AgriSkills Roundtable Meeting Notes

March 26, 2018

Adapting Teaching to Meet Student Needs – Student Panel

Society and what it means to be a student have changed exponentially in the last 50 years, do you think our institutions have adapted at the same pace? Why or Why not?

- Need more inclusive learning styles to augment lecture, applied learning outside of the classroom (in barns)
- The passion that the professor has enhances the student experience
- It is encouraging to see the participation in this room today
- A boring prof is a boring prof
- Relate to current news items – this is why it matters – can apply right away
- Showing that you care and give some one-on-one help
- Having the engagement with students
- Wanting us to succeed
- Flashiest technology is not necessary – prof can make a lecture fun – having a prof that cares, keeps track of you

Should we tailor coursework to individuals, or is there value in teaching a broader curriculum?

- Learning a broad spectrum works best and can be adapted
- Need an intro to ag basics for non-ag students
- First week is hardest (could prepare in high school, prior to starting or in first semester, online course)

Does the current teaching model disadvantage students who do not have an agricultural background?

- Hands on learning helps (seeing things in practice)
- Need some help (e.g., seeder vs sprayer)
- Need an intro to the program to welcome new non-ag background
- Rural students have higher level of knowledge – need to get city students to same level
- Take a quick online course for naming conventions
- Peer group support that is cross specialized helps
- Ag/Non Ag students end up the same – will be at the same level to know content
- Biggest challenge is not having the experience

Can you give examples of teaching models that are well-adapted to students' needs?

- Things that incorporate more than the basic theories

- Group work/learning from each other: some activities, presentations are formalized, other learning occurs informally
- Mentors/helpers (teacher and peer mentors) are they in place: yes but not utilized by all students. Utilize peer helper program. UofM students teamed with farm advisor
- Internships: are they helpful to students (learning different mgmt techniques): helpful when structured (questionnaires) and when you get to choose the opportunity (good to look at other business aside from your family farm)
- 2nd year case study and learning from each other
- Mid-term evaluation helps
- Having a class that stays together for a 3-year program

What are some suggestions for how we can adapt teaching methods to today's students?

- How would you like to learn HR: discussion during lab (Q&A about laws), guest speakers that are experts in each area and different from the prof, case studies (but don't overuse them and make sure they are modern/relevant)
- Do you agree with Gen Z video (8 sec attention span): difficult to pay attention and be engaged for 1.5 hr lecture, need breaks, both students and profs need to sort this out
- Are field trips helpful (they are expensive): yes because otherwise you only know your home operation (Hutterite colony approach), depends on how passionate and interactive the farmer is, conferences are helpful too if there are student workshops (Ag Ex), associations are good too (Manitoba Pork)
- How should things change: be interactive, get students moving, have quizzes and assignments during lectures (can study off them), more specific examples since general ones don't work (commodity groups), present information using different methods (not just PowerPoint), hands-on learning, guest speakers, be passionate about your topic and the ways the material is applicable and important

What's on the Horizon? (UofM, UofG)
- Students need skills for the future: need for critical thinking and technology
- **Group Discussion 1: How are you using technology (teaching and/or agricultural) to provide better experiences for students with hands-on training and experiential learning?**
    - Grow Safe system – for feed lot system
    - HR very challenging to incorporate technology (Top Hat)
    - Use quizzes, CAHRC toolkit, online discussions of controversial issues (e.g., manage workers, vegan activists
    - Special recruiting software, resume screening, mostly for bigger farms, experiential opportunities for small farms, head hunters
    - In-classroom app alerts for test, quizzes due by day's end
    - Internet app – quiz – 5 marks
    - Course questions posted for all students to see

- o Flipped class not popular – students not participating
- o Agricultural tours
- o Video conferences – students in remote locations
- **Group Discussion 3: How are you using teaching technology to increase student engagement?**
  - o Change content and mix lab and lecture materials
  - o Eliminated mid-terms, use 20 min quizzes each week (tests are not reflective of real world of work)
  - o Use pre-tests to adapt material (clickers, polling software)
  - o Stimulate discussion: break into small groups, solve a problem (less lecturing, more interactive learning is better)
  - o PowerPoint is supposed to be a visual aid (not a textbook)
  - o Need material that can withstand a lack of IT technology (web goes down), other tech is key (microscopes, etc.)
  - o Facebook groups work well (keep group even after class is over)
  - o Assignment and discussions using Courselink
  - o Get students to identify innovative ideas for using technology to teach one another
  - o Not all students are tech savvy (outside of social media)
- **Group Discussion 4: How can we increase industry & gov't participation?**
  - o Ask industry what they need in terms of skills for their employees – their technological needs might be completely different from what we are doing/teaching (they want a mix between soft skills & technological training)
  - o Don't go too in-depth in a particular technology because it changes so quickly
  - o Industry $$ comes in much faster than government $$, use industry money as a driver to get government investments (if industry isn't on board, government won't invest)
  - o Building relationships is key. Build long-term relationships before the ask. Get academics on board to help build personal relationships
  - o Invite industry, government to visit campus, tour their facilities, will help develop relationships long-term. Then you can ask for the investments. What will they get in return? Co-op students, new grads, new employees.
  - o Maximize existing relationships of faculty members with partners, but maintain even when staff leaves institution
  - o There is a clear difference between what Industry and Government can and seemingly want to do.
  - o Gov't funds the system, and generally does it well. They look after $/student, they look after physical infrastructure and the (on occasion) do fund initiatives related to technology. However, there is a limit to what Gov't can do, and there was a sense that across provincial governments had been a bit shy about putting too much money into tech for educational institutions, in part because that could be a black hole of spending, and in part because they want to invest in stuff that does not become obsolete in just a few years.
  - o Industry is not there to teach. Industry can and does support at three levels – they provide work placements (internships or stages) for students, they provide expertise to

come to our schools and present/discuss industry advances and respond to student questions, and they provide loans or donations of equipment. All of that is greatly appreciated.

- o There was some concern that, a bit like gov't acquisitions, donations of technology might be obsolete in a short period of time.
- o There has to be clarity around what we are trying to develop in students. Is it to become 'expert' in a particular technology, or is it to become a learner who can master new technology in a timely fashion. The point was made about learning how to operate a particular brand of Precison Ag equipment, or robotic dairy milker, versus being able to develop skills that can be transferred to any brand/version of equipment.

New Production Areas and How to Keep Things Current
- Industry Advisory Boards (Terms of Reference, get together annually, 3 year terms)
- graduating class and graduates are used to collect evaluation details
- connecting with commodity groups (they find this connection valuable)
- liaise with employers and grads (informal, alumni events, surveys, LinkedIn)
- panel events (mix of students and business experts)
- conferences
- publications,
- use of staff that are producers
- flexibility of scheduling (PD for instructors and students to attend farm shows)
- mentoring/shadowing opportunities for instructors with farm staff
- instructors via zoom and Skype
- partnerships for infrastructure/instructors, investment in crop to pay for itself (vertical farms)
- New Production: Medical cannabis, invitro meat, block chain for ag, precision ag (new Research Chair and profs), Independent Study course for niche topics

Participation: 56 attendees
- NL, PEI, NS, QC, ON, MB, SK, AB
- Assoc/Gov (fed/prov)/Educators (HS/C/U)/Students

Next Steps:
- volunteer host for a next conference (frequency, timing)
- on-line community and connections for networking
- research & tools: integration of mental health best practices, internship support, benchmarking student background, case studies and videos to support delivery
- CAHRC is here to assist