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AN EXPLORATION OF THE PROFESSIONAL DEVELOPMENT NEEDS OF AGRICULTURAL EDUCATORS WITHIN THE VET SECTOR: A MIXED METHODS STUDY

^{a,b}Sinéad Flannery*, ^aKaren Keaveney, ^bFrank Murphy^a School of Agriculture and Food Science, University College Dublin, Belfield, Dublin 4, Ireland.^b Teagasc Kildalton College, Piltown, Kilkenny, Ireland.* Corresponding Author Email: sinead.flannery@ucdconnect.ie

ABSTRACT

Recent studies have highlighted the contribution of education to the productivity and viability of the Irish agricultural sector. This paper explores the training needs of agricultural educators within the vocational education and training sector by examining educators' experience in their role based on educator qualification, availability of continuous professional development and opportunities for development. The study was conducted in Ireland using a mixed methods explanatory sequential design. The study sample consisted of the national population of agricultural educators within the vocational education and training sector, i.e. agricultural colleges. Data collection methods included a national survey and three focus groups. The findings highlight a challenge across Irish agricultural colleges in how educators are trained to teach, in their motivations for the role, and their long-term desire to remain teaching. It also demonstrates the importance of continuous professional development and the need to enhance training, particularly, pedagogical training, to agricultural educators. It can be concluded that stronger supports are required at both recruitment and throughout an educator's career for development and progression. This study is one of the first studies in Ireland to investigate the continuous professional development needs of agricultural educators within the vocational education and training sector. The paper explores the pedagogical underpinnings of agricultural education, with the aim of developing teaching and learning needs in parallel to technical expertise.

Keywords: Agricultural education, pedagogy, professional development, training, vocational education, teaching and learning, extension, Ireland, mixed methods.

INTRODUCTION

Contemporary agriculture is characterised by a number of demographic challenges that include an ageing population, engaging young farmers, and succession (Meredith & Crowly, 2018; Ní Laoire, 2002; Russell, 2017). For young farmers, the formal route to farming, and in particular to achieve eligibility for state supports, is through agricultural education. While Heanue & O'Donoghue (2014) demonstrate the importance of a formal agricultural qualification in benefiting higher production rates and increasing economic returns in a competitive agricultural industry, there have been limited studies on the teacher experience within the delivery of that qualification. It is timely, therefore, to reflect further on the early education of young farmers, and specifically, on the teachers that facilitate their

learning. It is well established that there are two pathways of education in agriculture – formal and informal pathways (Beijaard *et al.*, 1997; Kilpatrick, 2000; Rolls, 1997). In the lifetime of a farmer, these pathways will intertwine and separate, one informing the other, and leading on to each other. While the role of the extension agent as an educator is well established in public and private advisory services, the parameters of formal teaching are less clear.

Agricultural education is the teaching of agriculture, natural resources, and land management through hands-on experience and guidance to prepare learners for entry into the agricultural industry (Bird *et al.*, 2013; NAAE, 2017; Rubenstein *et al.*, 2014). Generally, there are three key foci within studies of agricultural education, namely: (i) the impacts of education and

training on the sector (Brennan *et al.*, 2016; Heanue & O'Donoghue, 2014; Howley *et al.*, 2017; Leonard *et al.*, 2017); (ii) the learner experience (Alkhasawneh *et al.*, 2008; Anthony Jr, 2008; Biggs, 1999); and to a much lesser extent, (iii) the teacher role (Dolan & Kenny, 2014; Kind, 2016; Walker & Gleaves, 2016). It is this latter focus of the role, experience, and perspective of the teacher that is central to this paper. The purpose of the paper is to explore the experience of agricultural educators within the Vocational Education and Training Sector¹ (V.E.T) in Ireland, identifying opportunities for and barriers to their professional development in the context of advances in approaches to teaching and learning. Young farmers now engage with formal educational services in the form of V.E.T. In Ireland, this equates with Teagasc-provided² Level 5 and Level 6 courses on the National Framework of Qualifications (N.F.Q.) as derived by Quality and Qualifications Ireland (Q.Q.I.)³. While educational services are formalised and accredited by Q.Q.I. in Ireland the actual training for teachers is not.

Traditionally agricultural education is very much intertwined with extension (Cristóvão *et al.*, 2012; Hermans *et al.*, 2015; Ingram, 2017; Prager & Thomson, 2014). Given the overlapping nature of the two, education has become an integral part of extension services rather than as a separate route of knowledge transfer and professional development. Indeed, in the context of this paper's case study, the current 'common pool' approach to recruitment highlights the on-going interchange of extension and education within the agricultural knowledge system in Ireland. In this instance, for example, advisors and educators are recruited from the same pool of agricultural science graduates. It is extensively highlighted in the literature that a strong link between advisory, education and research results in a much more effective agricultural

extension system (Anderson & Feder, 2004; Botha *et al.*, 2008; Prager & Thomson, 2014). However, in the case of this research project, where individuals are recruited from the same pool of applicants regardless of preferred professional pathway, their first choice of working in the agricultural knowledge system may be advisory rather than education and they may take up education positions while awaiting opportunities for advisory roles. Different medium-term career goals present a challenge in terms of their training needs and requirements.

Agricultural education institutions have an important developmental role in terms of delivering the knowledge and expertise to the trainee farmer and helping them acquire the skills and attributes required to apply this knowledge and expertise to farming systems. The trainee farmer gains the confidence and ability to seek new knowledge and adapt such knowledge to any farm system (Anderson & Feder, 2004; Darnhofer *et al.*, 2012; Klerkx *et al.*, 2012). The challenge, however, is in examining the needs of teachers in this context. Very few of the current teaching cohorts in agricultural colleges have formal pedagogical qualifications, having been recruited due to their agricultural science qualification and expertise. Consequently, these educators have little to no pedagogical background as there is no obligation on agricultural educators to complete pedagogical courses at any stage in their career. This is outside the norm of other V.E.T. agricultural education jurisdictions within Europe, such as the Netherlands, where agricultural educators must either possess a teaching qualification upon employment or alternatively obtain a teaching qualification within two years of employment (De Bruijn *et al.*, 2017). Given that Ireland is an outlier in the context of agricultural education there is a strong rationale for exploring the professional development needs of agricultural educators.

Given the challenges outlined, this paper is organised around four key areas. The first provides a theoretical framework for the study. Secondly, the methodologies employed in the data collection phase are detailed. The third section provides a discussion of the results, and finally, the paper draws conclusions and recommendations associated with the results. It is important to note this paper is part of a broader research project and this initial stage of the study explores the overall professional development needs of agricultural educators. Other foci, as a result of the

¹ VET takes place post-secondary school/high school but is not part of the third level system.

² Teagasc is the main provider of V.E.T. in agriculture, food, horticulture, and equine studies in Ireland.

³ Level 5 and Level 6 courses on the N.F.Q. are equivalent to Level 4 and Level 5 respectively on the European Qualifications Framework. Graduates of V.E.T. programmes obtain a Certificate level of training, acknowledging their specialised skills training and ability to perform as a skilled labourer within the workplace.

findings to date, include the development of a competency framework to provide support to educators following identification of specific pedagogical training required by agricultural educators in the future. The framework will be used as a tool for auditing, planning and assessing future continuous professional development (C.P.D.) needs of agricultural educators within the V.E.T. sector and will provide the basis of future publications.

Theoretical Framework: At its simplest, education can be divided into its two interdependent parts; teaching and learning. Teaching is a complex term: is it a profession or occupation, practice or activity, vocation or calling? The results of teaching are found in the learner, not in the teacher and teaching does not always result in learning and therefore must be constructed around the apparent need for learning (Fitzmaurice, 2010; Jōgi *et al.*, 2015; Noddings, 2003). Hence, the educator becomes a facilitator of learning and guides student learning. Consequently, teaching and learning are very tightly bound activities.

The roles and responsibilities of the teacher have become much more complex and demanding (Kasule *et al.*, 2016) as they are expected to deal with a wider range of students of varying levels of ability in an environment where the needs and demands of learners are constantly changing (Conway *et al.*, 2009; Gleeson, 2012; Tobail *et al.*, 2016). Consequently, educators should be supported in their attempt to cope with these emerging demands through the provision of appropriate, up-to-date and relevant, high-quality C.P.D. (Harford, 2010; McMillan *et al.*, 2016; Murphy & de Paor, 2017). C.P.D. and training have a key role to play in securing staff commitment and helping staff realise their true potential (Dysvik & Kuvaas, 2008; Velada & Caetano, 2007). Investment in training also reassures employees they are valued by their employer which consequently increases employee motivation and commitment to the organisation (Ashar *et al.*, 2013; Dysvik & Kuvaas, 2008; Ghanbari & Eskandari, 2013). Educators are attracted to C.P.D. when an opportunity presents itself to expand existing knowledge and skills, contribute to their growth as educators and enhance student learning and educator effectiveness within the classroom (Guskey, 2002; Velada & Caetano, 2007). Therefore, a systematic approach to the training process whereby there is assessment of training needs, development and implementation of a training program followed by

evaluation of the training process should be employed. Identifying the training needs through assessment is a crucial part of the training process as it provides information on who needs to be trained, the type of training program required and how the results of the training program are to be evaluated. Investment in training and approaching the training process in this manner helps an organisation achieve a more competent, better motivated and more independent workforce (Elnaga & Imran, 2013; Hanaysha, 2016; Kapenda & Pieters, 2017). Finally, staff morale increases, and positive employee attitude evolves where skills development is associated with career progression, recognition and reward thus highlighting the benefits associated with investment in training and C.P.D.

METHODOLOGY

A mixed methods approach was used in this study by combining both quantitative and qualitative research methods. There are several definitions of mixed methods, but for the purpose of this research mixed methods can be defined as a way of collecting and analysing quantitative and qualitative data, integrating both methods of data collection and their results, and using certain mixed methods designs (Creswell & Clark, 2018). The core mixed methods design used in this study was the explanatory sequential design which consists of two distinct phases: quantitative data collection followed by qualitative. Quantitative data was collected via a national survey and analysed prior to collection of qualitative data via two focus groups. The two phases of data collection were integrated at the intermediate stage of the study. The quantitative phase helped explain and provide a general understanding of the research problem. The qualitative phases assisted in the explanation of statistical results obtained in the quantitative phase, allowing the researcher explore participants' views and opinions in more depth (Creswell *et al.*, 2003; Ivankova *et al.*, 2006; Tashakkori & Teddlie, 1998). A national survey of agricultural educators and three focus groups were used to gather the information required to answer each research objective.

Pre-Survey Focus Group: Prior to developing the national survey, a focus group was conducted with a cohort of volunteer agricultural educators (n=9) at an education training day held in County Carlow, Ireland in February 2016. The purpose of this focus group was to gain an insight into educator's experience in their role as

educators in terms of regular challenges they face and potential areas for improvement. The information gathered in this focus group was used in the formulation of the national survey.

National Survey: All agricultural educators (n=76) within the six Teagasc¹ Irish Agricultural Colleges were invited to complete a national survey in June 2016. A satisfactory response rate of 67% was achieved from the national survey which consisted of both open-ended (n=5) and closed-ended (n=31) questions. This survey focused on current levels of training received and satisfaction levels with such training, identification of potential improvements to future training and support provided, investigated educator's pedagogical knowledge, and finally agricultural educators career path intentions and the impact of training and support on their career path intentions. A 5-point Likert scale was used to assess attitudes and satisfaction within the survey. Prior to distribution of the national survey, it was piloted with a cohort of individuals who had previous teaching experience in an Irish agricultural college. The results from the pilot survey were analysed and final amendments were made to the national survey prior to distribution.

Agricultural Educators Focus Groups (n=2): Following analysis of the national survey, two focus groups were conducted with agricultural educators within the six Teagasc¹ Irish Agricultural Colleges. Participants were selected from the national survey based on their agreement to participate in a follow-up focus group.

The first focus group consisted of new, relatively inexperienced educators (n=7) with less than five years' experience in their role as educators from each of the six agricultural colleges.

A second focus group was conducted with more experienced educators (n=6) in the South-East of Ireland who had more than five years' experience in their role as educators. Both focus groups explored three main themes: (i) level and type of training received; (ii) teaching skills and strategies; and (iii) future professional development needs. These focus groups provided in-depth information on pedagogical training available to educators and their level of satisfaction with all types of training offered to them based on national survey results. They also identified potential areas for improvement in terms of future educator training in pedagogical skills and strategies based on educator

experience.

Data Analysis: Qualitative data collected via the focus groups were recorded and subsequently transcribed. These transcripts along with the national survey results helped identify many key themes within this study.

Quantitative data collected via the national survey was coded and subsequently analysed using the statistical processing computer software package IBM SPSS Modeler 18 64-bit. Descriptive analysis was used to provide general descriptions of the national survey data followed by a relational analysis which explored relationships and associations between variables.

Thematic analysis was used to analyse qualitative data obtained from each of the three focus groups. An inductive approach was used for coding and identification of themes from qualitative data collected. Repetitions, similarities, and differences were recorded and subsequently divided into themes. This method of analysis was applied to identify concepts occurring in-text, analyse patterns in-text, and to discover associations between themes. The main themes emerging from each of the three focus groups included; lack of support in terms of materials and resources available; vast diversity in level of student ability; lack of specialisation in specific subject area; lack of pedagogical knowledge; inadequately prepared and trained for their role as educators; barriers to professional development; and opportunities to improve and enhance both formal and informal training provided to educators.

Integration in this explanatory sequential design consisted of explaining survey results with qualitative focus groups, connecting the quantitative results with the qualitative data collection.

RESULTS DISCUSSION

Profile of Respondents: Based on national survey results obtained in this study the majority of agricultural educators in Irish agricultural colleges are male (80%) and aged between twenty and forty years of age (82%). Of the agricultural educators surveyed, 63% have permanent contracts and very little experience in their role as educators with only one-third of educators possessing more than five years' experience in their role. The majority of Irish agricultural educators possess a Level 8 Honours bachelor's degree qualification (35%) or Level 9 Post-Graduate degree qualification (49%). The study population in this paper is small due to the nature of the delivery of agricultural education within the V.E.T. sector in Ireland. As alluded to previously,

there are six Agricultural Colleges nationally under the Department of Agriculture, Food and the Marine and at the time of this study, there were less than one hundred agricultural teachers (n=76) within these colleges teaching full-time students. Consequently, the sample size used within this study may appear to be relatively small, but the numbers used are representative of the national population of agricultural educators given the size of the total population of agricultural educators in Ireland.

Agricultural educators' perceptions and attitudes towards a teaching role: The majority of agricultural educators (90%) 'like' teaching because it gives them great satisfaction and pride from the student interactions and success achieved by individual students. As a result, they feel it is a very rewarding job which provides them with great experiences and opportunities to meet new people and build connections. As one educator states;

I believe that enabling a student to achieve, helping them to develop an understanding of new information and potentially a passion for a particular subject area is one of the most rewarding things you can do. Walking out of a class where students really became engaged in the subject and a good discussion was generated is very uplifting. What's not to like (Respondent 42, Q28 (a). National Survey)

However, deeper investigation into employee attitudes and perceptions in terms of motivation for their role and their level of commitment to that role revealed that educators do not intend to stay in formal education within extension, seeking career paths in other areas of the extension services. Almost three-quarters of educators that do not intend to remain in education have less than five years' experience in their role as educators. These findings present a significant challenge in terms of agricultural educator retention levels into the future. A career in the advisory services is the most sought-after position with 72% of educators who wish to move on from education intending to enter the advisory services. Other areas of interest include research, private agricultural industry and full-time farming. This presents a significant challenge in the field of V.E.T. agricultural education as education does not appear to be the preferred professional pathway in agricultural extension within Ireland. Consequently, commitment and retention of agricultural educators into the future

may pose a significant challenge to the V.E.T. sector.

As identified previously, almost three-quarters of these educators have less than five years' experience in their role as educators. Consequently, it must be noted that this cohort of educators were employed at a time when severe pressure was being placed on Irish agricultural institutes to reduce the back-log of individuals on a waiting list for a place on a Green Cert programme⁴ to become recognised as a 'trained farmer'. Typically, pre-2015, in excess of 3500 students enrolled on Teagasc V.E.T. programmes. However, post-2015, in excess of 5000 students are enrolling on these programmes. Cohorts of educators recruited since 2015 were inexperienced in their role and endured greater pressures than their more experienced counterparts who are familiar with the education system. Consequently, a greater number of these educators perhaps view other roles, as mentioned previously, as more favourable career paths. Interestingly, on the other hand, more experienced educators with greater than six years' experience in their role as educators who wish to move on from their role as agricultural educators seek a career in a senior educational role. Consequently, these results suggest educator's motivations differ depending on their stage in their career.

Perception of Agricultural Educator Training: Agricultural educators receive technical training to stay abreast with current and new technologies and practices in agriculture. Technical training is available to educators on a monthly basis if they can allocate the time to attend training. New entry agricultural educators also receive a limited level of pedagogical training in teaching and learning skills and strategies via a four-day pedagogical course (Level 6 Q.Q.I. Award), however, this training is not mandatory and is only offered to new recruits at present, typically within eighteen months of commencing employment. This study examined educators' level of satisfaction with the training received and identified areas for improvement. When the relationship between educators' level of satisfaction with training received and their level of confidence in both their technical and

⁴ The Green Cert Programme comprises a list of land-based courses qualifying individuals as a 'trained farmer'. Individuals require this qualification to be eligible for agricultural schemes i.e. stamp duty exemption, agricultural stock relief, national reserve, young farmer scheme, etc.

pedagogical content knowledge was examined, an association between the two variables became evident. Findings presented in Table 1 and Table 2 suggest there is an association between educators' level of satisfaction with training received and their overall knowledge of the

core agricultural enterprises they teach as well as their knowledge of the teaching and learning skills that enable effective teaching. This highlights that training has a key role to play in the development of agricultural educators both personally and professionally.

Table 1. Relationship between educators rating of their technical knowledge on the core agricultural enterprises they teach and their level of satisfaction with technical training provided on the core agricultural enterprises (n=51).

		Level of satisfaction with technical training provided on core agricultural enterprises			Total No. (%)
		Unsatisfied Overall No. (%)	Don't Know No. (%)	Satisfied Overall No. (%)	
Rating of technical knowledge on core agricultural enterprises	Poor Overall	2 (66.7%)	0 (0.0%)	1 (33.3%)	3 (100.0%)
	Neither Good Nor Bad	2 (40.0%)	0 (0.0%)	3 (60.0%)	5 (100.0%)
	Good Overall	14 (32.6%)	2 (4.7%)	27 (62.8%)	43 (100.0%)
	Total	18 (35.3%)	2 (3.9%)	31 (60.8%)	51 (100.0%)

Table 2. Relationship between educators rating of their knowledge on the teaching and learning skills that enable effective teaching and their level of satisfaction with pedagogical training provided (n=51).

		Level of satisfaction with pedagogical training provided			Total No. (%)
		Unsatisfied Overall No. (%)	Don't Know No. (%)	Satisfied Overall No. (%)	
Rating of knowledge on teaching and learning skills that enable effective teaching	Poor Overall	7 (87.5%)	0 (0.0%)	1 (12.5%)	8 (100.0%)
	Neither Good Nor Bad	6 (60.0%)	2 (20.0%)	2 (20.0%)	10 (100.0%)
	Good Overall	11 (33.3%)	8 (24.2%)	14 (42.4%)	33 (100.0%)
	Total	24 (47.1%)	10 (19.6%)	17 (33.3%)	51 (100.0%)

Agricultural educators are satisfied with the level and type of technical training provided to them. Sixty-one per cent of educators are satisfied with technical training received which was proven further in the focus groups with one educator stating, 'The technical training is good you cannot deny that (Participant 5, FG3, Pg8)' and all other participants in full agreement with this statement. Within the focus groups, it was also highlighted that educators do not want more technical training but believe it could be improved through the provision of one-off training on online agricultural tools i.e. Carbon Navigator⁵, Nutrient Management Plan Tool⁶, etc.

There is stuff there like the Nutrient Management online or Carbon Navigator. There is general stuff, not just enterprise-specific, that I wouldn't get to training on during the year because I don't have time to go but everybody here should know that stuff (Participant 5, FG3, Pg6)

Therefore, as a result of these findings, technical training satisfactory levels are good amongst agricultural educators. In contrast, there is an evident difference between agricultural educators' level of satisfaction with technical versus pedagogical training. Forty-seven per cent of agricultural educators are not satisfied with pedagogical training received and a further 20% are unsure of their level of satisfaction. These levels

⁵Carbon Navigator: online farm management package which measures environmental gains that can be made on farm by setting targets in key areas e.g. length of grazing season, spring application slurry.

⁶Nutrient Management Plan tool: online system for developing nutrient management plans for environmental and regulatory purposes.

highlight a need to provide sufficient pedagogical training to agricultural educators in the future. Within this study, less experienced educators were more satisfied with pedagogical training when compared to their more experienced colleagues. This is not surprising as new entry agricultural educators receive a four-day pedagogical course (Level 6 Q.Q.I. Award) which equips them with a certain level of pedagogical competence. The more experienced educators do not receive this training (nor did they in the past) which further signifies the importance of both improving and extending the provision of pedagogical training to agricultural educators. However, the form of pedagogical training required by more experienced versus less experienced educators differs. Within the focus groups conducted with more experienced educators in this study, educators highlighted key areas for improvement and the type of training that would benefit this particular cohort of educators;

I learnt more by watching other people present to other students...by watching them, how they're arriving and they're presenting themselves and the tone and the style and how they communicated it. It was actually therapeutic or energising watching a number of people in action...I'm sure we'd all benefit from different styles... (Participant 1, FG3, Pg15).

It is well known that teachers are the worst people you can present to because for the first half-hour of the presentation they'll be looking at the person presenting and will say well how would I have reacted (Participant 2, FG3, Pg15).

This cohort of educators are not seeking information on the theories that underpin education but seek knowledge on new technologies and alternative communication, presentation and teaching styles. There is a positive attitude amongst all agricultural educators in this study and a willingness to engage in training, particularly pedagogical training. Of those educators that completed the national survey, 79% are willing to engage in additional pedagogical training upon provision. A strong association was evident between agricultural educator level of satisfaction with pedagogical training and willingness to engage, with 60% of agricultural educators who are unsatisfied with current pedagogical training received declaring a willingness to engage in this form of training. Therefore, there is great potential to increase and improve the

pedagogical training provided to agricultural educators, which in turn could improve their satisfaction levels with pedagogical training and lead to increased student engagement and better morale overall, both in the classroom and the workplace. As this study is the first stage in a broader research project, the purpose of this paper is to explore the C.P.D. needs of agricultural educators and subsequent research conducted by the authors will identify the specific pedagogical training needs of agricultural educators into the future.

CONCLUSIONS AND RECOMMENDATIONS

There is a challenge facing Irish agricultural colleges in how teachers are trained to teach, in their motivations for the role, and their long-term desire to remain teaching. Primarily, agricultural educators with less than five years' experience in their role as educators seek employment in the advisory services with longer-term staff seeking senior educational roles. This represents a change in agricultural educator motivations depending on their stage in their career. Furthermore, regardless of professional pathway, education is not the preferred career within agricultural extension. This poses a significant challenge to the retention of agricultural educators within the V.E.T. sector. Therefore, agricultural educators require stronger supports both at recruitment and throughout their career for development and progression.

A limited number of agricultural educators possess a pedagogical qualification as a result of being recruited based on their technical knowledge and expertise with no obligation on these educators to complete any pedagogical training or qualifications. As mentioned previously, this is outside the norm of other European jurisdictions, for example, the Netherlands, where agricultural educators are obliged to obtain a teaching qualification within two years of employment unless they already possess a teaching qualification upon employment (De Bruijn *et al.*, 2017). These educators are expected to deal with students from a variety of backgrounds, with varying levels of ability in a setting where the demands of students are constantly changing (Conway *et al.*, 2009; Gleeson, 2012; Tobail *et al.*, 2016). This places increased pressure on agricultural educators which subsequently highlights the importance of providing relevant, up-to-date, high-quality C.P.D. to these educators (Harford, 2010; McMillan *et al.*, 2016; Murphy & de Paor, 2017), in an attempt to provide stronger supports and better assistance to agricultural

educators in their role.

From this study, agricultural educators are satisfied with the technical training they receive which provides them with information on current and new technologies and practices available to the different agricultural enterprises (Beef, Dairy, Sheep, Tillage, etc.). However, a deficiency in the provision of pedagogical training provided to agricultural educators has been identified. Agricultural educators in this study are not satisfied (47%) with the pedagogical training they receive and seek more support and guidance in this area. Despite the level of dissatisfaction with the provision of pedagogical training, agricultural educators in this study have a positive attitude towards C.P.D. with 79% of educators willing to engage in future C.P.D. on pedagogical skills and strategies. Consequently, this highlights an opportunity to engage with agricultural educators and enhance the pedagogical C.P.D. made available to educators in the future. Investment in C.P.D. will play a key role in the development of educators both personally and professionally as it leads to increased staff morale and commitment to an organisation, enhanced student and educator motivation, and improved educator effectiveness and student engagement, as extensively highlighted in the literature (Ashar *et al.*, 2013; Dysvik & Kuvaas, 2008; Ghanbari & Eskandari, 2013; Velada & Caetano, 2007). Given the career path intentions of agricultural educators in this study, their commitment to their role, the lack of pedagogical training provided, and their willingness to engage in future C.P.D., the need to improve and enhance the C.P.D. opportunities available to agricultural educators is evident. Investment in C.P.D. will benefit both the educator and the organisation. It will enable educators to identify their true potential and feel valued by the employer but also benefit the organisation as it should lead to a more competent, better motivated and more independent workforce (Elnaga & Imran, 2013; Hanaysha, 2016; Kapenda & Pieters, 2017).

Therefore, in conclusion, both formal qualifications and informal peer engagement have a role to play in the development of agricultural educators within the V.E.T. sector. This paper extensively highlights the importance of C.P.D. and the need to both increase and enhance the availability of C.P.D., particularly the provision of pedagogical skills and strategies, to agricultural educators. Such investment also has the potential to increase retention of educators within the organisation

and boost staff morale, which are significant challenges facing agricultural education within the V.E.T. sector in the present competitive industry. Subsequent research conducted by the authors as part of the broader research project will identify specific pedagogical training needs of agricultural educators into the future.

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