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"AWECoP has made my teaching experience so much better!" – Creating community and improving teaching practice through an Animal Welfare Education Community of Practice (AWECoP)

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Abstract

An animal welfare education community of practice (AWECoP) for those teaching animal welfare science, applied ethology, and/or animal ethics was created to develop a dialogue amongst educators within the field of animal welfare science. The purpose of this paper is to describe the history, objectives, and members' experiences within this community. AWECoP hosts 6–8 meetings annually for members to discuss topics relevant to our community and exchange teaching resources; within its first two years, the community has grown to 121 members representing approximately 70 institutions across six continents. A 12-question, mixed-method survey was distributed to capture member demographics, engagement with AWECoP, motivations for joining, and self-evaluation of AWECoP's impacts. Quantitative data from the survey are presented descriptively, while reflexive thematic analysis was applied to the qualitative data. Survey respondents (n = 54) felt that AWECoP is a vital community and safe space for members to share their ideas and receive feedback, inspiration, information, and resources regarding subject-specific and broader pedagogical topics. As a result, a majority experienced professional (e.g. development of new contacts) and personal (e.g. increased feeling of belonging in their field) benefits, as well as impacts realised in their teaching practice. We conclude with an examination of challenges faced in ensuring AWECoP remains accessible to a growing membership and offer recommendations for facilitating similar communities to support fellowship and training in the teaching of animal welfare and related disciplines.

Introduction

In recent decades, the field of animal welfare science has grown substantially as a result of rising interest from students, scientists, and society in the lived experiences of animals used for agriculture, research, companionship, and entertainment (e.g. sports, zoos, and aquaria) (Buller *et al.* 2018; Parlasca *et al.* 2023). As the field continues to grow, so too does the need for higher education professionals to train learners in topics related to animal welfare (Pejman *et al.* 2021). However, there are several challenges involved in teaching animal welfare in higher education, including the diverse perspectives and values around what constitutes a good life for animals (Weary & Robbins 2019) that likely translate into several different approaches used to teach the topic (e.g. Hewson *et al.* 2005). In addition, many professionals in and outside this field are often isolated in their teaching practices, an effect exacerbated by the COVID-19 pandemic (Leal Filho *et al.* 2021).

Professional development opportunities for academics can help improve their teaching skills, yet many programmes focus upon training at the level of the individual (Gast *et al.* 2017). However, it has been argued that learning best occurs through social relationships with other people (Wenger 1998), suggesting that community-based approaches can lead to more effective teaching practices. A common approach to facilitate social acquisition of skills amongst professionals is the formation of communities of practice. These communities were described by Lave and Wenger (1991), who posited that situated social interaction could result in more authentic learning compared with cognitive transmission of knowledge. Brown and Duguid (1991) further developed this idea and suggested that informal groups can generate flexible solutions to novel problems through locally developed understanding, when more traditional managerial approaches are inadequate; Cox (2005) describes this approach as "*the proposition is that organisations should recognise the value of this source of shop floor innovation and foster the informal networks which actually work out how to get the job done*" (p 529).

A detailed description of communities of practice is beyond the scope of this article but can be found elsewhere (e.g. Cox 2005; Roberts 2006). However, it should be noted that researchers may use the term 'communities of practice' with different meaning. Here, we refer to a framework described by Wenger (1998), who defines three dimensions of communities of practice: "*What it is about – its 'joint enterprise' as understood and continually renegotiated by its members: how if functions – the relationships of 'mutual engagement' that bind members together into a social entity; what capability it has produced – the 'shared repertoire' of communal resources (routines, sensibilities, artefacts, vocabulary styles, etc) that members have developed over time*" (p 2). Such communities fall within the 'social constructivism' paradigm, whereby learners construct their own knowledge in realistic, informal situations together with others (Kanselaar 2002).

Communities of practice have been used across disciplines, including by those within higher education (e.g. Abigail 2016; Hoyert & O'Dell 2019). Researchers have assessed the possible effects of communities of practices within the teaching community (e.g. Hadar & Brody 2010). For example, Hadar and Brody (2010) conceptualised three layers of how communities of practice affect participants. Firstly, these communities help with 'breaking of isolation' between individuals through the creation of a safe environment for finding common ground through the exchange of ideas and perceived challenges with teaching. Second is an 'improvement of teaching' experienced by participants in which they acquire new knowledge and skills to enhance their teaching practice, in addition to gaining the confidence to try new things with the support of their community. In the third layer, participants gain advancements in their 'professional development', including higher order functioning such as a heightened sense of accomplishment and self-efficacy in their teaching.

To our knowledge, there has been no description in the literature of the formation and impact of a community of practice for those teaching animal welfare and related fields in higher education. Thus, the aims of this paper are to describe: (1) the history and objectives of an animal welfare education community of practice (AWECoP); and (2) member experiences within the community.

Animal Welfare Education Community of Practice (AWECoP)

In autumn 2020, we first discussed the idea of creating a community of practice for those of us currently engaged in (or interested in) teaching in higher education within the fields of animal welfare science, applied ethology, and/or animal ethics (see Figure 1 for a brief timeline of AWECoP). Our hopes and objectives for this community were three-fold: (1) to create a space for members to network with each other and build a sense of community; (2) to exchange knowledge and take inspiration from each other's teaching practice; and (3) to share educational materials with each other so that we were not all reinventing the wheel nor working in isolation. It was also our intention to create a community that was deeply participatory by involving community members as much as possible (Pyrko *et al.* 2017), including in decision-making regarding when and how often we met as well as identifying and leading discussions about our teaching practices.

To help us reach these objectives, we created the Animal Welfare Education Community of Practice, in which our idea was to bring together our colleagues in a series of online meetings hosted over Zoom® to share our challenges and successes in teaching. To facilitate the exchange of educational materials, we also used an existing Google Drive® folder that was created by one of the authors (KP) in collaboration with a few colleagues early in our careers as a place to store and share teaching materials (e.g. lecture slides, assignments, readings, and syllabi). To date, approximately a dozen

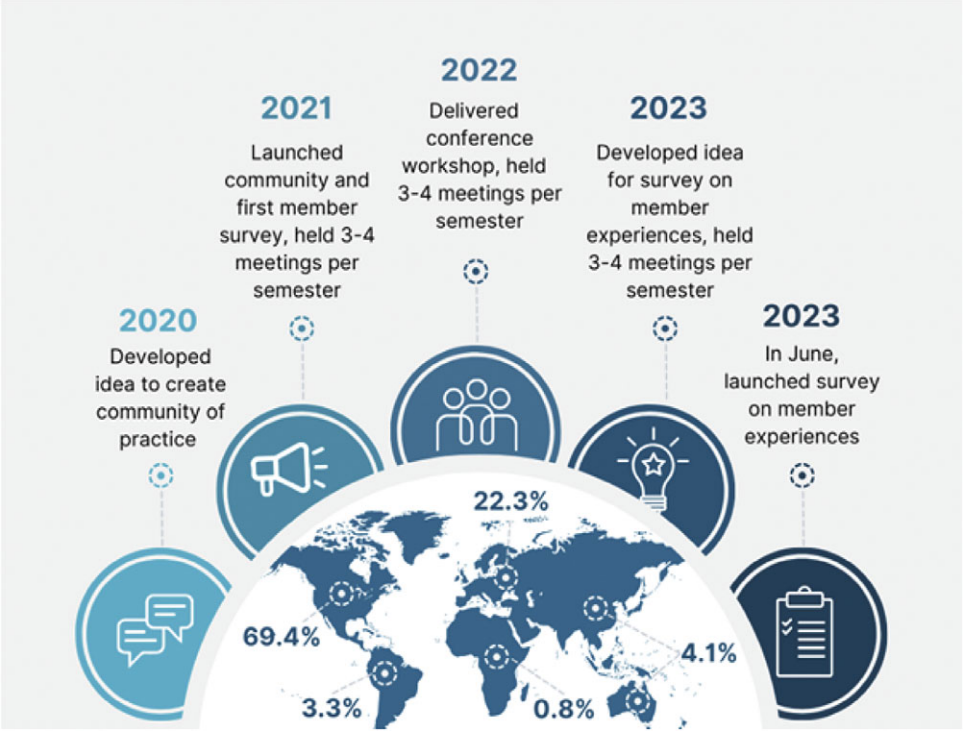

Figure 1. A brief history of and representation of member distribution (% across regions) in the Animal Welfare Education Community of Practice, as of summer 2023.

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members have contributed their teaching materials to this online resource, mainly those in the later stages of their teaching careers.

To gauge interest from our colleagues in joining such a community, we compiled a list of people known to us who were engaged in undergraduate, postgraduate, and/or veterinary teaching in the fields of animal welfare and related topics. We then distributed an initial survey providing a brief description of the community followed by an invitation to join, and queried our colleagues regarding what topics they would like to discuss and what they hoped to gain from the community. A total of 31 people responded to this initial survey, prompting us to schedule the first online meeting in February 2021 over Zoom®. At that meeting, we set ground rules for the community using input from members, discussed the results of the survey, and asked participants to vote on desired frequency of and topics for future meetings.

Based on that discussion, we opted to schedule three to four meetings each semester (excluding summer), which were also recorded for those unable to make the live meetings. We used member feedback to guide our choice of topics for subsequent meetings (for example topics covered since 2021, see Figure 2), led either by community members with stories to share or by external sources who had expertise in the area (e.g. a trained psychologist to lead discussion on managing student anxiety). The final meeting of each semester featured a 'success spotlight' where several community members shared short descriptions of activities, assignments, or other innovative practices that they have found success with as part of their teaching.

At the end of 2021, we created and distributed a second survey asking members what (if anything) they had found beneficial about the community, how the community could improve, and what topics we should cover in 2022. This input helped us choose topics and make changes to the community, such as incorporating small group discussions (break-out groups using Zoom®). Due to growing interest in the community, we hosted an in-person workshop at the International Society for Applied Ethology (ISAE) meeting held in North Macedonia in September 2022 where we shared our experiences facilitating the community; participants at this workshop included current members as well as those outside of the community. We began with an introduction to the concept of communities of practice, followed by facilitated small group discussions where participants could network, connect, and share their experiences and questions related to their teaching practice.

The ISAE workshop sparked important conversations between us and with current members of AWECoP about the impact these communities can have on us as people and as educators. Since, to our knowledge this was the first community of its kind in our field, we felt it important to formally capture member experiences at the end of the spring 2023 semester through a mixed methods online survey. By the time of the survey, AWECoP had grown from its initial 31 members to 121 members representing approximately 70 institutions across six continents (Figure 1). Most community members are based in the United States or Canada (69.4%) and Europe (22.3%), with few in Asia and Oceania (4.1%), Central and South America (3.3%), and Africa (0.8%). This distribution likely reflects the locations of the authors (KP in Canada and BV in the US and then the UK), as well as time zone conflicts with the scheduled meetings. From February 2021 to May 2023, we have hosted 16 meetings covering a range of topics (Figure 2), attended live by approximately 10 to 30 members each meeting.

The remainder of this paper will describe the approach, results and discussion arising from the survey distributed to AWECoP members in 2023. The specific objective of this mixed methods survey was to capture member experiences arising from their engagement with AWECoP. Specifically, we wished to describe how and if their engagement with the community helped break any feelings of isolation, improve their teaching practice, and affected their sense of development as a professional (adapted from Hadar & Brody 2010).

Materials and methods

Reflexivity statement

We recognise that as researchers, through our identities, work, and interactions with our participants, we influence and are influenced by the research process. As such, we name the ways in which we intersect with the research, in the hope this will enhance the credibility of our findings (see Tong *et al.* 2007). KP is currently

Figure 2. An example of the meeting topics presented and discussed by the Animal Welfare Education Community of Practice. Topics included both subject-specific and more general pedagogical issues.

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based at a veterinary college in Canada where she conducts research and teaches animal behaviour and welfare to veterinary students. Her graduate work was conducted in Canada, but she spent six years working in the US at the Ohio State University where she first became exposed to faculty learning communities and the concept of communities of practice. BV is now based in the UK as a senior lecturer in animal welfare and behaviour, but trained and has spent most of her career in the US and Canada. BV and KP share a collegial and long-standing working relationship, grown from our time as doctoral students in the Animal Welfare Program (AWP) at the University of British Columbia, Canada. Through this programme we were positioned within a vast network of animal welfare scientists across the world, and the roots of this community are held by several members of the AWP alumni network. The members of the AWECoP are our treasured peers, friends, and colleagues, and we came to this work with the recognition that their experiences may resonate with our own, as we too are members of the community we report upon in this paper.

Survey design and distribution

We designed a brief (approximately 5 min), 12-question survey hosted on the UK GDPR-compliant JISC online survey platform. A participant information sheet was provided prior to the survey and participants gave informed consent before entering the survey. The survey received a favourable ethical opinion (UoL2023_14763) from the University of Lincoln Research Ethics Committee.

Four questions (two open- and two closed-ended) assessed basic demographics (gender, job role, teaching experience, and country of employment; see Table 1) with an additional three questions (one open- and two closed-ended) regarding participants' engagement with AWECoP. The remaining five questions were a combination of qualitative (open-ended) and quantitative (five-point Likert item) questions designed to assess motivations for joining the community and a self-evaluation of AWECoP's impact on members' sense of community and teaching (Likert questions structured to capture Hadar and Brody's [2010] three layers of community of practice impacts; see Supplementary material for full survey language). At the end of the survey, participants were asked whether they would be willing to participate in interviews at a later date (not reported here) and, if so, provided their emails. Participants were anonymous to us unless they disclosed their email addresses; any addresses provided were removed from the dataset prior to analysis to preserve participant anonymity during the analysis process. The finalised survey was distributed to the AWECoP membership list (n = 121 at the time of distribution) via email in July 2023 with an invitation to participate.

Data analysis

Quantitative data

Data collected about participant demographics, their recruitment and engagement with AWECoP, and the Likert items were analysed descriptively. Responses to several of the closed- and one of the open-ended demographic questions were collapsed and/or categorised based upon member responses (e.g. country of employment was collapsed into regions for reporting to protect participant anonymity; see Table 1 for all demographic categories).

Qualitative data

One question about participant recruitment engagement in AWECoP was open-ended ('How did you learn about AWECoP?') yet yielded easily categorised responses; thus, these data were processed through a form of simplified content analysis (Coffey & Atkinson 1996) in which related answers were assigned categories to capture the proportion and range of AWECoP recruitment sources (e.g. any references to KP or BV were batched into one category).

To understand members' motivations in joining and experiences with AWECoP, we applied reflexive thematic analysis (Braun & Clarke 2021) on data from the three open-ended questions asking participants why they joined the community, how they felt it had impacted them thus far, and if they had anything else to share about the community. This process involved finding and describing patterns of meaning in participants' responses; to do this, BV first read and re-read participants' responses to familiarise herself with the data, making notes to reflect as she processed. BV processed responses to 'Please tell us the reasons you joined AWECoP' first, coding related comments and bucketing them into preliminary categories. These were ultimately combined into a list and description of initial themes and subthemes. BV and KP discussed these themes and subthemes (i.e. "*verbal memoing*"; Strauss 1987), then constructed a preliminary thematic map highlighting connections between themes. BV then repeated this process with responses to the prompts 'Please tell us how AWECoP has impacted you' and 'Is there anything else you'd like to share about AWECoP?' It became evident through this process that there were several intersections in themes across the responses, regardless of the question. BV therefore went back through the data to construct a theme set and thematic map that encompassed responses to all three questions and then backchecked the theme

Table 1. Demographic profile of participants (n = 54) who completed the Animal Welfare Education Community of Practice member experiences survey

Demographic	% participants
Gender (self–described; n = 53)	
Woman/female	83.0
Man/male	15.1
Non–binary/trans	1.9
Region (n = 54)	
United States or Canada	74.1
Europe	14.8
Asia/Oceania	5.6
Central/South America	3.7
Africa	1.9
Career stage (n = 54)	
Permanent academic	55.6
Post–doc/temporary academic contract	22.2
Student	13.0
Role outside academia	5.6
Seeking employment	3.7
Teaching experience (n = 54)	
Less than a year	1.9
1–5 years	35.2
6–10 years	29.6
11–15 years	16.7

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list against the raw data to ensure that themes accurately encompassed the responses. The themes and thematic map were then discussed by BV and KP to derive the final versions.

We pursued member checking (Popay *et al.* 1998; McKim 2023) by sharing early drafts of this manuscript with AWECoP members and incorporating their feedback to ensure that their meanings are faithfully reported. Supporting quotations from survey responses (e.g. P1 designating Participant 1) are incorporated in the discussion of results to centre members' voices in the research process (Cote & Turgeon 2005).

Results and Discussion

Sample description

A total of 54 AWECoP members responded to the survey, representing 44.6% of the total membership at the time of survey distribution. We do not have gender data on the broader AWECoP membership but gave survey participants the option to self-describe: virtually all (n = 53 of 54) chose to answer this question. Of those, most identified as women (83.0%), 15.1% as men and 1.9% self-described as non-binary/trans. Like the broader AWECoP membership, most survey participants were based in Canada and the US (83.0%; n = 54), or Europe (14.8%), with relatively few individuals in Asia/Oceania (5.6%), Central or South America (3.7%) or Africa (1.9%). The majority held permanent academic posts (55.6%) or were on postdoctoral or other temporary academic contracts (22.2%). A range of teaching experience was represented as well, though most commonly participants had been teaching for at least a few years (Table 1).

Participant recruitment and engagement in AWECoP

Nearly two-thirds of participants learned about AWECoP from us (31.5%) or their peers (i.e. named their friends or colleagues; 31.5%). One-quarter (24.1%) were recruited during the 2022 ISAE meeting workshop in North Macedonia, 9.3% through their mentor (i.e. mentioned their supervisor, advisor, or mentor[s]), and several (9.3%) indicated other sources (e.g. social media or non-specific references to word-of-mouth). While most named only one source, a few participants mentioned several (e.g. learned about AWECoP from a colleague who had attended the ISAE workshop); as a result, percentages do not add up to 100%. Nearly half have been part of AWECoP since its first year (2021; 44%), another 41% since 2022, and the remainder joined in 2023 or could not remember (7.4% in each).

Most participants reported attending AWECoP meetings at least occasionally (53.7%, with a further 25.9% attending 'frequently') and approximately one-quarter (28.8%) also reported occasionally watching meeting recordings (Figure 3). Participants reported high engagement with the curriculum repository, with most sharing that they had either occasionally (59.6%) or frequently (25.0%) looked through material, and half indicating occasional use of the repository's content (and a few [7.7%] indicating frequent use).

Motivations for joining and experiences within AWECoP

In this section we report upon the qualitative data resulting from members' responses to the open-ended survey questions. The resulting themes overlapped with the eight-item Likert questions designed to assess Hadar and Brody's (2010) three layers of community of practice impacts (for participant responses to these questions, see Figure 4); thus, where relevant, we report the qualitative and quantitative results together.

Members' responses regarding why they joined and their experiences with AWECoP often highlighted intersecting themes, described below across three clusters: (1) Attributes of the community (main themes: 'Context on me', 'Community is vital'); (2) Activity within the community (main themes: 'Give', 'Receive'); and (3) Effects of the community (main theme: 'Hoped for and achieved outcomes'). See Figure 5 for the thematic map describing identified themes.

Attributes of the community

This theme cluster encompassed some individuals sharing 'context about me' (i.e. information about themselves and what brought them to AWECoP), in addition to remarks emphasising how the 'community [created within AWECoP] is vital' to themselves, both as professionals and as individuals.

Context on me. Some shared that they came to the community simply because they were intrigued by the idea, e.g. "*I really love the idea of your project*" [P24] or "*was very interested in what the community provided*" [P1]. Several participants, particularly those who identified as new to teaching and/or to their faculty positions, shared that they had joined AWECoP because it fitted their needs as professionals requiring increased teaching support: "*I have increasing teaching responsibilities…*" [P39] and "*new to teaching and thought it would be great…*" [P10].

Community is vital. An important theme was that AWECoP was providing a critical sense of community that addressed both professional and personal needs. Here, members shared that they had

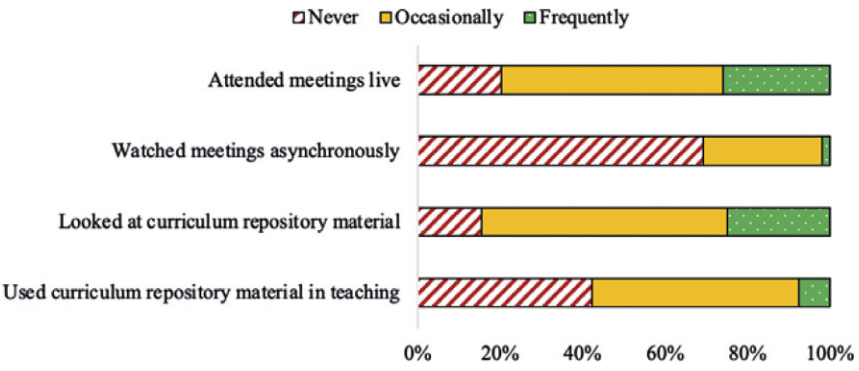

Figure 3. Likert responses denoting the proportion and degree of survey participants' (n = 54) engagement with meetings and curriculum repository within the Animal Welfare Education Community of Practice.

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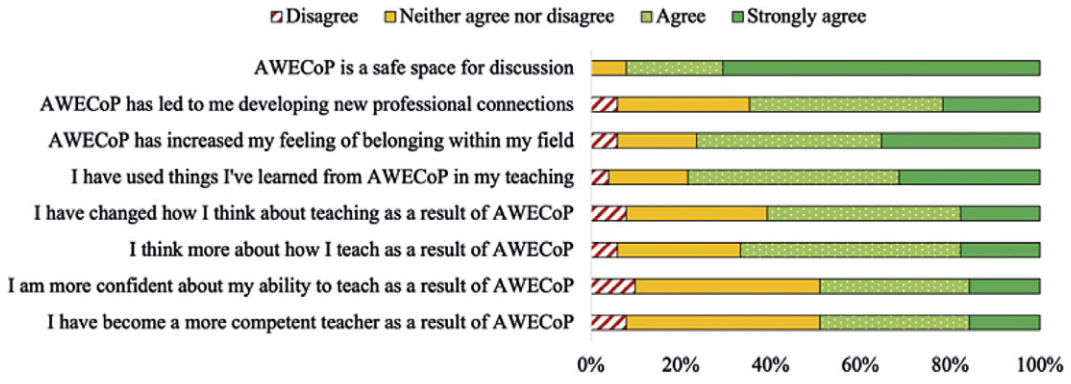

Figure 4. Participant responses (n = 51) to Likert questions about their experiences as a member of the Animal Welfare Education Community of Practice. No one provided 'strongly disagree' as an answer to any question.

been attracted to and had benefited from the creation and nurturing of professional networks as well as social connections, which had important positive emotional impacts on the membership. In some cases, professional and emotional aspects were bound together such that having access to other like-minded people working in the field helped counter feelings of isolation and fostered social connection, something that was particularly valuable during the pandemic. For example, one person shared that they joined AWECoP in part "*to network and community build. This was my primary way of 'seeing' folks within my discipline during the COVID-19 pandemic*" [P27], while another shared that they "*liked the idea of being a part of a community that all teach* [on] *the same niche topic*" [P16]. Meanwhile, those emphasising professional aspects provided by the community were drawn by the "*network(ing)*" opportunities [P3, P5, P7, P8, P27, P33, P48] and potential to form new or strengthen existing connections and collaborations, a result reflected in the 65% of participants who agreed or strongly agreed that AWECoP had led to them developing new professional connections (Figure 4).

Participants commonly reported the creation of a community space in which they could experience fellowship as a key motivator for joining. Notably, most participants agreed or strongly agreed that AWECoP was a safe space for discussion (92%) and had increased their feeling of belonging in their field (76%; Figure 4). Members widely reported improved social and professional connections, for example: "*through the meetings I have… found a sense of community*" [P6], "*I feel supported and that I have a community to reach out to for advice or help*" [P12], and "*AWECoP has given me a sense of community with people all over the world*" [P28]. The nurturing of this community space was particularly valuable for our early career members: "*it also provided a great way to meet and interact with others who have similar goals in a non-intimidating way for a graduate student*" [P7], "*as a new faculty member, it has been a huge relief to have this resource and community to lean on*" [P38], and "*my first year… having a cohort to help me navigate the process who also did behavior/welfare work was the difference between being isolated/depressed and surviving the semester*" [P8].

Threaded through many comments was the strong respect members had for their community peers. Responses emphasised that AWECoP was a space built upon mutual respect and admiration, rather than competition, a place where friends supported each other. For example, people's motivations for joining included: "*check out what all my friends are doing when it comes to AW* [animal welfare] *teaching*" [P49], "*supporting awesome colleagues*" [P7], "*to be part of a group of really thoughtful, smart and passionate animal welfare scientists and educat*[ors]" [P41], or a "*fantastic community*" [P18]. In turn, several participants referenced positive emotions experienced as a result of being part of AWECoP, e.g. "*feeling a warm sense of community*" [P38] and "*also it's fun*" [P23].

Activity within the community

Within the creation of this community space, members were attracted by the potential to 'Give' by sharing their own teaching experiences, as well as 'Receive' inspiration, new information, and resources. Often members' responses seemed to suggest that 'giving' and 'receiving' operated along a continuum through which knowledge was exchanged as a result of people with shared interests discussing problems and learning together (Figure 5).

Give. Many expressed that they had joined AWECoP in part due to a desire to share their own teaching experiences and ideas with their peers. For example, comments such as "*love teaching and wanted to share*" [P6], and "*to present some of my teaching work*" [P41] indicated a sense of pride in their experiences as educators. Some were also eager to receive feedback on their teaching: "*the possibility to exchange with others and to thereby learn and improve my own teaching*" [P24].

Receive. Members shared that they had joined AWECoP to receive inspiration, information, and/or teaching material, and that AWECoP had successfully delivered on these objectives. The desire to learn and receive inspiration was a key motivator for nearly all members. Responses in this theme were expressed by some in general terms ("*getting tips*" [P12] and "*to learn from other animal welfare educators*" [P4]), while others expressed that they wished to learn about specific pedagogical topics including "*course design*" [P35], how to "*engage learners in deep learning*" [P53] or as one member phrased it, "*gain ideas for better teaching approaches, more active teaching activities, evaluations, student engagement, etc*" [P39]. Others expressed their hopes in relation to teaching within the subject area:

> "*Trying to cover such a multi-disciplinary discipline in one course is challenging. I wanted to learn from others facing the same challenge: get new ideas as to how to approach the various challenges associated with teaching animal welfare and animal ethics, learn about new approaches in pedagogy as applied to these types of courses*" [P27].

Participants widely reported that AWECoP did deliver on their desired objectives relative to receiving inspiration, information, and teaching material. For example, they enjoyed partaking in discussions where perspectives were exchanged (e.g. "*It's been lovely to hear realistic perspectives from other people*" [P2] and "*Nice to be able to share experiences and resources and tackle different challenges with teaching*" [P36]), which led to inspiration and motivation to

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Figure 5. Thematic map representing members' motivations for joining AWECoP and their resulting experiences. Large, coloured ovals represent main themes while sub-themes are represented by the smaller, coloured circles underneath. Arrows depict relationships between themes. Yellow-coloured themes and sub-themes appeared in explanations of motivations for joining AWECoP (e.g. members only volunteered 'Context about me' [themselves] when sharing why they joined); green if they arose in both motivations for joining and resulting experiences (e.g. responses about 'Community is vital' to their professional and personal selves were represented across the questions) and blue if they appeared only in responses to resulting experiences or the prompt asking if members had anything else they wished to share. The themes of 'Give' and 'Receive' are actions taking place within the circle of 'Community'.

take what they learned and apply it in their own teaching, evidenced by comments along the lines of: "*AWECoP has given me a ton to think about…and opened my eyes to how to be the best teacher I can*" [P9]; "*…always am inspired by what is presented. It is always practical and exactly on target for what I teach*" [P5]; and "*I really appreciate…having a place from which I can draw to improve course delivery, continue to improve the student experience, and equitable access to learning for all*" [P27].

A portion of the membership also found value in the curriculum repository (e.g. "*I have also explored the curriculum repository and found lots of useful information there*" [P39]). Others who had not yet used the repository indicated that knowing it was there in case of future need was a comfort: "*Knowing that I have access to resources that are fantastic and creative. I have not yet used them but am not in a full teaching role so don't need them fully*" [P41].

Effects of the community

Participants shared several 'hoped for and achieved outcomes' of being part of AWECoP, including impacts 'on the profession' and 'on themselves', as well as 'expressions of gratitude' to community organisers. Additionally, a portion of participants also expressed that they 'want to [participate] but experience barriers to their participation', highlighting challenges for AWECoP's future.

Outcomes for the profession. Upon joining, a few expressed hopes that the activities within AWECoP would harness the collective minds of members to improve the quality and standard of animal welfare education, or perhaps standardise it across institutions. For example, one member shared:

> "*I think it would be cool to come up with standardized learning outcomes/lecture topics for different courses that would fall under 'Animal Welfare.' I think it would be extremely beneficial to the field if the people teaching the college courses were covering similar material, if not at least covering what a group of experts have deemed the most important things…I just feel like sometimes we're all reinventing the wheel*" [P23].

Outcomes for themselves. A few members highlighted that they had joined in hopes of achieving a direct career benefit (e.g. looking for new employment, or because they believed AWECoP would support their professional development). More frequent was the theme that the community had directly impacted their intention to try new teaching approaches (e.g. "*I also will try some of the more interactive* [exercises] *going forward*" [P10]) or indeed had already resulted in changes made to their teaching practice. This result was reflected in the majority agreeing or strongly agreeing (78%) that they have used things they have learned from AWECoP in their teaching (Figure 4). For example, some participants commented on changes to the way they designed their lecture materials: "*I used some of the ideas…to 'spice up' my slides*" [P10] and "*I have changed some of my lectures to include more active teaching material after hearing some success stories from members*" [P39]. Others made changes to the ways they assessed student learning: "*the AWECoP gave me inspiration about things to add to my welfare course. Also the talk about self-grading, opened my mind to the concept and I added a component of this to my course*" [P42]. Early career participants specifically highlighted the impact this had for them, sharing, for example: "*My first year, the repository really saved me on a few lectures*" [P8]. For some, the community appeared transformative to the way they teach: "*AWECoP was integral to everything in the development and execution of my animal course course. THANK YOU!*" [P33]. Finally, AWECoP appeared to positively impact at least one member's approach to scientific communication more broadly: "*Every time I present information to livestock producers, I think about tools that I can use to be more impactful, and those tools were developed from information delivered by this community*" (comment shared during the member checking phase).

Most members similarly agreed or strongly agreed that they have changed how they think about teaching (61%) and think more about how they teach (67%) because of AWECoP (Figure 4). In turn, members reported improved self-efficacy in their ability as educators, with about half agreeing or strongly agreeing that they are more confident in their ability to teach (49%) and have become

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more competent teachers (49%). The qualitative responses reflected this improved confidence: "*AWECOP has most definitely made me a better teach*[er] *and given my students a better learning experience*" [P23], "*I really appreciate…feeling more confident about my own teaching practices*" [P27], and "*…those meetings that I have attended have made me more confident in my approach to content and delivery of content related to animal welfare/animal behavior in my own classroom*" [P29]. Some volunteered that this has helped them better enjoy this aspect of their work, for example: "*helped maintain…enthusiasm for teaching animal welfare*" [P22], and "*it has also deepened my passion for teaching*" [P9].

"I want to but…" Limited impact due to external barriers. While nearly all participants reported positive outcomes, many also shared that they faced several barriers preventing them from engaging with AWECoP in the way they would like, notably with respect to attending live meetings (reflected in the approximately 20% who reported having never attended live meetings). Barriers were predominantly listed as limited availability or conflicts preventing meeting attendance (time zone issues or other commitments). For example, one member facing workload issues explained, "*Unfortunately, due to the timings of the meetings and my workload I haven't engaged as much as I had initially intended. Therefore impact has been minimal*," [P53]. Time zone issues were particularly problematic for members in Oceania and Asia: "*I have not attended any live meetings purely because of the time difference in Australia… but I still think this is a great community to be* [a part] *of*" [P15]. Despite these barriers, individuals often maintained hope to more frequently engage with the community in future: "*I haven't had the chance to commit to it the way I'd hope, but plan to continue trying to engage and participate with the group in the future*" [P3].

Expressions of gratitude. Finally, despite challenges raised, many participants spontaneously offered their thanks for organisation of the community; for example, one person shared the following lovely comment: "*Major gratitude…for organizing the community space. In talking with colleagues in other fields, I don't think an equivalent to AWECoP exists in many other fields (I haven't heard of anything else like it.) As a new faculty member, it has been a huge relief to have this resource and community to lean on*" [P38].

Discussion

In this paper we sought to describe the history, objectives, and member experiences within an Animal Welfare Education Community of Practice (AWECoP). We initiated the AWECoP as a constructivist approach to create space for those teaching animal welfare, ethology, and related topics in higher education to network with each other and build a sense of community, exchange knowledge and take inspiration from each other's real-world teaching practice, and share educational materials with each other so that we were not working in isolation. Drawing from survey responses from nearly half of the membership as of summer 2023, we found that AWECoP has succeeded in delivering on its aims for most members who responded to the survey: members drew personal and professional support from the community; exchanged experience, ideas and knowledge; and benefitted from sharing curriculum materials. Members reported that this has had demonstrable effects not only on their professional lives (e.g. improved teaching efficacy and ease) but also their personal selves (e.g. feeling connected and part of a community, greater joy in teaching). Below, we highlight how the themes identified from members' responses to the survey aligned with our initial objectives and compare with the existing literature. We then share some thoughts on lessons learned and recommendations for anyone interested in participating in, or initiating, their own community of practice. We conclude by sharing why we believe this type of space matters for anyone interested in improving the lives of animals.

Objectives and impacts of AWECoP

Our primary objective in creating AWECoP was to initiate a place for 'mutual engagement', where members could form supportive relationships with each other (Wenger 1998). This sentiment was captured in the quantitative data, where most respondents strongly agreed that the community created a safe space, helped them develop professional connections, and increased their sense of belonging; this same idea was also reflected in the qualitative data, where respondents described the community as a place for both personal and professional connections. Importantly, the community helped reduce feelings of isolation amongst members, which is a common concern held by academic teachers (Pharo *et al.* 2014). These findings may be especially relevant as many academics in post-secondary institutions endure psychological stress, burn-out, and mental health concerns due to high workloads and poor work-life balance (McGinn 2012; Reevy & Deason 2014; Bothwell 2018), in addition to mounting pressure to become individualistic and competition amongst each other (Berg & Seeber 2016). This situation is compounded by limited collegiate environments for academics to exchange more than casual discourse about teaching and student learning challenges and successes (see Patton & Parker 2017). Communities such as AWECoP may help mitigate some of the stress and competitive pressure amongst academics by creating a more collectivist relationship with their peers.

A sense of belonging may be especially critical for those in early career phases (Sawarkar *et al.* 2019), like many members of our community. The challenges facing early career teachers in higher education, elementary and secondary education are well-documented (Bazeley 2003; Johnson *et al.* 2014; Hubbard *et al.* 2015). Amongst the strategies explored on overcoming stress, burn-out, and high attrition are those focused upon supporting resilience – "*the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances*" (Masten *et al.* 1990; p 425). A key theme within resilience among these early career teachers is that of "*relational resilience*" (Le Cornu 2013), including the "*the social networks, human connections, and sense of belonging needed to successfully adapt to demands*" of teaching (Johnson *et al.* 2014; p 540). More research is encouraged to determine whether early career academics are especially at-risk for challenges associated with their teaching practice, as well as the usefulness of communities of practice such as AWECoP in helping to overcome those challenges through social connections and an enhanced sense of belonging.

Our second aim in establishing AWECoP was to foster a 'joint enterprise' allowing for exchange of knowledge and inspiration from sharing teaching practice (Wenger 1998). This became evident in our qualitative survey findings within the 'give and receive' theme. In agreement with this finding, Wenger *et al.* (2002) suggest that members of a community of practice should respond to each other's actions as teachers; for instance, asking each other for advice, or finding collaborative partners for teaching activities. In doing so, "*teachers understand and discuss the quality of student learning and what role they have as teachers in relation to student learning*" (Laksov *et al.* 2008; p 124). This may be especially important for academics who receive very little training in pedagogy, despite extensive training in how to conduct research as part

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of their graduate degrees. Descriptions of being 'thrown in the deep end' are common (Bazeley 2003; Hubbard *et al.* 2015), a metaphor we suspect resonates with many early career academics. In a case study of a community of practice focused upon teaching in a highly research-oriented department at a Swedish university, Laksov *et al.* (2008; p 131) suggest that teaching be treated more like research in higher education: "*it is our suggestion that by making teaching and learning an intellectual problem, academics more easily approach this issue with interest, and the creation of a joint enterprise concerning teaching and learning can be achieved*". For many academic teachers who must learn how to teach quickly and often without extensive guidance, communities of practice can play a crucial role in providing support through the sharing of educational resources.

A third aim of the AWECoP was to provide a platform for the creation of a 'shared repertoire' of resources amongst members (Wenger 1998). To do this, we created an online curriculum repository wherein members can deposit teaching material they have created (e.g. lectures, reading lists, assignment briefs, video material). One of the main motivators for BV and KP to create this repository was that we both benefited enormously from resources shared by our peers when we started our own academic careers, well before the AWECoP was created. At the time of publication, approximately a dozen members (predominantly those who have served in faculty positions for at least five years) have contributed teaching material to the repository, yet over half the membership reported having drawn from the repository in their teaching. That a substantive portion of AWECoP members, particularly the early careers, have found value in the curriculum repository suggests that AWECoP has also managed "*to make the range of resources employed into something that is used and engaged in*" (Laksov *et al.* 2008; p 123).

The establishment of community of practice that is grounded within social constructivism may be particularly useful for interdisciplinary subjects like animal welfare, which draws upon diverse disciplines spanning the natural and social sciences, ethics, philosophy, economics, and policy (Lund *et al.* 2006). As educators, we are influenced by those who trained us and can expect our teaching approaches may echo those who taught us. There is a risk this may lead to 'silo-ing' of how and what content is taught, reminiscent of the phenomenon of 'disciplinary fragmentation' wherein teaching approaches, knowledge claims, and curriculum can differ amongst academic disciplines (Brown *et al.* 2010). We would suggest this issue presents not just across academic disciplines but within them and agree with Pharo *et al.* (2014)'s warning that "*disciplinary fragmentation poses a particular challenge to students in the context of complex problems on which many different disciplines converge, each with an important but disarticulated contribution to offer*" (p 342). Based on the results of our survey, particularly in how members commented on AWECoP's impact on their teaching practice, a community of practice may help mitigate issues associated with this disciplinary fragmentation.

Survey considerations

We note that our positions as peers and colleagues of our participants posed an inherent risk of influencing survey responses due to various response biases (e.g. social desirability; Grimm 2010, non-response; Sedgwick 2014); consequently, the results described may present a positively skewed perspective of members' experiences in the community. However, the high response rate and prevalence of responses from members who had not yet frequently engaged with AWECoP, or who made requests for change, suggests that the survey successfully captured a broad range of experiences in the community and that members were comfortable in voicing their honest perspectives without being unduly affected by these factors.

Challenges for AWECoP's future and recommendations

Challenges

Several challenges with communities of practices have been described in the literature (e.g. reviewed by Roberts 2006); we recognise that many of these limitations are evident within AWECoP. For example, Roberts (2006) suggest that the size and spatial reach of a community may affect its efficacy. Although the growth of AWECoP is something in which we take a lot of pride, attempting to balance scalability with accessibility of the community may result in several issues. First, ours is not a problem of lack of critical mass caused by low membership as faced occasionally in other communities of practice (Pharo *et al.* 2014). Rather, our issue is one of scale: at time of publication AWECoP supports more than 150 members (already 29 more than the 121 members at the time of our survey) and we are cognisant that sustaining an intimate environment may become increasingly difficult as the community grows. Wenger (1998) poses that communities of practice are fluid and flexible, describing large communities as 'collections' or 'constellations' of communities of practice; Wenger (2002) included examples with as many as 1,500 members. In contrast, Brown and Duguid (1991) argue that large groups may reflect 'networks of practice' rather than 'communities of practice' whereby those within a network may be able to share knowledge but will never have the chance to really know one another. At present, attendance numbers between 15 to 30 during live online meetings, but we anticipate a point may come where the membership swells beyond capacity to support aims to build community amongst individuals. As the community continues to grow, there may be a need to create constellations of communities of practice (Wenger 1998), which has been used in other fields such as mathematics (Jakopovic & Johnson 2023).

Another limitation of communities of practice is that of 'power', whereby those who participate most within the community may "*wield more power in the negotiation of meaning*" (Roberts 2006; p 627). AWECoP is not part of an organisation with a hierarchical structure where negotiation of meaning may be driven by a few members with more authority than others; yet there may still be concerns over inequitable participation across members. We attempt to mitigate this problem by emphasising a flexible membership structure ('come when you can, as you can, and as you are') whereby members feel welcomed to engage when and how they can, rather than setting expectations for membership participation or contributions. However, the size of the community and the online meeting platform makes it difficult to ensure that all members have a voice.

A key theme identified amongst responses to our survey prompt "Please tell us how AWECoP has impacted you" was that impacts were limited for a portion of the membership, who described several barriers preventing their engagement with AWECoP in ways they would have liked. For example, several members cited time and workload issues, which have been recognised as common barriers for members to participate in communities of practice across several disciplines (for a review, see McLoughlin *et al.* 2018). Others have noted that communities of practice for teaching "*operate at the margins of the workloads of members*" (Pharo *et al.* 2014; p 347), with some having to participate outside of their designated working hours. Similarly, AWECoP meetings at present are scheduled to accommodate those in Western time zones, an artefact reflecting the community's origins. Unfortunately, this

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keeps live meeting attendance out of reach for members based in Asia and Oceania and suggests that to better support members in these time zones, AWECoP may need to consider offering multiple meetings per topic to accommodate disparate time zones, or alternatively, supporting members in these regions in launching their own networks (Jakopovic & Johnson 2023).

Recommendations

Our hope is that this paper may support others interested in facilitating the creation of a community of practice centred around teaching animal welfare or related disciplines. To that end, below we share a few considerations that we have found benefited us as facilitators of AWECoP.

First, we emphasise that the leadership involved with initiating and keeping the CoP alive, particularly considering workload issues highlighted above, is a demanding task and one we believe is best shared with an equally engaged and committed partner. Our recommendation is in keeping with other reports on communities of practice in higher education. For example, Pharo *et al.* (2014) found success in designating two leadership roles: an 'activator' to serve as catalyst in forming the community and a 'facilitator' to co-ordinate activity organisation, communication amongst members, and curation of resources. Our experience resonates with their description that such shared leadership allows "*additional flexibility in responding to the pressures faced by the community, especially when one of these people was away from their normal duties…*" (p 348), though in facilitating AWECoP these roles are fluid between us. To help reduce the burden on the leadership and ensure that the community is deeply participatory, the roles of the leaders should be to facilitate discussion and provide direction when needed; however, they should also strive to create open lines of communication with the membership to ensure that the community itself plays a key role in decisions (e.g. topics for discussion) and content (e.g. sharing their teaching challenges/successes).

Second, we emphasise that the sustenance of trust amongst members of a community of practice is of paramount importance and is commonly considered necessary to promote active participation in virtual communities (for a review, see McLoughlin *et al.* 2018). We conceive of trust in several ways: first, we trust that members are amongst peers, and perhaps friends, sharing common experiences and interested in working toward shared goals to connect with and learn from others. We have sought to create an environmental culture in which members come from all levels of experience and backgrounds, where no question is silly nor no idea too 'out there' for discussion, and where we respect that members may bring differing perspectives but remain open to learning from those with whom we may disagree.

We also trust that we come to AWECoP with shared concern about and commitment to advance the issues associated with our discipline. The field of animal welfare, like many scholarly disciplines, is one we have found anecdotally many come to based upon personal commitments to 'make a difference'; like Pharo *et al.*'s academics working on climate change, so too do AWECoP's members hold "*profound concern… and a related conviction about the practical imperative of improving* [our field's] *teaching*" (p 345). Here, AWECoP has benefited enormously from existing networks which have nurtured collegial relationships amongst many of AWECoP's members (e.g. the American Veterinary Medical Association Animal Welfare Assessment Contest network of coaches and judges based mainly in North America, international professional societies like the International Society of Applied Ethology and the Universities Federation for Animal Welfare). We have sought to build off existing rapport amongst members by emphasising the importance of tolerance and mutual respect, which has had a trickle-down impact on the quality of discussions in meetings and on the maintenance and integrity of the curriculum repository. The existence and growth of the curriculum repository is especially dependent on measures in place which encourage free sharing based on mutual trust; members share their materials with the understanding that others within the community may use them, but concurrently all members understand the expectation both that any material use or adaptation is attributed to the originating member, who is also notified that their materials have been used. This shared 'rule' supports originating members in documenting their teaching impacts, but also creates a positive feedback loop by nurturing feelings of communal support and goodwill.

Animal welfare implications

As educators of animal welfare, some of us work with a few students, others, hundreds. Over the course of our careers many of us will end up teaching thousands of students, who will in turn become veterinarians, farmers, scientists, animal care staff, behaviourists, rehabilitators, shelter workers and others whose decisions will impact the lives of countless animals under their care. If we are effective in our teaching, these individuals will come away with improved knowledge, empathy, and self-capacity to improve the lives of the animals with whom they work. Thus, what we teach, and how we teach it, carries ripple effects that ultimately affect the quality of life of animals under our care. We hope that by providing members of AWECoP with a safe space to share their challenges and improve their teaching practice, we can help disseminate evidence-based practices to future animal caretakers that will ultimately result in tangible improvements to animal welfare.

Conclusion

The goal of this paper was to describe the history, objectives and member experiences within a community of practice created for educators in the field of animal welfare. The objectives of AWECoP were to create a space for members to network with each other and build a sense of community, to exchange knowledge and take inspiration from each other's teaching practice, and to share educational materials with each other so that we were not all reinventing the wheel nor working in isolation. Using a survey to the membership, we found that, in general, these objectives were met. Many members joined AWECoP to find professional networks and social connections, recognising that the sense of community it brought to their lives was vital. Within the community, members found benefit in both giving and receiving to their colleagues through the curriculum repository and online discussions. The community was generally described as a safe space to share ideas and gain both personal and professional support from their peers and colleagues. Participants also shared several hoped-for and achieved outcomes of being part of AWECoP, including impacts upon the profession as a whole and on themselves as teachers. One main challenge faced by members was in finding the time and overcoming other barriers to actively participate in the community. We hope to see continued growth in our community, recognising that a network of several networks or communities of practice in animal welfare is likely warranted.

Supplementary material. The supplementary material for this article can be found at http://doi.org/10.1017/awf.2024.34.

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