

THE FARMERS CLUB CHARITABLE TRUST

AGRICULTURAL EDUCATOR

AWARD 2019 REPORT BY PETER REED



A comparison study on the delivery and assessment methods of agricultural management via Work Base Learning in Canada and how this can enhance our Agricultural Business Management programme.

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Andrei Spence,
The Secretary
The Farmers Club
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London
SW1A 2EL

07/03/2019

Dear Andrei

Please find attached my application and declaration in applying for the Agricultural Educator Awards 2019. I am currently working at Bicton & Duchy College as an agricultural apprenticeship assessor and manager of the Level 4 Agricultural Business Management Apprenticeship (ABM) programme.

I have assessed the ABM apprenticeship programme for three years and been manager for two of them. The programme is made up of five livestock modules in the first year (nutrition, breed & fertility, animal health, environmental and Grassland & forage management). The second year is financial based, covering areas such as global markets, gross margins and proportional analysis to name a few. To conclude the programme, students have to complete a full business plan and three year cash flows for a rented farm application and likewise, apply for capital funding from a bank with both resulting in interviews with representatives from the county council and agricultural bank managers.

The agricultural industry is entering a huge period of change and it's an exciting time for new entrants entering the industry. Likewise, the apprenticeship programme is changing too, with the migration from frameworks to standards. As of yet, the L4 standard has not been written and within my role at college, I am working closely with the team to ensure what is delivered will be right for tomorrows leaders of the industry and see this opportunity as an enhancement of such work. It is fundamental, within my role as manager of the ABM programme, that I provide a relevant and progressive scheme of work to train and equip the next generation of farm managers/leaders into the industry and enhance their global market awareness.

My outline plan for the programme of study is:

Proposed title

A comparison study on the delivery and assessment methods of agricultural management via Work Base Learning in Canada and how this can enhance our ABM programme.

Outline plan

My plan is to visit relevant colleges/universities in Canada to investigate how they deliver and assess ABM to their students. I intend to split my plan into two, the first being to attend lessons to see:

- The depth of delivery
- What interaction students have within the lessons
- Do they incorporate remote delivery and how assessment takes place on farm
- How they enhance the students awareness of the global markets
- How do they incorporate the latest technology used on farm into their scheme of work
- How do they assess the employer demands and adapt the programme to match these.

The second part of the plan is to shadow assessors/tutors on visits to the students at their work placements. From this, I would like to see:

- What technology they use to capture and record evidence to meet the course criteria
- What level of involvement the students employer has to play with mentoring on farm
- What level of detail they assess at, compared to our ABM standards.

With evidence I obtain from my study, I can then compare what level we deliver our programme to Canada. Is it meeting the same standards, can we adapt our programme to incorporate better use of technology for delivery and assessment, which will result in more efficient use of time.

In conclusion, my plan will provide me the evidence to ensure the core objectives of the ABM programme are being met, which is to equip our next generation at this exciting time of change within the industry. I can then work with the team to ensure the new standards that are written meet employer and market requirements, efficient use of technology & time and fundamentally, ensuring it's a great learning experience for the student.

Place of study

I propose to carry out this research across Canada

July 2019 – Canada (duration to be confirmed, suggesting three weeks)

Out of Canada's population of 36.7 million people, 1.9% work within the agricultural industry, a similar percentage but our population is 66.3 million. I have investigated, through 'Hot Courses Aboard 2018' website, that Canada has 33 institutes that deliver relevant ABM courses. This will give me a huge pool of opportunities to find the most suitable institutes to visit.

Estimated Costs

This is difficult to put a figure on at this stage, it will depend on provinces I visit but an estimated return flight from London to Vancouver is £600 plus there will be internal travel/flights, accommodation etc.

In conclusion, if I am successful with my application and subsequent interview, my next phase is to focus on a timeline of which institutes to visit and work out costings in greater detail.

I confirm that I will fulfil the conditions of the award, complete a report on the project and give a presentation if required. I also confirm that I intend to continue in my current job role.

Please find attached my completed application form and two relevant letters from my referees. I look forward to hearing from you

Yours sincerely

Peter Reed

INTRODUCTION

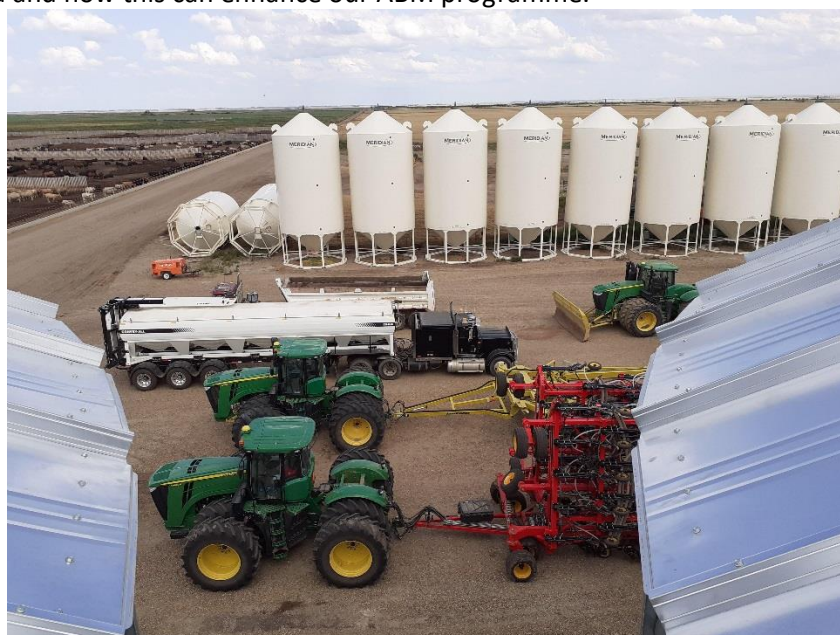
As my letter declaration highlights, I work for The Cornwall College Group, based between both Bicton and Duchy (Stoke Climsland) campuses. I am an apprenticeship assessor as well as Programme Manager for our L4 Agricultural Business Management Apprenticeship (ABM) programme. The students attend delivery sessions one day a week, between September to March for 2 years. The sessions are delivered by industry experts making it very current and relevant for the students to relate back to their places of work, whether that be home farms or employers they work for.

The first year is livestock based where students work with a model farm, in class to ensure they can plan for a 12 month farming calendar within their opted enterprise(s). Therefore planning Dry Matter (DM) requirements for stock numbers, designing diets built around their silage analyses and requirements of their end product. Able to understand appropriate breeding information and design a breeding plan for their enterprise(s). Soil management, looking at soil health and planning/selecting suitable seed and fertiliser requirements for the farm. The students then have to do the same for their place of work and are assessed on their findings.

The second year is finance based, by the end of the year, apprentices will have submitted an application and been interviewed for a council farm, producing three year business plans and accounts resulting in being interviewed by the Devon County Farm Estates team. They will also submit a full capital application to Lloyds Bank for finance, to support their business plans, again resulting in interviews by two agricultural bank managers. Overall, the students will have a broad spectrum on how to plan and manage an agricultural business.

The delivery of the sessions are delivered in a discussion group environment. All students are over 18, have responsibilities at their place of work and therefore are treated at that level. Methods of delivery is predominately face to face as a group with apprentices having work set at the end of each session where they relate session delivery to their place of work and report back at the next session to the group, all of which links to the criteria within the City & Guilds Apprenticeship.

I would like to explore ways in which we could make the sessions even more focused, use different delivery & assessment methods and open it up to accommodate flexible learning, hence my project title 'A comparison study on the delivery and assessment methods of agricultural management via Work Base Learning in Canada and how this can enhance our ABM programme.'



THE PLANNING STAGE

I have a few contacts in Canada, as I have travelled there a few times before on Devon and National Young Farmer Scholarships. This gave me the advantage of knowing their education system was going to be compatible and relevant to learn and exchange ideas. I first searched online and identified 33 colleges across the country, which taught Agriculture in some way. From this list I researched and narrowed it down to eight colleges with the most relevant and realistic travel times within my scheduled time of three weeks. I then made contact via email and phone to these colleges and eight became three that could meet and discuss their programmes. These three were Fleming College in Ontario, Olds College in Alberta and Parkland College in Saskatchewan. Once the dates were confirmed, I booked the flights, accommodation, car hire and planned my itinerary, which was as follows:

Date	Plan
22 nd July	Flight from Gatwick to Toronto
25 th & 26 th July	Visit Fleming College, Frost Campus, Lindsay
29 th July	Flight from Toronto to Calgary
1 st & 2 nd August	Visit Olds College, Olds, Alberta
6 th & 7 th August	Visit Parkland College, Yorkton, Saskatchewan
13 th August	Flight from Calgary to Heathrow



FLEMING COLLEGE, LINDSAY, ONTARIO

'Frost Campus is located on over 150 acres of land close to downtown Lindsay - a student-friendly community with a population of about 21,000. Lindsay, one of the communities in the City of Kawartha Lakes, is about a one-hour drive north east of Toronto, or four hours south west of Ottawa. Part of the Trent Severn Waterway. The campus is home to one of Canada's leading environmental education institutions, Fleming College's School of Environmental and Natural Resource Sciences - which offers over 20 exclusive programs in this fast-growing sector. (Flemingcollege.ca)



Fleming College has 1800 students studying agriculture, arboriculture and environmental science. It was a good start to my trip as I got a real sense of the education system in Canada, how things were taught, college environment and to set the scene for the rest of my trip. Some of the main points of interest within the education system and Fleming College were:

- Students finish secondary at 18 years old
- Graded pass or fail with English, maths and science, if not met requirements then have to pass block Functional Skills (FS) programme before enrolled onto a course
- College take 35% top slice but very relaxed on stats regarding measuring performance
- Programmes are priced dependant on age of student, however student has to match fund per semester, typically \$3000
- Courses, including apprenticeships, are run September to April. During the summer students work on coop farms where they are assessed
- Similar issues and concerns regarding the number of entrants coming into the industry and rely on foreign students, mainly from India to ensure programmes are run. Current intake from the local area is around 15% of the total students on comparative courses to ABM
- The programme is taught two days a week and from college staff only, no use of industry lead input. Lessons were made up of on farm scenarios. It didn't have to be linked back to place of work, therefore assessment was done in class
- The use of online learning was used in most, if not all, programmes. This was mainly used as flip learning, students had to complete online work before the week lessons to get the basic facts/terminology in place prior to turning up to college. This was done via online Moodle tests to confirm they understood the content and these marks were linked to their end grade of pass, merit or distinction

OLDS COLLEGE, OLDS, ALBERTA



"Transforming agriculture for a better world" Everything we do at Olds College is done to advance all aspects of the agriculture industry. By transforming the agriculture industry, we will make the world a better place. All of our programs and actions align to our social purpose. It is the why behind everything we do.

Olds College - EST 1913

Founded in 1913, Olds College has been offering quality hands-on education for over a century. We are a distinct, provincially focused institution that supports the teaching and learning of all Albertans. Through our regular programming, continued education, and online and blended programming, we provide accessible educational opportunities within Alberta and beyond. We are passionate about the Agriculture industry. Through our applied research and integrated learning, we are proud to be Canada's Smart Agriculture College, specializing in agriculture, horticulture, land and environmental stewardship. We work closely with industry to advance and adapt our programming to ensure our graduates have the skills to succeed. (www.oldscollege.ca)

Olds College has 1500 students covering a range of rural subjects and draws students from across the Alberta province. It concentrated primarily on full time students but the apprenticeship programme was certainly a growing area of the college. It was interesting to tour the campus and meet with staff where we discussed and exchanged ideas and working of our programmes. The college was running a Smart Farm, which was excellent to hear and see how students are learning using the latest technologies and how to use the data provided to enhance their own businesses where they work. Olds College is made up of:

- 2000 acre farm, comprising of beef and arable
- 100 ag students per year

- Moodle is imbedded within the teaching and learning of students, which impacts on their end grades. Flip learning is very much embedded too with work set prior to sessions on Moodle. This is to ensure students are prepared for the college session- all set on Moodle
- AgSmartolds.ca is the Smart Farm, made up of beef units with smart farming ideas, using feeding and water monitoring equipment, this was funded from Farm Credit Canada (FCC) \$1 million
- Agri businesses have bought into projects, to have their latest technology being used by students and deals for students when they finish college and head back to their farms
- Olds have an equine reproduction programme, members of the public bring their horses to college, student undertake and oversee whole process from breeding, flogging, AI and shoeing
- Agricultural engineer department have contracts with JD, CASE, NH for students to have latest technology to work on and also companies own staff use college facilities to have a joint teaching session with students and staff alike

The college also run a butchery programme, which I was lucky enough to have a full tour of the facilities and meet with the lectures and 'trading standards' to get a full understanding of the programme.

- standalone enterprise within the college with a maximum of 18 students per cohort
- The college have their own slaughter house and students are taught from slaughter, through to cutting, packing, selling and marketing
- They kill roughly 6 pigs and 3 beef per week from the college farm, which the agricultural students have reared. Also local farms provide animals, mainly Hereford and Angus at 500-550kg due to consumer demands with less fat and smaller joints/steaks. Pigs are mainly Duroc at 75-80kg, again minimal fat due to consumers
- The enterprise has a \$700k turnover, with abattoir running costs and lecturer staff costs to come out of this



PARKLAND COLLEGE, YORKTON, SASKATCHEWAN

'Welcome to Parkland College! With six campuses, one training centre, and a wide range of programs and services, there's a lot to like about us. For more than 45 years, Parkland College has advocated for life-long learning in the Parkland region. To this day programs are developed in response to the community's needs. Education options range from high school upgrading to skills training and trades to university courses and four-year degrees. From accounting to welding, Parkland College offers a broad range of programs that include bachelor's degrees, diplomas and certificates, and adult basic education. Take a look below at a few reasons why you should choose Parkland College for career success (www.parklandcollege.sk.ca)



Agricultural Operator programme is their main programme for students, as 40% of land in Saskatchewan is arable. This programme concentrates on seeding, spraying and harvest

- Programme is a 1 week block per half term
- Apprenticeships are not considered a trade, therefore Saskatchewan policy will not fully accredit the programme
- Programmes are delivery by outside industries

The main points I learnt from Parkland that would benefit our students directly, is how they plan the delivery of their programme to ensure students get the most from the delivery blocks, as students can travel up to 3 hours to get to campus. The delivery is designed as follows;

- Flip learning is crucial, students are set tasks on Moodle and tested, preparing the students for topics covered during the block week
- Results from the Moodle tasks count to their end mark, up to 15% of final mark. This encourages students to complete as it has a direct effect on the pass grade
- When students are taken to an agricultural show/industry visit, they have to do a report on the most relevant new thing they learnt and how it could benefit their place of work

FINDINGS OF MY PROPOSED PLANS AND HOW MY STUDENTS WILL BENEFIT

Classroom

The comments below are based on evidence gathered from lessons and discussions with lecturing staff from the three colleges visited.

➤ **The depth of delivery**

It was refreshing to see and hear the depth of delivery of our ABM programme was on par with what I experienced. Similar criteria was required for the qualification but the relevance of delivery to the agricultural world today was not as relevant as our programme. I saw and heard a few examples of relating college lessons to their place of work but it was not part of their criteria and required minimal evidence.

➤ **What interaction students have within the lessons**

Students were expected to sit and listen, take notes and produce reports on what they had learnt but again, not relating to their place of work, which made me question its relevance.

➤ **Do they incorporate remote delivery and how assessment takes place on farm**

The students were set tasks on their Moodle page (student college portal site), this related to the next college lesson, known mainly as flipped learning. The students had to read statements, watch videos and answer questions throughout relating to the work. This gave them a grounding on the basic knowledge prior to travelling to college, where they were stretched and challenged during the lesson with the lecturer/industry person. As previously mentioned, assessment on farm is minimal, the main challenge would be the remoteness of students and distance to travel, hence the tests on Moodle but overall I found we would certainly link our programme to their place of work in more depth, which I feel gives more value.

➤ **How they enhance the students awareness of the global markets**

It was very apparent the communities were focused on local markets and buying local, especially from my visit to Olds. The students were certainly taught the importance of marketing their products within their areas and provinces. The scheme of work (SOW) I was shown, covered global markets relating to pricing and trends with delivery concentrating on the impact of global warming and minimising their carbon footprint.

➤ **How do they incorporate the latest technology used on farm into their scheme of work**

Technology was a huge part of their SOW, especially at Olds and Parkland Colleges. Olds was working with industry to trial AgSmartolds.ca system. This monitored everything relating to livestock and soils. The feed and water troughs recorded each animal on how often they fed, quantities consumed and students used this data within their programme. AgSmartolds.ca also had probe sensors recording moisture, pH, nutrients etc. within the fields and again, students were monitoring this to incorporate precision farming. At Parkland, they were using GPS driverless tractors. As the area was so remote and large scale farms, the industry are struggling to find a workforce prepared to work in these conditions. Therefore they are turning to technology to bridge the gap. The college worked closely with John Deere to teach students the latest and often held JD staff training at the college campus, where students join such discussions/practical's. Could any of these be incorporated into our programme, yes but at a smaller scale and more directed towards precision methods of spot treating etc. from GPS data.

➤ **How do they assess the employer demands and adapt the programme to match these**

Employers are not a huge part of the SOW design, all three colleges were interested to hear from me what we do within our programme, especially involving industry. Parkland were more 'open' to what the market requires and have started discussion groups to gauge the requirements from employers and how this can be incorporated. My take is on this is you need to adapt the SOW to meet the needs of employers not the other way around, which met some resistance from one college.

The second part of my plan was to shadow assessors/tutors on visits to the students at their work placements. From this, I learnt:

➤ **What technology they use to capture and record evidence to meet the course criteria**

The main methods to gather evidence was Moodle with online tests, which in turn results from these tests equated to 15% of their end mark. The programmes were pass, merit and distinction and from this gave those who wished, the opportunity to stretch themselves and ensured all students done the flip learning prior to lessons otherwise they would fail the programme.

Whilst out onsite with an assessor from Fleming College, they used an iPad with video and professional discussions as evidence, very similar to our practises.

➤ **What level of involvement the students employer has to play with mentoring on farm**

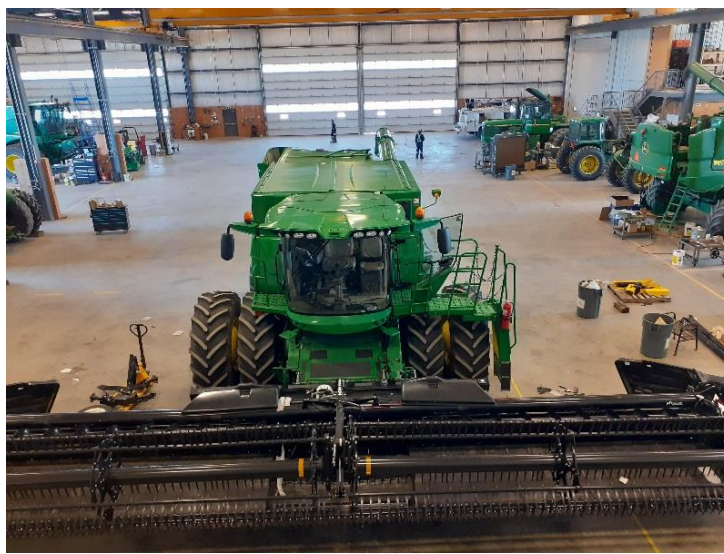
Employers play a major part with the programmes and they complete feedback reports monthly, commenting on behaviours, skills and areas of improvement. The employers are vetted prior, to ensure they can offer the full programme criteria.

➤ **What level of detail they assess at, compared to our ABM standards.**

As mentioned before, very similar to us with the exception of online testing via Moodle and the results impacting on their end mark. I would say we assess in more depth regarding their understanding of how it links to their place of work, actually putting it in practice what they have learnt, which was lacking from what I saw. It has given me a huge boost that we are on par and in many respects ahead of the game with our ABM programme.

FARM VISITS DURING MY VISIT

Whilst visiting the colleges I visited a number of farms and JD dealerships, which gave me a huge insight to technology used and what is required in the workplace by employers and are the colleges meeting those requirements. Whilst in Saskatchewan I visited James Madge, near Hanna who farmed 12,000 acres of arable and 18,000 acres grassland. James ran a 1300 suckler herd and finished 4000 Angus beef cattle during the winter. James had a great business model and my students will directly benefit from this visit, as James has kindly agreed to a video link to our class where students can see and ask direct questions to James on his business model.



EVALUATION

I must first thank the Farmers Club Charitable Trust for giving me the opportunity to complete this award. I would also like to thank Cornwall College for supporting me.

I have learnt we are on par with colleges I visited in Canada. In some areas we are ahead relating to employer engagement with the SOW and meeting what the industry require. I see this is a fundamental part of my role and I'm pleased to see we are meeting this but also I picked up more ideas of how this can be enhanced, which I have already incorporated into the delivery and building for future programmes. The distance learning aspect can easily be put into the programme but I feel the students, themselves, are different. Education in Canada embeds flip learning and completing online tests prior to attending the lessons as the norm, which for our education system it's not, therefore it could be challenging to embed this at a later stage of their learning journey, however it prepares them for HE if they wish to progress. As our programme is currently credited as pass or fail in the framework, the challenge arises of how we ensure students complete tests prior to college lessons. However with the new standards coming in and being pass, merit and distinction this may be rectified, making it easier to add pressure to complete such tests/tasks prior to lessons if we can link the results to their end results.

I made some good links with the colleges, industry and farmers during my trip and will endeavour to enhance these contacts in the near future.

