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5   **Teaching Professionalism: Using role-play simulations to generate**

6   **professionalism learning outcomes.**

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17

18   **Abstract**

19

20   For a constructively aligned curriculum in veterinary professionalism there is a

21   need for well-designed higher-order learning outcomes, to support students'

22   professional identity formation. A lack of available uniformly accepted

23   definitions of veterinary professionalism necessitates the defining and refining

24   of current concepts of professionalism in this context, to inform teaching and

25   assessment. A potential method for generating such learning outcomes is to

generate these from simulated professionalism teaching scenarios. A workshop was designed in which veterinary educators used role-play to resolve a professional dilemma. Following discussion of the appropriate management approach, participants were asked to reflect on the learning outcomes that were required to resolve the scenario, and that students would achieve by going through the same classroom-based process. Workshop participants identified a number of professionalism learning outcomes that are not currently defined in the literature, including realisation of the lack of a single correct answer to a professional dilemma, making a decision despite this uncertainty, communicating differences of opinion, and understanding the effect of differences in professional identity. Although the process described runs counter to the traditional approach to curriculum design it may offer valuable contribution to the discourse surrounding professionalism learning outcomes. Furthermore, it has generated higher level learning outcomes than have been obtained through other methods.

Keywords:

Professionalism; learning outcomes; course outcomes; role-play; professional identity

Introduction

Assessment of a clinician's or clinical student's professionalism frequently emphasises workplace based assessments, such as 360-degree evaluations, in which the observed behaviours of the individual are judged.[1] The assessment of

2

51 professionalism in this way represents a traditional approach, in which a

52 professional's inner values are assumed to be accurately represented by their

53 external behaviour. In contrast, a contemporary complexity framework of

54 professionalism can be defined by the acknowledgment that the environment in

55 which the professional works, and the varying demands associated with their

56 interactions at different levels (e.g. client, employer, institution, society) will

57 challenge a professional's external portrayal of their inner values. Greater

58 understanding is therefore afforded to the clinician who may be juggling various

59 responsibilities (to patients, families, students, hospital administrators, and

60 colleagues), is trying to remain 'professional' in the eyes of all, even though all

61 may be exerting conflicting needs,[2] and whose observed behaviour may be

62 temporarily compromised by the effects of 'human factors' (stress, fatigue,

63 concerns about a difficult case, heavy workload).[3] Viewing professionalism

64 through a contemporary complexity model therefore necessitates assessments

65 that extend beyond observed behaviours. Furthermore, it can be argued that the

66 desirable attributes of the healthcare professional extend beyond those that can

67 be assessed in this way, and include moral reasoning, ethical decision making,

68 recognition of limitations and the appropriate use of clinical autonomy. The

69 purpose of this paper is therefore to demonstrate a method of improving

70 assessment practice, in this case through a novel approach to generating

71 professionalism learning outcomes that have high validity and are engaging to

72 students.

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74 Attention has recently been drawn to the importance of professional identity

75 formation in medical students, and the need to formally address this in medical

76 curricula.[4] In a constructively aligned curriculum, such as defined by Biggs,[5] the

77 desired graduate skills, knowledge and attributes inform firstly the assessment,

78 and then the teaching methods, such that students are taught and assessed in a

79 way that maps onto their expected performance post-graduation. As this

80 approach helps support student learning, designing professionalism assessments

81 that are well aligned with professional identity formation will encourage and

82 direct student development. There is therefore a need to generate

83 professionalism teaching and assessment methods that facilitate the formation

84 of a professional identity, such that the clinician is able to practice ethically and

85 with confidence in a complex, self-regulating profession. It would also be

86 expected that the achievement of well developed sense of identity would

87 ultimately lead to a clinician who is better able to demonstrate desirable

88 behaviours despite the demands of the clinic, and would be less vulnerable to the

89 negative effects of the hidden curriculum.

90

91 Designing a constructively aligned curriculum typically starts with a

92 consideration of intended course outcomes, which inform assessment methods

93 and then teaching strategy.[5] Despite a wide discourse, professionalism in both

94 the medical and veterinary literature remains a diverse and variably defined

95 concept. Without robust learning outcomes, professionalism teaching and

96 assessment are at risk of becoming undermined. Students are distrustful of

97 professionalism assessment that is poorly aligned with the behaviours they

98 experience in the hospital, and with those that they perceive are rewarded in

99 faculty. They are therefore known to 'play the game', and create a dichotomy

100 between the set of values they demonstrate in assessments, and those they

101   believe will help them in professional life.[6] The creation of valid learning

102   outcomes that are aligned with both success in the clinic and the formation of a

103   well-developed professional identity is therefore necessary to support student

104   development and engage them in learning. The lack of a contemporary

105   complexity definition of veterinary professionalism means there is a deficiency

106   in formalised, universally accepted outcomes appropriate for building a modern

107   professionalism curriculum.

108

109   Role-play in teaching is used to provide students with opportunities to practice,

110   reflect on, and develop important skills in a predictable and safe learning

111   environment. In professionalism teaching, students can be given a situation that

112   represents a challenge to professional reasoning, skills or behaviour, with

113   feedback to support on-going development. The learning outcomes that are

114   achieved from 'living' a professional dilemma will be closely related (if not

115   identical) to the skills and attributes required to successfully manage a similar

116   situation in practice. When attempting to define professionalism learning

117   outcomes, we therefore proposed that, in the absence of available higher-order

118   learning outcomes for success in a complex profession, it should be feasible to

119   provide students with an authentic simulated experience, and then ask them to

120   reflect on the skills, knowledge and attributes they utilised to complete the task

121   to their own satisfaction. Once these learning outcomes have been identified,

122   they can be used to inform constructively aligned assessments and further

123   development of teaching strategies.

124

125   **Methods**

126

127   A workshop was designed for veterinary educators at the 2015 annual

128   Veterinary Education conference in Cambridge, UK. The objectives of the

129   workshop were to identify outcome competencies of professional studies

130   teaching, to demonstrate how formative and summative assessments facilitate

131   the development of professionalism, and to encourage participants to explore

132   the boundaries of the veterinary social contract through role-play scenarios. This

133   was based on the model of professionalism teaching developed by Cruess and

134   Cruess[7] in which the cognitive basis of professionalism is followed by provision

135   of opportunities for experiential learning. Clearly the intent of this model is to

136   structure professionalism teaching over the length of the undergraduate medical

137   curriculum; however it was explained to participants that the 90-minute

138   workshop was intended to represent this overall curriculum design in a micro-

139   format. In the first 15 minutes, by way of introductions, the two facilitators (MW

140   and EAC) each presented the conceptual frameworks on which they defined

141   professionalism in the context of their own veterinary teaching. This preceded a

142   period of experiential learning, in which participants were given an authentic

143   role play simulation followed by a structured reflection on the skills utilised,

144   challenges faced and learning outcomes achieved.

145

146   Two   diverse   conceptual   frameworks   represented   two   extremes   of

147   professionalism teaching in the UK. The first framework is one of professional

148   boundaries, such that the professional is empowered in a social contractarian

149   fashion.[8] They may undertake anything with their legal monopoly power to treat,

150   diagnose and advise on animal care and make a profit from such interactions so

151 long as these interactions abide by the public interest, which supported that

152 empowerment. The professional is free to act as they please, but they are

153 constrained by the boundaries of the social contract, of legislation and of the

154 Codes of professional regulation. Relevant legislation, and the Royal College of

155 Veterinary Surgeons (RCVS) Code of Professional Conduct,[9] are therefore central

156 in teaching practiced within this framework in the UK, which largely resides in

157 the deontological approach[10] and contrasts sharply with the virtue based

158 ideology of the second framework. This second framework has its roots in the

159 emphasised professional autonomy and discretion in practice described in

160 Freidson's definitions of the professions.[11] However it additionally reflects the

161 contemporary complexity lens described by Castellani and Hafferty,[12]

162 incorporating the notion of different identities, with differing professional

163 priorities, co-existing with equal validity within a profession, and also the

164 challenges encountered by balancing competing stakeholder needs, often

165 resulting in apparent paradoxes in professional behaviours when compared to

166 traditional notions of the idealistic professional.[2] The professional is therefore

167 free to act as they please, and must do so in a manner that maintains public trust

168 and the self-regulatory framework afforded by the social contract, with a

169 recognition that the complexities of the modern clinic may often result in

170 observed behaviours that may not align with traditional expectations. Where

171 professionals are deemed to act 'unprofessionally' by a particular stakeholder, it

172 is generally because of a difference in identity prioritisation. Teaching in this

173 framework therefore emphasises autonomy in decision-making and variation

174 between professionals. In both frameworks, although conceptual differences

175 exist, the end result is a convergence of teaching methods: both require

176   strengths in ethical and professional decision-making, including prioritisation of

177   interests, in the face of a situation where there are conflicting stakeholder needs,

178   and a need for a robust framework for complex decision-making. Students are

179   encouraged to consider a situation from the viewpoint of all involved parties,

180   including both deontological and utilitarian perspectives, and recognise that the

181   course of action they choose to select will have both risks and benefits.

182

183   Through the provision of these introductions, participants had thus been

184   provided with several conceptual frameworks for defining the 'cognitive basis of

185   professionalism'. Participants were then provided with an activity developed at

186   the Royal Veterinary College (RVC) in 2009 as a multiple format cumulative

187   learning structure for veterinary ethics,[13] which is used in third year veterinary

188   undergraduate teaching at this institution, approximately 16 months before the

189   students start clinical rotations. The particular scenario used is shown in Box 1.

190   Participants were divided into groups of five or six people, provided with the

191   scenario, and were instructed to reach a common decision within their small

192   group for its resolution. They had approximately 20 minutes to achieve this.

193   Once all groups had reached their decision, the decisions would be shared

194   between the groups as a 'whole room' activity.

195

196   **Ethical considerations**

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198   The participants of the workshop were not informed of this research prior to

199   their engagement, as the usefulness of their outcomes was not determined until

200   its completion. Consequently, all responses were deidentified so as to protect

201   their interests. This presents as a challenge to informed consent for research

202   participation, but as the workshop was available for anyone to attend, and

203   participation in the oral discussion was not mandatory, the participants were

204   able to voluntarily withhold their participation if they wished not to express

205   their views to the educational community. Subsequently, the authors submitted

206   for institutional retrospective ethical approval from the Royal Veterinary

207   College, with this caveat in mind. The cost benefit analysis of research outcomes

208   and the use of deidentified data against lack of informed consent, resulted in

209   ethical approval URN: 2015 1413.

210

211   **Results**

212

213   Thirty conference delegates participated in the session. Demographic data of the

214   participants were not collected, but all participants had a strong interest and/or

215   involvement in teaching and assessing veterinary professionalism in the UK or

216   elsewhere in the EU. The ethical dilemma provided to the groups rapidly

217   triggered in-group discussion. When small groups shared their decisions for

218   resolving the situation, this initiated debate and discussion as differences

219   emerged both in the preferred action and the priorities in decision-making. After

220   approximately 10 minutes of debate, the facilitators intervened and asked the

221   participants what learning outcomes they felt students would achieve by going

222   through the same process. These were collected by the facilitators, and are listed

223   in Box 2.

224

225   **Discussion**

226

In general, developing a constructively aligned curriculum starts with the learning outcomes required for the graduate, which then feed into assessment design and teaching strategy.[5] This could be described as a "top to bottom" approach. However, as uniformally accepted, higher level learning outcomes are not available, it is challenging to implement this top-down approach to professional studies teaching. Identifying learning outcomes that are necessary for the successful resolution of an authentic professional dilemma, and developed during a role-play simulation on the same theme, represents an alternative, "bottom to top" design of curriculum outcomes.

236

Since 2000 it has increasingly been established that there is a need for inclusion of non-technical or professional competencies in veterinary curricula. The outcome competences necessary to direct curriculum design have been gathered using a number of methods, including reports from consultancy firms, surveys of employers and recent graduates, and veterinary faculty workshops.[14] These have yielded a variety of desirable graduate competences, in particular relating to veterinary practice management and business acumen, communication and interpersonal skills, teamwork, and ethical responsibilities including recognition of conflicts of interest and responsibility to animal welfare. More recently Bok et al[15] described a multi-methods study in which a focus group of 54 recent graduates and veterinary clients, together with an expert panel, created a competency framework to direct curriculum outcomes. These generated desirable veterinary competences in seven domains: veterinary expertise, communication, collaboration, entrepreneurship, health and welfare, scholarship

251   and personal development. Findings such as these have been used to inform

252   curriculum design for the teaching and assessment of non-technical competences

253

254   In comparison to the professionalism competences identified above, those

255   generated during the described workshop represent more specific and higher-

256   order learning outcomes. Matthew et al[16] described a similar approach to the

257   identification of learning outcomes from veterinary teaching, in this case using

258   final year clinical rotations. They categorized the student-identified learning

259   outcomes according to increasing complexity; at the least complex level were

260   individual technical skills and remembering protocols and formulae for dealing

261   with standard case presentations. Higher order outcomes were represented by

262   an understanding of the contextual variation inherent in veterinary case

263   management, recognition of different preferences in professional decision-

264   making, and identifying personal and professional factors related to sustainable

265   practice. The learning outcomes identified by the workshop participants in this

266   study are similar to the higher order outcomes described by Matthew et al. Skills

267   such as recognizing that there isn't a single correct answer and making a

268   decision despite this uncertainty, communicating differences of opinion with

269   colleagues and clients, acknowledging the importance of self when making

270   professional decisions, and respecting the existence of varying identities within

271   the profession, are vital for the graduate veterinary surgeon faced with the

272   demands of the complex and constantly changing professional environment.

273

274   The learning outcomes supported by the role-play simulation also reflected a

275   wider range of professional skills and attributes than can be assessed using

276 observations of professional behaviour in a clinical setting. The role play model

277 therefore not only represents an approach for generating complex learning

278 outcomes, but also provides a means to assess competences that may not be

279 easily identifiable from clinic behaviours. Using the learning outcomes generated

280 in student simulations to inform assessment development offers a number of

281 advantages compared to the use of externally derived learning outcomes in a

282 traditionally constructively aligned model. Students are able to identify the skills

283 they need to manage a professional dilemma to their own satisfaction, and also

284 reflect on those they achieved in the session and those which were more

285 challenging. Using these learning outcomes to develop assessments lends

286 validity to the assessment (because it was generated from an authentic clinical

287 experience) and provides scaffolding for the students to direct their own

288 professional development.

289

290 Teaching and assessment outcomes of the RVC ethics course were initially based

291 on the RCVS Day One Competencies, RCVS Code of Professional Conduct, and

292 guidance from the American Veterinary Medical Association. Recognising the

293 additional complex learning outcomes that students are able to achieve in these

294 sessions has not only enabled refinement and improvement of the ethics

295 teaching, but also directed the development of professionalism teaching in other

296 areas, and has informed assessment practice. For example, the same format of

297 scenario-resolution-discussion-refinement has been extrapolated into veterinary

298 business teaching, sessions on informed consent and complementary and

299 alternative medicine. The ethical and professional reasoning processes

300 demonstrated by the students are aligned with the logical approach to clinical

301   reasoning taught at the RVC, enabling students to resolve clinical and

302   professional scenarios in an integrated fashion. The developed scenarios also

303   inform further development of new scenarios for communication skills teaching,

304   so that the communication of complex problems between colleagues can be

305   practiced, in addition to communicating these to simulated clients.

306

307   Assessment of professional studies was initially informed by the ethics teaching

308   strategy as students were asked to repeat the process practiced in small group

309   teaching sessions, but in an essay-based assignment. Identification of the

310   learning outcomes achieved by students in their role plays has enabled further

311   development and refinement of this assessment strategy, such that the core

312   strand outcomes (ability to view a situation from a number of perspectives,

313   consider the conflicting needs of the veterinary patient and business, make a

314   decision in a situation without a single correct answer, exercise autonomy in

315   decision making in an ethically-informed manner) are represented whichever

316   component of the professional studies strand is used to generate an examination

317   question. Although initially only applied to a single end-of-year assessment

318   taken by students prior to entering clinical rotations, identification of this set of

319   learning outcomes has enabled professional studies summative and formative

320   assessments in year 1, 3, 4 and 5 to be aligned with the same course outcomes.

321   Although the level of complexity expected from students is greater in the end of

322   year 5 final examinations compared to that expected at the end of year 1,[4]

323   students at all stages are expected to demonstrate similar uses of ethical

324   frameworks (particularly viewing a scenario from the different perspectives of

325   the affected parties), recognise that there is no single correct answer but at the

326 same time commit to a decision in the face of this uncertainty, and show respect

327 and lack of judgmentalism to differences of opinion.

328

329 **Conclusion**

330

331 In traditional arrangements of constructive alignment of curriculum relating to

332 professionalism, the process is arranged in a 'top-to-bottom' process. The key

333 desirable attributes in graduates are known and established and these skills and

334 knowledge lead to the creation of course learning outcomes. The outcomes then

335 feed further downwards to inform the assessment content and method and the

336 teaching requirements.   However, despite surveys of the profession and

337 competency working groups, the available published professionalism learning

338 outcomes have failed to keep pace with the evolving profession and demands on

339 the contemporary veterinary professional. Thus this model of developing

340 learning outcomes from authentic student role-play scenarios helps to determine

341 those skills and attributes that are hard to define, and yet essential for success in

342 a complex environment. The model presented in this workshop has thus led to a

343 'bottom-to-top-to-bottom' approach to constructive alignment, where the

344 teaching strategy led to the identification of authentic, high validity learning

345 outcomes (bottom-to-top) which then in turn led to further improvement of

346 assessment and teaching (top-to-bottom). Such an approach can be used

347 alongside more traditional methods for the development of higher order

348 learning outcomes to inform teaching and assessment. Using role-play scenarios

349 obtained from contemporary examples from the profession ensures that course

350 learning outcomes remain time- and context-relevant.

351

352

Box 1: Ethical dilemma scenario used in the workshop.
Your practice has a policy on strongly persuading clients to have their dogs neutered. They offer bonuses of free food for a month to the client and they give you a £50 bonus in your paycheck for each animal you neuter. A regular client of yours asks if it is specifically in her dog's best interest to have her new 1 year old Abruzzenhund neutered. What do you say to the client?

353

354

355

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Box 2: Learning outcomes identified by workshop participants following role-play of an ethical dilemma.
- Realising there isn't one single correct answer   - Making a decision in the face of this uncertainty   - Respecting others' opinions   - Communication skills: Communicating the answer to a difficult question to a client   - Communication skills: Communicating differences in opinion with colleagues   - Seeing a situation from a range of perspectives   - Understanding identity and acknowledging a range of identities

(specifically in this situation: different interpretations of the veterinary role; some felt their role was to provide a list of pros and cons to a particular action, others felt their role was to provide their own opinion of the desirable action)

- The importance of the self: recognising the importance of autonomy in decision making and one's own view as integral to navigating the dilemma
- Reasoning a complex problem

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