:

1. How do the theoretical foundations of our Constitution shape lived experience? (7=6.48%)

2. How do governmental policies affect us? (20=18.52%)

3. How do various political institutions function? (21=19.44%)

4. What are my personal values and evaluations? (47=43.52%)

5. When groups/individuals organize and get engaged, what can be achieved? (13=12.04%)

The findings (in parentheses above) indicate that 34 courses in our department, and their combined 108 SLOs, target broad access to knowledge about our country's political culture. Seven of the 108 SLOs foster student knowledge of how constitutional principles affect society (e.g.: Discuss the language of *The Declaration of Independence*, the Constitution of the United States, and the *Emancipation Proclamation* in relation to Black Americans- African American Studies 101); 20 course SLOs (of 34 courses surveyed) ask students to relate policies to society (e.g.: Quantify and qualify the role that innovative urban planning played in Chicago's rise to urban preeminence- History 117); 21 SLOs test students' knowledge on institutional functions (e.g.: Examine the functions of each subsystem of juvenile justice- Criminal Justice 234); 47 SLOs ask students to reflect on their own values (e.g.: Assess human relationship with the natural environment-Geography

201); and 13 SLOs investigate political participation (e.g.: Articulate the value of cross cultural campus and community activities and their impact on the lives of others- Anthropology 102).

Following the mapping of these outcomes from our departmental syllabi, there is a lot of potential to analyze further. My plan for doing so is to go concept by concept, starting with awareness, then knowledge, then participation, the idea being that awareness and knowledge lead to meaningful participation.

To assess student learning and awareness, I drew up research questions first: 1. Do we (SAS) contribute to our students' learning by shining a light of current events with our students, how events fit into a historical context, and how they affect us psychologically, sociologically, economically? 2. Do we (SAS) help students realize how politics touches all aspects of our lives differently depending on our socio-economic backgrounds, raising questions of equity, equality, diversity?

3. Do we (SAS) convey the importance of tuning into and engaging with politics actively (as in listening, analyzing, mobilizing, voting)?
4. Do we (our department as an aggregate) provide analytical tools for students to navigate the political information? And if so, which ones?

A pilot survey, consisting of three multiple-choice and one short answer question, was sent to 78 students:

1. How familiar were you with current events before you came to HWC and started taking courses?

2. How familiar are you with current events after taking classes at HWC?

3. In your social science courses overall (think anthropology, child development, criminal justice, economics, history, political science, psychology, sociology, social service – whichever may apply) how often do you feel current events are addressed? 4. Can you share some specific examples of how social science classes - or classes at HWC - have affected your familiarity with current events?

While the sample was disappointingly low, with only 36 valid answers generated, it did yield some interesting initial insights: 33% of students responded that they were "not familiar at all" with current events before taking courses in our department, a number that dropped to 5% after taking our courses. 42% of participants responded that current events were addressed in our courses "very often," 44% "often," 14% "rarely," and nobody reported that current events were "never" addressed.

Short answer themes were: 39% of the students felt more confident to vote and participate in politics, post taking courses here; 61% reported that current events discussions made them know and understand more (some of them mentioning both themes in their answer); 5% (or 2) students offered no answer; and 5% reported not to have been affected at all during their studies of our curriculum.

Obviously, this sample is too small to derive substantial representative information but it allows me to fine-tune the questions before sending the survey to the whole department next week. I will edit out the HWC context and focus the questions solely on our department, and I will reword the short answer question so that students cannot simply respond "no."

In subsequent semesters, I will explore what students know about our political system and the major events spawned by it, before exploring if and how my department may contribute to student participation in our political culture... all in hopes of generating a curriculum that produces an informed and actively engaged citizenry that contributes to solving our country's pressing problems.



Source: https://xkcd.com/2276/

# Toward the Goal of Gender Equity in Assessment of French Phonology Acquisition By Matthew Williams, World Languages & ELL

Among the Six Stages of Assessment (SLO identification, tool design, pilot assessment, conduct full assessment, data analysis, and supporting evidence-based change) the World Language and ELL Department Unit Assessment Project on French phonology acquisition is at a point at which we have had to shift from stage three (Spring 2020) back to stage two (Fall 2020) for two main reasons: first, I realized that the tool I had originally designed had a distinct male bias, and second, in the current COVID-19 environment. I have realized how essential it is to make the procedures for the participants as simple and minimal as possible (ideally, so that the course instructor would not have to be involved at all in training and supervising students in using the tools).

#### The Original Design

Last Fall, during Stage Two of the Assessment Process (Tool Design), I constructed activity procedures that built upon an essential aspect of speech production, namely the 'formant'. As Figure 1 below shows, the vocal tract consists of three main cavities, the nasal cavity, the throat cavity, and the oral cavity. When we produce a vowel sound, the cavities

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highlighted in yellow below allow sound to resonate. The throat cavity is labeled as Formant 1, and the oral cavity is labeled as Formant 2. Producing different vowels involves shifting the tongue, which affects the relative sizes of the oral and throat cavities, thus altering the resonances of Formants 1 and 2, and that difference in resonance frequencies is what we perceive as different vowel sounds.



# **Figure 1:** Vocal Tract showing Formant 1 and Formant 2

These formants can be detected and analyzed by means of an open source sound analysis program called Praat. With this program, we can produce a detailed analysis of speech sound called a 'spectrogram'.

This spectrogram (Figure 2) displays a visual representation of speech sound in graph form in which the y axis measures the sound frequency in hertz, the x axis measures passage of time, and intensity of the sound shows up as darker and lighter areas within the graph grid. Figure 2 below shows a spectrogram of four vowels including Formants 1 and 2 (F1 and F2) for each vowel. We can notice immediately that, for each vowel, the 'distance' in hertz between F1 and F2 differs, and the spectrogram allows us to measure those differences precisely in hertz.

The assessment procedures I constructed called upon students to analyze a spectrogram of a native French speaker and then produce a spectrogram of their own showing their attempt to produce the same French sounds. The participants would then compare the two spectrograms including a comparison of the exact F1 and F2 frequencies.



Figure 2: Spectrogram showing four vowels and Formants 1 and 2 for each

#### **Male Bias Identified**

An issue developed, however, when I piloted these procedures with a small group of French students last fall. Most male-identified students were able to match the F1 and F2 frequencies of the target French sounds, but the majority of female-identified students struggled to generate spectrograms that approached the sample from the provided native speaker. Their F1 and F2 frequencies were much higher than most male-identified students' were and so they had a harder time using the native speaker sound files as models than the male-identified students did. As it turns out, I failed to account for differences regarding the secondary sexual characteristic of the size of the vocal tract, which led to gender inequities in the pilot implementation..

As Figure 3 below shows, the smaller vocal tract is a more female-identified feature while the larger tract is a more male-identified feature, and this affects the resonance frequencies that each would produce.



#### Figure 3: Vocal Tracts of A Typical Adult Female and Male

A quick inspection of the native French speakers represented in the sound files that the participants had to use for this project revealed that no female-identified French voices were included.

# Striving for Gender Equity in the Assessment Design

Clearly, the pool of native French vocal samples need to include a diverse range of speakers so that all of our students, regardless of their sex assigned at birth and their gender identity, have sound file models that will actually help them. As it happens, the ESL student population in the World Languages and ELL Department includes Francophone women from various nations in West Africa. The plan is to reach out to these ESL students and ask for their help to make their own recordings of the French words in the sample pool. Even though the accents of West African varieties of French would differ from the typical Parisian accent which dominates the staple pool now, this would go a long way toward our goal of equity with respect to gender.



Source: https://xkcd.com/2290/

# **Committee Members**

Chair: Erica McCormack (Humanities & Music) Vice-Chair of Unit Assessment: Jeffrey Swigart (Mathematics) Vice-Chair of Gen Ed Assessment: David Richardson (Humanities & Music) Research Analysts: Fernando Miranda-Mendoza (Mathematics) and Phil Vargas (Physical Science) Secretary & Coordinator of Adjunct Outreach: Jack Whalen (Social & Applied Sciences) Coordinator of Cocurricular Assessment: Jennifer Vogel (Advising) Unit Liaison for Art & Architecture: Paul Wandless Unit Liaison for Biology: Farahnaz Movahedzadeh Unit Liaison for Business: Bridgette Mahan Unit Liaison for English, Speech, Theater & Journalism: Ukaisha Al-Amin Unit Liaison for Humanities & Music: David Richardson Unit Liaison for Math: Camelia Salajean Unit Liaison for Social & Applied Sciences: Samar Ayesh and Phil Vargas Unit Liaison for Social & Applied Sciences: Ingrid Riedle Unit Liaison for World Languages & ELL: Matthew Williams

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