Developing a professional studies curriculum to support veterinary professional identity formation.

Abstract

Professional studies teaching in medical and veterinary education is undergoing a period of change. Traditional approaches, aiming to teach students professional values and behaviours, are being enhanced by curricula designed to support students' professional identity formation. This development offers the potential for improving student engagement and graduates' mental wellbeing. The veterinary professional identity associated with emotional resilience and success in practice incorporates complexity in professional decision-making, and the importance of context on behaviours and actions. The veterinarian must make decisions that balance the sometimes conflicting needs of patient, clients, veterinarian and practice; their subsequent actions are influenced by environmental challenges such as financial limitations, or stress and fatigue caused by heavy workload. The aims of this paper are to describe how curricula can be designed to support the development of such an identity in students. Relevant literature from medical education and the veterinary profession will be reviewed to describe current best practice for supporting professional identity formation, and then the application of these principles will be presented using the curriculum at the Royal Veterinary College as a case study. Design of a "best practice" curriculum includes sequential development of complex thinking, rather than notions of single best solution to a problem, management of a hidden curriculum that tends to reinforce a professional identity conceived solely on clinical diagnosis and treatment, exposure to veterinary professionals in different environments who possess different sets of professional priorities, and contextualisation of taught content through reflection on workplace learning opportunities.

Many veterinary curricula now include professional competencies, and skills that are classically considered to be "non-clinical". The recent nature of this development means that this is new material for many of those involved in curriculum design. Focusing professionalism teaching exclusively on a set of technical skills (communication, business management, teamwork) runs the risk of neglecting the potential benefits that a professionalism program can impart on graduates' management of clinical complexity and their own mental wellbeing. In this article, we present a rationale for constructing a curriculum around professional identity formation, rather than exclusively focusing on professional skills and behaviours. After reviewing relevant veterinary and medical education literature, we will describe how we have implemented the fundamental curriculum design elements for the support of professional identity, including examples of teaching and assessment strategies.

Why do we need to support professional identity formation?

Content relating to professionalism and professional skills has been developing in medical and veterinary curricula over the past 20 years.[1-8] Most evident in the early development of veterinary teaching were strategies aimed at improving professional skills: communication,[1,2] business, leadership and practice management.[3-5] Early strategies to embed professionalism in medical education arose in response to concerns surrounding "deprofessionalisation", in particular perceptions of a loss of trust in doctors, increases in managed healthcare (in the USA), and high profile scandals, such as the Harold Shipman case in the UK. As a result, curriculum interventions were developed that focused on attempts to teach students professional values (honesty, compassion, altruism, empathy and trustworthiness)[6,7] and responsibilities (to social justice, patient confidentiality, and management of conflicts of interest[7]). Teaching strategies were aimed at facilitating students' internalization of professional values and adoption of professional behaviours, in part by learning from role models.[8.9]

More recently, some of those individuals influential in these early developments have advocated a change in focus.[10] Instead of teaching students values and responsibilities, the more contemporary approach is constructed around supporting their professional identity development. In particular, this recognises the importance of situation and context to the decision, actions and behaviours demonstrated by the clinician.[10] It acknowledges that students enter their medical education already equipped with many normative professional values,[11,12] and that they can be supported in the demonstration of these in relevant professional behaviours, but that this behaviour demonstration may be challenged by the complex environment of the clinic.[11,13] Developing students' professional identity therefore includes methods to enable individuals to act in accordance with their own values, and understand the contextual challenges, such as stress, fatigue, high workload, and concern about a patient, which may negatively impact on this. It also includes support for context-related decision-making, rationalising the ideals of the individual against the needs of the client and the challenges of the situation. Incorporating the importance of clinical context to the successful expression of professional values allows the accusatory term "unprofessional… the catch all criticism"[14] to be replaced by a notion of temporary lapses in professional behaviour. Decisions are acknowledged as being context-dependent, and therefore a universally appropriate "gold standard" is recognised as being overly simplistic.

This change in focus is welcomed from the perspective of student engagement in this area. Early curriculum design was built on the assumption that professional values and behaviours needed to be taught to students before they entered the profession.[8] The implications of this are that students are somehow innately "unprofessional", and this is something that is developed through education. Unsurprisingly, the medical education literature demonstrated the resistance encountered to these approaches to teaching and assessing professionalism.[15,16] Students resented their professional behaviours being judged by role models who were themselves lacking professional values and behaviours.[15] Conflicting messages in the hidden curriculum, predominantly surrounding the disconnect between professionalism as taught in the classroom and as role-modelled in the clinic, led to a lack of engagement in the value of professionalism education, and a distrust of the methods used.[17] In contrast, a view of professionalism that incorporates a recognition of the complexities of professional behaviours, constructed on the integration of personal and professional values and patient needs, applied in a way that varies with context, is more engaging for students and is perceived as being less judgmental.[14] Focusing professionalism teaching on the complexity of decision-making and acting on those decisions, rather than on teaching and assessment of professional values and behaviours, offers potential for improving student engagement and their perceptions of the value of the content.

In addition to encouraging student engagement, a focus on professional identity development represents "best practice" because of implications for graduate resilience and mental wellbeing. A link between identity and mental wellbeing is increasingly recognised[18-20] and in professions associated with significant levels of poor mental health, professional identity development is an important part of a successful mental health strategy. A well-developed professional identity is proposed to represent the difference between individuals who successfully employ coping strategies to manage career stressors, and those who try to use these but succumb to negative emotional consequences from career stress.[19] Career coping methods, such as peer support, wellness programs and self-help methods (exercise and a healthy lifestyle) will only be effective if the individual has a well-developed professional identity. Acting in a way that is discordant with personal identity values is known to result in a sense of failure and emotional distress.[18] Professional identity therefore needs to incorporate personal identity values, and can be viewed as a process of negotiating these into the professional role, constructing a set of professional priorities (which if realised impart a sense of career satisfaction), and situating those values and priorities in the context of the professional workplace. Veterinary professional identity is therefore represented by the inter-relationship of personal beliefs, professional actions and clinic/ hospital context. If this is poorly developed, career success and satisfaction will be achieved only if the individual's own personal values are consistently converted to desirable actions, something that is challenged by the complicating influences of the clinic environment. Emotional wellbeing is supported when a veterinarian builds their identity around actions in context: an understanding that their decisions will be based on their personal values and goals, integrated with those of the client and wider clinical stakeholders, and enacted in the context of environmental challenges (financial limitations, cultural norms, an individual's stress and fatigue).[21-25] Veterinary curricula therefore need to be designed to help students construct a three-dimensional professional identity (personal values, professional actions

that integrate the values of all parties, expression of values and behaviours in the context of the clinic environment).

Veterinary students are exposed to powerful hidden curriculum influences on their developing identity.[26] Their education is typically dominated by specialist practitioners, an identity associated with periods of work-life imbalance, the pursuit of a definitive diagnosis and "gold-standard", evidence-informed, but disease-focused rather than health-focused, therapy. Often the level of complexity evident in the veterinary identity is reduced: many patients are referred with a lesion or area of pathology already defined, and the client and referral veterinarian usually share common values relating to financial costs of treatment and gold-standard clinical management. These scenarios are frequently regarded as good teaching cases, because the aligned values, relative lack of financial limitations and availability of a definitive diagnosis means a complete clinical picture can be relayed to the student. Cases where the client opts not to pursue treatment or where a definitive diagnosis is not achieved are often disregarded as not representing valuable teaching material. This can reinforce students' narrow conceptions of a professional identity built on curing disease.

In contrast, most veterinary graduates enter a first opinion practice environment, defined by the need to act with confidence in the absence of a definitive diagnosis, manage the complexity of conflicting client values and contextual limitations, and (at times) make decisions not to treat.[23] An attempt by new graduates to emulate the specialist practitioner identity in the context of a first opinion practice will result in frustration: the graduate will experience dissonance and career dissatisfaction as the environment prevents the expression of the values and actions modelled in the specialist practice, and clients and colleagues will become frustrated as the graduate focuses their professional priorities on definitive diagnosis and gold-standard therapy. To prevent this, steps to support identity formation in the veterinary school additionally need to highlight the differences in professional identity (values, priorities, actions and context) that will be evident within the profession, particularly those in general, referral and academic practices. Exposure to different role models in relevant contexts, rather than context-free teaching of professional values and behaviours, therefore represents best practice for graduate wellbeing and competence in different professional careers that require different versions of the veterinary professional identity. This discussion of the hidden curriculum and differences in professional identities demonstrates the final benefit of a curriculum built around professional identity formation: formal inclusion of the competences of the general practitioner identity, including acting in the uncertainty of a lack of definitive diagnosis, and problem-solving complex scenarios where conflicting values and environmental challenges are present.

The veterinary professional identity thus incorporates balancing the needs of numerous stake-holders in problem-solving clinical and professional dilemmas.[21] During veterinary student education, particularly in the earlier years, clinical problem-solving is typically presented in a decontextualized manner, focusing on the disease of the patient and how it may be best resolved. Weaknesses in graduates' competence in incorporating the needs of the veterinary business in their reasoning and decision-making have been identified,[27] and incorporating the needs of colleagues, the client and personal self (one's own priorities

associated with being a veterinarian) represent additional layers of complexity. If a student develops a narrow conceptualisation of professional identity, for example one that is disease-focused, built on achieving a definitive diagnosis, and based on the highly selected caseload of many university-based, referral hospitals, any clinical decision that compromises this in favour of the business or the client (for example taking treatment decisions in the absence of a specific diagnosis), will represent an identity-behaviour mismatch, and may result in a sense of failure. Furthermore, this will inevitably lead to a lack of confidence and competence in managing complex professional dilemmas, in which the needs of the various stakeholders are in conflict. Building a professional identity that acknowledges multiple "right answers" rather than a single gold-standard, clinical approach, and recognizes that the pathway selected will depend on individual circumstances and stakeholder priorities, encourages competence in complex problem-solving and reaffirms the improved mental wellbeing that can be achieved.

How do we support professional identity? Principles for curriculum design.

Professional identity formation is a complex process of identifying one's own personal values, developing this into a set of goals and priorities for the professional self, and negotiating the exteriorisation of one's goals, values and priorities into behaviours, social interactions and decision in the professional environment.[28] The key elements of curriculum design that best support this complex process are listed in Table 1. In this section, we review relevant literature to explain each of these in turn. In subsequent sections we will present examples from the curriculum at the Royal Veterinary College (RVC), University of London, to demonstrate how we have achieved these key principles. Although this represents a review of best practice, we will also include the challenges we have encountered in this iterative process of curriculum development.

The heterogeneous veterinary identity

Recognising alternate versions of the professional identity is fundamental to being able to develop from a naïve, narrow conceptualisation of veterinary identity built around curing disease, to a broader one that looks holistically at patient health, engages with wider stakeholder needs and incorporates the management of a challenging environment.[21] For veterinary students, this necessitates a departure from the narrow set of ideals with which they enter their education, typically focused on curing disease.[28] It also requires them to value alternative identities to those they may have witnessed previously. Castellani and Hafferty's model of professional identity illustrates the existence of seven different versions of the medical professional identity, each defined by a different prioritisation of professional attributes.[29] For example, in this model, an "Activist" professional will prioritise equality of care, personal morality and altruism, an "Entrepreneurial" professional will prioritise commercialism and a "Lifestyle" professional will place higher value on personal and family life than they place on their work. Key to this model is the understanding that this heterogeneity of professional values, and the varying way they are prioritised amongst the profession's members, supports the overall strength of the profession.[29] This model is useful for conceptualising the complexity of professional identity for veterinary students. It demonstrates that there is not one single "ideal" set of values and behaviours that depicts

the valued veterinarian, and encourages the students to value "other": professional peers with conflicting sets of priorities to their own.

In the previous section, we introduced the importance of students' exposure to different role models in different contexts. A key process of identity formation is identity exploration (identifying and considering identity choices).[30] To encourage students to engage in this process, they need to be exposed to members of the profession whose identities are built around different sets of professional priorities, and for these differences to be made explicit. During this exposure (which occurs as part of the process of professional socialisation: entering the workplace and engaging with members of the profession as a student and future colleague), it is important that students are helped to recognise both those aspects of identity that members have in common (such as a responsibility to uphold animal welfare) and where they differ.

Progressive increase in complexity

Models of university learning emphasise the developmental nature of students' ability to handle complexity in their conceptualisation of knowledge and problem-solving. Perry's descriptions of student cognitive development[31] describe students entering university with dualistic notions of knowledge, in which all questions have a correct answer (known by the teacher), and alternative answers are incorrect. If a student at this stage has a professional identity prioritising diagnosis and treatment, then treatment with an uncertain diagnosis, provision of palliative rather than curative care, or euthanizing a patient rather than pursuing a costly diagnostic work-up would all be conceived as "incorrect" (or less desirable) patient care solutions, and would be dissonant to their identity ideals. Pursuing these pathways would hence evoke a sense of failure. It is therefore necessary to progress students to a multiplicity conception of knowledge: the existence of more than one acceptable solution to a problem, and to relativism: solutions that are dependent on context.[31] Achieving this level of development is essential for competence in professional problem-solving, understanding that when balancing the conflicting needs of stakeholders, the best course of action will vary depending on situation, and may, at times, be at odds with the veterinarian's own professional goals.

Building on Perry's model, Cruess et al[32] use Kegan's stages of identity formation to demonstrate the maturing intellectual and emotional complexity that is necessary for students' identity formation.[33] At university entrance, students are expected to have progressed beyond Kegan's stage 1, a child-like stage during which decision-making is largely impulsive and without conscious reasoning. At stage 2, the typical university entrant student identifies that decision-making is affected by the needs of others, but their own needs will still predominate. At this stage, it therefore represents a significant challenge for a veterinary student to empathise with stakeholders whose needs may conflict with their own. Curriculum interventions that encourage more complex thinking, such as assessments that reward the analysis of multiple perspectives rather than the provision of a single correct answer, will facilitate progression to stages 3 (able to view multiple perspectives simultaneously but seeks role models for approval of actions) and 4 (acceptance of the different values of others, and defines the self independently of role models). At this mature stage of identity formation, alternate views and conflicting values are encountered non-

defensively and managed without a threat to the individual's sense of self.[28,34] For veterinary students at this stage, the individual has successfully managed the integration of their personal self into a social professional context, and the management of conflicting priorities and values becomes part of their veterinary identity.[21] To support this development, teaching should be designed to provide opportunities for engagement with complexity and management of conflicting values, including reinforcement of this in teaching and learning that occurs in the workplace. However, it is important that learning outcomes and assessment criteria recognise the staged nature of this development, and are written at an appropriate level of complexity for learner stage.

Reflection

The model of professionalism teaching developed by Cruess and Cruess[8] is built around cycles of delivered core knowledge, experiential learning and reflection. Reflection is fundamental to the in-context application of professional identity concepts, and helps the student to engage with the challenges of socially integrating and developing their personal identity ideals. Following the delivery of information in core curriculum areas (see Table 2), opportunities need to be provided for students to experience these in context, for example during work placements or short clinic visits. A period of reflection then allows the student to analyse their own success (or that of observed others) in managing their professional identity, recognise challenges, and identify where further knowledge or skills are required. While the benefits of reflecting on professionalism are widely accepted[35], it is less clear how effective reflection is achieved. We have certainly identified, as reported by others,[17] the importance of using authentic examples to trigger reflection on professional challenges, students readily dismissing theory and examples that they perceive as irrelevant to clinical life. Unfortunately, particularly in the pre-clinical stages of the curriculum, students often lack their own clinical experiences and are therefore reliant on being provided with scenarios.[36,37] However, similarly to others,[35] we have also found that asking students to reflect on their own experiences more successfully engages them in the challenges they will encounter as a veterinarian. We therefore face the conundrum that we want students to be able to use their own experiences as triggers for professional identity development, but these need to explicitly relate to veterinary clinical practice at a time when students lack relevant clinical experience. Early exposure to clinical areas, such as integrating problem-based learning with clinical placement, can help to achieve this. In the model described by Boudreau et al,[38] medical students from different year groups meet to discuss the challenges they have witnessed or experienced in the clinic. As well as authentic personal experience, this model also emphasises the importance of a safe space for reflection, the value of skilled facilitation, and the advantages of reflecting through group dialogue rather than privately.[37] This benefit of socially constructed reflection was initially surprising, as it seemed to contradict the need for privacy in constructing genuine and authentic reflections. However, the experience described by Bernabeo and others[37] mirrors our own experience: students (and graduates) struggle to identify experiences that are of interest to examiners and peers, when doing this in isolation.[39] In contrast, presenting their experiences to a group, and encouraging peer discussion, exposes elements of the experience that the presenter had not otherwise identified, or had dismissed as irrelevant or uninteresting. Trained facilitators who can foster a safe environment for shared reflection are therefore

key to maximising the benefit of reflective self-analysis and the role of this in professional identity development.

Faculty development

The final element for successful curriculum implementation is embedding these concepts in an institution-wide culture.[11,40] The power of the hidden curriculum risks undermining the efforts of well-planned curricula by the omission of concepts of professionalism in the teaching delivered by clinical faculty,[17,41] inconsistent messages in teaching and assessment regarding the significance of professional identity in complex decision-making, and clinical faculty and university promotion strategies that appear to reward unprofessional behaviour.[41] Faculty development, at all levels, is therefore a key component of managing change, and integrating professional identity across all aspects of the curriculum, rather than being situated in isolated modules.[11]

Previous work has demonstrated that clinical faculty have concerns surrounding their perceived competence in integrating professional and non-technical elements into their teaching.[42] This is understandable, given that their professional identity is frequently one characterised by Castellani and Hafferty's "Academic" set of priorities, and thus they will typically have focused their own learning and development on their technical competence.[29] Instead of developing clinical faculty to instruct students on the core cognitive knowledge needed for engaging with wider stakeholders (such as the fundamentals of veterinary business), faculty development can be focused on the hidden curriculum elements that reinforce an identity constructed solely on diagnostics and gold standard therapy. Personal experiences of environmental challenges complicating patient care represents an example of a common area that most veterinarians have experienced, but may not recognise as being of value to veterinary students' education. Faculty development interventions that inform educators of curriculum goals in terms of professional identity development may therefore encourage the use of examples in teaching they were previously considered not relevant or useful. Amongst course leaders, developmental support is necessary for designing learning outcomes, aligned teaching and assessment methods that encourage complex thinking rather than single correct solutions to problems, and incorporate students' reflection and analyses of their experiences.

The Professional Studies Curriculum.

In order to implement these fundamentals of curriculum design, our professional studies approach is constructed around the overriding learning outcome of competence in resolving complex professional dilemmas. This outcome represents something tangible to the students; difficult situations (such as the client who cannot pay, and conflicting opinions surrounding euthanasia) are something they frequently observe in the clinic, and therefore these experiences provide a focus for reflection. Developing this overriding learning outcome also enables the curriculum to be structured with progressively increasing complexity, as students first identify the implication of their own values in a professional dilemma, and progress to being encouraged to explore the needs of others, before finally

situating this problem-solving in the clinical environment. The following curriculum elements are necessary to achieve this outcome:

- Professional reasoning frameworks for the systematic problem-solving of professional dilemmas.
- Content necessary to engage with the needs of stakeholders, and understand these in relation to one's own professional identity: the veterinary business, human-animal bond, clinical reasoning and evidence-based medicine, animal welfare, client and personal values, the professional and their obligation to society.
- Teamwork and communication skills necessary for working collaboratively to determine and implement clinical and professional decisions.
- Critical reflection on practice to underpin ongoing development, in particular relating to the developing professional identity as the individual encounters different professional environments.

We will now discuss how we have developed our teaching, learning and assessment strategy to progressively support students through the three phases of the veterinary curriculum: pre-clinical (our first and second years), clinical theory (third and fourth years) and final (5^{th}) clinical rotation year (summarised in Table 2). For each phase we include the expected outcome (and level of complexity), taught content, teaching methods and assessment strategy. We have also included the challenges experienced in implementing these changes, and the modifications we have made as a result. The strategies presented represent the result of a 15-year period of action research and iterative development. Graduate education and lifelong professional development, while important, are beyond the scope of this paper.

Phase 1: The Pre-Clinical Years

The teaching methods in Phase 1 of the Professional Studies curriculum reflect students' cognitive and emotional development at this education stage. They are therefore not asked to empathise with multiple stakeholders, but are expected, by the end of the phase, to be able to rationalise a professional situation from two viewpoints (their own and one other), and to be able to explain the reasons for their own perspective. Veterinary ethics teaching introduces the frameworks necessary to be able to do this systematically; ethical dilemmas relating to the use of animals in farming and research are presented, and students identify stakeholders and consider the immediate and broader consequences of various courses of action. Group work is an important element across the course, and therefore another key learning outcome for this phase relates to competence in teamwork and team communication. Students are expected to be able to apply models of well-functioning teams (using the Belbin model)[43] and effective communication (using an adaptation of the Calgary-Cambridge system[44]) to support their group work.

As previously mentioned, fundamental to professional identity formation is a process of identifying one's own professional values and priorities, and exploring identity alternatives. Reflecting the need to stage the complex process of identity formation, the aims of Phase 1 are to form identity conceptualisations largely in a decontextualized manner, before environmental complexity is added later in the course. To initiate students' exploration of identity, and to help them to identify their own perspective so that they can rationalise their

viewpoint in a professional or ethical dilemma, one of the first activities in the RVC curriculum is titled “The Good Vet”. Similar to retirement speech activities reported elsewhere[45], this activity encourages students to define their aspirational professional identity, and explore the set of competencies, values and priorities they want to achieve for their professional lives. Performed in groups, this highlights where differences exist between individuals, introducing early notions of multiplicity and identity heterogeneity.

Consistent with the fundamentals for successful curriculum design, taught sessions in ethics, communication skills and teamwork are followed by opportunities for experiential learning and reflection. In earlier iterations of the curriculum, we had previously thought that scenarios from veterinary practice would be the best for engaging students in analysis and reflection. However, even though these seemed to be better aligned with their career aspirations, the students struggled to appreciate how they could find themselves in similar situations, and we have concluded that the environmental influences on communication, teamwork and professional reasoning need to be experienced first-hand rather than simply presented. Student feedback, reported in the literature and evident in our own institution, also demonstrates a preference for learning this in situ, and not in the classroom.[46] We have therefore changed our approach to one focusing on the students’ own curriculum experiences for reflective activities. For example, the content of the ethics course was selected because students subsequently experience relevant scenarios during external farm placements, and when using animals in practical classes and dissections. Group reflective activities are constructed to coincide with these experiences, encouraging students to apply their earlier taught content to analyse the ethical dilemmas or communication challenges encountered. They also use their teamwork teaching to reflect on their competence in working as a team in their small group sessions throughout this phase, which has the advantage of embedding the taught concepts curriculum-wide, rather than being restricted to the discrete professional studies sessions. Formative reflections are aligned with the summative assessment for this stage of the curriculum, in which students reflect on their developing competence in teamwork, communication or ethics across the whole curriculum, and how they are progressing towards their aspirations of the good vet, identified at the start of the course.

Phase 2: The Clinical Years.

By the end of this curriculum stage, students are expected to be able to increase the complexity of their professional decision-making, and engage with broader perspectives, moving from Kegan’s stage 2 to stage 3. Taught content therefore provides the necessary knowledge to be able to consider various additional stakeholders in their decision-making, such as the needs of the veterinary business, the role of the human-animal bond and a veterinarian’s responsibilities to the profession (see Table 2). Rather than learning outcomes that encompass isolated competences (ethical reasoning, communication skills), at this stage they represent a more integrated approach, with students expected to be able to reason a problem and communicate their decision with a simulated client or colleague. Although formal teaching and assessment are in-classroom, during this phase the students start their 26 weeks of extra mural studies (EMS), in which they undertake 2-week blocks of external placement in veterinary practices. In-context complexity is therefore introduced in the teaching strategy, and students are asked to reflect on the challenges and management

of professional dilemmas, communication skills, business practice and teamwork they observe in these clinics. This early period of professional socialization is also important for students to start to explore identity alternatives, and select appropriate and preferred role models for their own identity formation.

The summative assessment for this phase is very transparent, and makes explicit the need to discuss the needs of various stakeholders in reasoning and decision-making. The topic for the written examination at the end of this phase is pre-released, (in the form of a professional dilemma), which we hoped would drive students to engage in the processes necessary to take a multi-perspective and context-dependent approach to their problem-solving, rather than prioritise learning and retention of facts (since those that are relevant to the examination can be accessed after the scenario has been released). The assessment method for communication skills is similarly transparent, and also intended to emphasise to students the importance of learning to use frameworks for effective communication and professional reasoning. However, despite this assessment approach, we have identified that without well-aligned teaching methods, assessment alone was insufficient to guide student learning, and students appear to need much more scaffolding to help them move beyond a focus on diagnosis and its treatment, engage with the different perspectives of stakeholders in their decisions, and integrate different parts of the professional studies curriculum. We have therefore made several modifications to the teaching strategy to support students in forming these links, described later in this section.

During this phase we frequently see evidence of identity confusion and dissonance that has been reported by others as students enter the clinical environment, particularly if this introductory professional socialization is unsupported.[47,48] These demonstrate the challenges experienced by students in developing their professional identity from a narrow to a broader conceptualisation, and working with veterinarians and other stakeholders with different priorities from their own. Students often express discomfort at the apparent prioritisation of academic advancement over animal welfare in case management decisions in the University teaching hospital; they have also expressed distress when faced with the euthanasia of healthy or treatable animals because of a client's financial limitations. Overly dualistic notions of the 'right' course of action are also apparent, and students frequently ask how best to convince a client of their perceived correct resolution of a professional dilemma. One student had witnessed a client who refused to consent to euthanasia provided by barbiturate injection, instead wishing to shoot his own dog. She asked how we would persuade the client to consent to barbiturate injection: to her, the only appropriate veterinary action. We have also seen that students struggle to respond to a client asking, "What would you do if it was your dog?" representing confusion in rationalising the paternalistic identity of the veterinary surgeon within a relational model of care that respects client autonomy. It also represents a student struggling to move beyond Kegan's stage 3 of development, as they are more comfortable seeking a resolution from a role model than being comfortable in their own identity priorities. Our research with early career veterinarians suggests that a disconnect between the 'right thing to do' as represented by classroom examples of evidence-based treatment, and that which represents high quality primary care medicine, is encountered frequently and can lead to notions of failure.[25] The teaching in this phase must therefore help students to use their workplace learning to explore and validate identity alternatives. As preparation for entry to

the clinical environment, delivered content also includes the concept of human factors (the impact on technical and professional competence of fatigue, emotions relating to patient suffering, and environmental pressures), emphasising their potential negative impact on the alignment of an individual's values and behaviours.[49]

With this in mind, the taught content for this phase starts by building on the professional identity material introduced in Year 1. The heterogeneous model of professional identity students[29,50] is presented to the students in the context of valuing other, attempting to support the students when they encounter veterinarian's priorities that are in conflict with their own, and also attempting to ameliorate conflicts between groups defined by different professional priorities.[51] When students have been exposed to this model, they have also identified that their own personal identity ideals may well differ from those of their educators; it therefore has additional value in encouraging students to consider the identities of their role models. At this stage we also introduce the concept of autonomy and its implications for professional decision-making. Students seem to struggle with the concept of autonomy and its importance to the professional role, as it is in apparent contradiction with the concept of there being a "best" way to manage disease. The framework of professional reasoning that is used emphasises that although there may be more than one "correct" answer to a problem, depending on the professional identity of the veterinarian, the values of the client and the needs of the business, the students must commit to a resolution. Furthermore, in summative and formative assessments, marks are awarded for students' commitment to an action, and their ability to explain their selection in the context of alternatives that are also appropriate. They are also rewarded for acknowledging their own priorities, and how these are rationalised in the social context of the dilemma presented. This therefore represents the highest level of cognitive and emotional development. Students are guided through their assessments to move beyond Perry's[31] concept of multiplicity (there are multiple equally correct answers) to one of relativism (the professional has the ability to use their discretion and select a course of action that depends on context). This also encourages them to develop towards Kegan's[33] stage 4 of development: that the choices made by the individual are independent of what another professional may believe to be correct.

Integration of taught content from different areas is supported through the use of peer-to-peer communication skills sessions. In this curriculum intervention, we have increasingly made use of communications practice not only to integrate didactically delivered content with communication skills, but also to encourage students to access information that they have not been "taught". Following positive student feedback with sessions integrating history-taking and clinical reasoning, and following the lead of others in this area[52] we have constructed communications sessions that additionally incorporate a variety of professional dilemmas, including clients requesting antibiotics for an unseen patient and homeopathic medications, and challenging communications surrounding complaints, mistakes, and talking about money. Examples are designed such that students will need to access resources, such as relevant professional and legal frameworks, to help them determine how they are going to resolve the scenario. They are also designed so there is no single best way of managing the case. Learning outcomes therefore integrate accessing information (incorporating a lack of 'knowing everything' into a client communication), decision-making in a framework of uncertainty and professional autonomy, teamwork (reaching a decision

where different opinions may be present) and communication (communicating a professional issue to a client or colleague).

Building on the experiential learning developed in phase 1, early clinical experiences are used to stimulate reflection and contextualise the students' understanding and formation of professional identity, through a series of formative assignments. In the first of these, students are prompted to look for situations where the veterinarian must engage in interactions that extend beyond a focus on diagnostics and treatment. The students must analyse this experience, specifically incorporating at least two areas of the professional studies curriculum (the core areas listed in table 2). For example, a student may wish to reflect on a consultation in which a veterinary surgeon must deliver some bad news. They may analyse the quality of the communication, but would additionally need to consider the significance of the interaction, for example relating to the veterinarian's professional identity, or their own priorities and notions of success. Students appear to find it particularly challenging to incorporate the implications for the veterinary business in their analyses, and therefore a second reflective assignment is targeted specifically at engaging with this area. This assignment, described in more detail elsewhere, is specifically designed for students to consider the implications of the veterinary business for the early career veterinarian.[27]

Phase 3: Clinical Rotations.

The clinical rotation year is particularly significant for identity development. The desired outcome is a professional identity that is socially constructed and contextualised, and not exclusively defined by personal priorities.[53,54] The experiences in the clinic offer the potential for students to engage in the wider influences on clinical decision-making, incorporating into their learning the needs of the client, financial restraints, and environmental limitations on patient management. However, although there may be a potential for this development to take place, students find it easier to learn the discipline specific knowledge and technical skills of the workplace, and fewer appreciate the complex learning outcomes relating to identity development.[55] This may relate to their choice of role models as those who also prioritise specialist knowledge and technical competence, a dependence on role-models as the source of the best answer (Kegan's stage 3), or a failure to move from dualistic notions of learning, retaining the identity ideals associated with single-best treatment and not context-specific variation. The experience of professional socialization therefore needs to be carefully structured, such that role models are selected who better embrace broader notions of professional identity and model the complexity associated with professional decision-making.[21] Student opinion frequently demonstrates a preference for learning their professionalism in the clinical environment, and particularly from role models,[46,56] indicating their receptiveness to support in identity formation and professional behaviour at this time. However, the literature also highlights the frustrations experienced by students as they enter clinical rotations, particularly relating to the "double standards" of being "subjected to professionalism education" while witnessing unprofessional behaviour amongst faculty.[15,57] If students are unsupported at this time, the demands of the clinic contribute to the well-documented decline in students' empathy during the clinical year.[58] It is also increasingly recognised that formal interventions are needed to support students' emotional resilience in managing the apparent identity dissonances they encounter in this environment.[20,50]

Our strategies for providing this support represent a combination of an appropriate assessment framework, and opportunities for reflective practice, both of which are crucially dependent on institution-wide faculty development for success. It is particularly the case during final year rotations (free from didactic teaching) that feedback provides a significant component of student learning. The feedback provided to students on their performance in the clinic will guide their learning and therefore direct their identity formation. A key element of developing the professional studies curriculum in the final year has therefore been faculty development to ensure that rotation feedback supports a common conceptualisation of the veterinary professional identity as one that is heterogeneous, and built on rationalising conflicting needs in a complex and challenging environment.[21] For professional identity formation to be embedded in this curriculum phase, it needs to be consistently apparent in rotation feedback. As part of our faculty development strategy, we therefore tasked clinical rotation leaders with the generation of an assessment framework for rotation professionalism teaching.[59] As well as encouraging faculty to reflect on their understanding of professionalism in student assessment and feedback, this activity also helped to foster a sense of ownership of professionalism concepts in rotation teaching, with ideas for teaching generated. A rethinking of appropriate teaching material was seen; patients without a diagnosis or resolution, and difficult or upset clients were identified as having (previously unappreciated) value for students.

We have found faculty to be particularly engaged in support for professionalism teaching when this is targeted at difficult conversations. Faculty demonstrate perceptions of low confidence in this area,[42] often reporting that feedback on professionalism feels more personal than feedback on knowledge or technical competence. This blurring of the distinction between “the good person” and “the good doctor” has been reported previously,[57] and can be addressed by the availability of better defined assessment criteria that focus less on normative personal values and are underpinned by a robust theoretical framework. The framework we generated emphasises five areas: interpersonal communication and interactions, awareness and respect for different values and priorities, taking responsibility for self, teamwork, and self-awareness of one’s own identity.[59]

Our approach to supporting reflective practice in our final year students remains a work-in-progress. While there is extensive support in the literature for the use of reflective portfolios,[60] we have been keen to avoid reported pitfalls, such as ‘forced’ or inauthentic reflections (inclusion of material that the students perceive will get them a better grade, rather than honest accounts of their development), inadequate feedback, and students perceiving that the efforts required are disproportionate to the outcomes achieved.[17,61,62] In common with other authors[20,37,63] we also firmly believe in the advantages of socially constructing reflections on professional identity formation, rather than this being a uniquely solitary experience. However, we also recognise that by reflecting in a group, although this may be empowering in helping students to express views they might consider unimportant or trivial, there is also a possibility that novel or unusual ideas, created by individuals, may be homogenised by the group and lost. In the current culture of veterinary rotation teaching (students dispersed off site or around the hospital), timetabling prioritised time for group reflection represents a significant curriculum challenge, and the transient relationships formed in short block rotations do not encourage the safe environments needed. Although

peer discussion and reflection would be the ideal, we have recently introduced sessions in which students reflect on their developing competence with their tutors. Further faculty development is needed to ensure this incorporates professional identity development, and not simply the technical and knowledge competencies. More work is needed in the area of professional identity formation during the clinical rotation year, which would be supported by further sector-wide engagement in this discourse.

Conclusions and Lessons Learned

The aim of this paper was to explore relevant literature from medical education and the veterinary profession to present a best practice approach to curriculum development to support professional identity formation. In addition, we have included elements from our own curriculum to illustrate and exemplify how these fundamentals of curriculum design can be achieved. Finally, we have also incorporated our reflections on the iterative process of curriculum development, including what has worked and what has not, and where the challenges of implementing an optimal curriculum may lie.

The lessons we have learned from this process include the welcome shift away from constructing a curriculum to teach students professional behaviours (something our students, like those vocal in the medical literature, strongly resented), to designing a curriculum to support our students through the challenges of consistent adherence to the morals, values and priorities which we know they possess. We have also experienced the sentiment frequently reported in the literature that students can perceive professionalism teaching as “fluffy”, patronising, and something they know already.[46,57] As a consequence, we have revised our approach to acknowledge earlier student achievements in their developing professional skills, incorporate a strong cognitive element (in particular the processes of resolving complex professional dilemmas), and ensure this cognitive element is represented in all the teaching and assessment activities. We have agonised over the challenges, in particular of ensuring all the content is explicitly relevant to being an early career veterinary surgeon, realising that even the use of genuine examples was insufficient to consistently engage students in the challenges of being a professional. We have thus redirected our efforts, to ask students to collect their own personal experiences of being a professional in different veterinary environments. We have also recognised that asking students to engage in reflection and analysis of their experiences in the professional environment is best carried out in a way that incorporates dialogue and a socially constructed reflection, rather than when carrying out this activity as a private, written reflection.

Work is ongoing to improve the support of veterinary students’ identity formation, and therefore without doubt further curriculum improvements will be made, and reported in the literature. We have more work to do, particularly in supporting students in clinical rotations, through improved reflection strategies and embedding conversations about context and uncertainty in clinical discussions. Similarly, embedding the concepts discussed in this paper across the entire curriculum, rather than (as is currently the case) being represented chiefly in the discrete professional studies course, is a project that is currently

in progress, principally via faculty development and curriculum redesign. We hope that this paper provides a platform from which future curriculum development strategies develop.

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844 **Table 1**

845 Principles of Curriculum Design that will support professional identity formation.

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A Successful Curriculum Will:
• Define identity goals based on the heterogeneous nature of the veterinary identity

• Progressively increase the level of complexity of professional issues and their analysis, with developmental learning outcomes:
  ○ Phase 1: Students reason a scenario according to two perspectives, their own and the values of one other stakeholder
  ○ Phase 2: Students reason a scenario from the perspectives of several stakeholders, and integrate reasoning, communication and teamwork
  ○ Phase 3: Students apply an integrated, multiperspective approach to professional reasoning, in the context of environmental complexity

• Incorporate reflection on authentic and clinically relevant professional issues
  ○ Provide safe spaces for socially constructed reflection, guided by trained facilitators
  ○ Use students' own experiences as triggers for reflection and application of core theory

• Have institution-wide implementation and incorporate faculty development

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Table 2

Key curriculum content and sample teaching during the three phases of the RVC curriculum.

	Curriculum Content	Sample Teaching Session
Phase 1: Pre-Clinical Years 1 and 2	• Teamwork • Communication Skills • Ethical reasoning	During extra-mural farm visits: *In your group, reflect on the challenges you might encounter in this new environment. How does your knowledge of teamwork theory help you participate and contribute to this new team?* *On returning from this placement: Did you identify any ethical or welfare dilemmas? Analyse these using the ethical framework from your ethics lecture. What are the consequences for the animal, farmer and public?*
Phase 2: Clinical Theory Years 3 and 4	• The heterogeneous veterinary identity • Professionalism and autonomy • Veterinary business • Animal behaviour and welfare • The human-animal bond • Personalities and values in the workplace • Ethical reasoning • Communication skills • Teamwork	In a communication skills workshop: *A client asks you for a repeat prescription of antibiotics. In your group, consider this request from the perspectives of the client, patient, veterinary practice, profession and society. Decide what action you will take, and how you will communicate this.* The students then role-play the scenario, with a simulated client. *How effectively was this communication managed? Consider the interaction from the perspectives of both client and veterinarian.*
Phase 3: Clinical Rotation Year	• Influence of the clinical environment on professional practice	In rotation assessment feedback sessions: *How successfully do you think you worked as part of a team? Think about your rotation group peers, and colleagues in the hospital. What challenges did you encounter to high quality teamwork? What are your goals in this area for the next rotation?*