

Utvikling og presentasjon av læringsmateriale basert på forskning og utdanning innen dyrevelferd: The Animal Welfare Science Hub

The Animal Welfare Science Hub: Integrating Animal Welfare Science in a collaborative educational environment

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EU-prosjektet *Animal Welfare Indicators* (AWIN) har etablert en nettside kalt *The Animal Welfare Science Hub* (www.animalwelfarehub.com). Hovedmålet er å tilby lett tilgjengelig informasjon om eksisterende kurs og utdanninger innen dyrevelferd på ulike nivåer rundt om i verden, samt utvikle og vise serier av læringsmateriale (learning objects) som lærere kan bruke på alle områder innen dyrevelferd. På møtet vil vi presentere to slike læringsobjekter: (1) behov hos purker rundt fødsel, og (2) identifisering av smerte hos hester.

1 The AWIN project

Funded by the EU 7th Framework Programme (FP7) the Animal Welfare Indicators Project (AWIN) has, as a goal, the improvement of animal welfare by developing, integrating and disseminating information about animal welfare indicators. The project is organized into five work-packages (WP1, WP2, WP3, WP4 and WP5, for a more detailed description of the project and up-to-date achievements see the AWIN web page: <http://www.animal-welfare-indicators.net/site>). The first three work-packages focus on research with a special emphasis on sheep, goats, horses, donkeys and turkeys, species that, although commercially relevant worldwide, were not studied in the E.U. Welfare Quality project.

Our education, training and outreach objectives will be carried out by work-package 4 (WP4). The Animal Welfare Science Hub focuses on mapping, producing and disseminating learning resources in all areas of animal welfare science for all species. We shall have a special emphasis on the recognition and assessment of pain as pain is an area that is lacking from many animal welfare assessments and yet is often key when animal welfare problems arise. Within this work-package of the project we aim to produce a reliable, comprehensive and up to date repository of animal welfare courses worldwide. Additionally, we shall produce a series of 'learning objects' based on the research from the AWIN project and other areas of animal welfare research. These will be accessible free and will be suitable for a range of learners from school-children to farmers and veterinary students.

2 The Animal Welfare Science Hub

The Animal Welfare Science Hub (<http://www.animalwelfarehub.com>) is a web portal, initially set up by the AWIN project partners, which hosts and shares information about animal welfare, allowing all stakeholders and interested parties to use and add to knowledge in a network of excellence. Our overall aim with this web-site is to create a global information site for research and education in animal welfare that will integrate past, present and future research and teaching materials at any level. The Hub is a one-stop shop about any aspects of animal welfare and is intended to be free, useful and easy to access by students, professionals and other users.

We created the Hub based on the ideas that: (1) animal welfare education should be available to all and that openness ultimately will have the greatest impact on animal welfare, (2) evidence-based research provides a sound basis for learning and (3) animal welfare education resources should be fun, active and interactive. The Hub was launched in May 2011 and is being further developed.

The Hub provides users with an interactive and innovative knowledge environment that can be personalized according to the user's preferences. When completed, it will have the following sections: (I) Animal Welfare Research, (II) Animals and Society, (III) Animal Welfare Interactive, and (IV) Animal Welfare Education.

Materials shared in the Hub cover any type of animal welfare issues in zoo, laboratory, farm, companion and wild animals. In addition, other relevant information from science, social science and philosophy will be presented. The Animal Welfare Interactive section will allow discussion of all areas covered. The Animal Welfare Education Section of the Hub presents science-based materials under two headings: "Learning Materials" and "Courses".

3 Learning materials

This part provides access to a wide range of information, ranging from specialist presentations to learning objects that are highly interactive. Besides learning from these materials, users are also able to add learning materials for other users via the Hub. In addition to collecting learning materials, our aim was to produce small, digital, interactive, educationally effective, scientifically valid and user-friendly web-based tools of learning called Learning Objects from animal welfare science to meet the audience's educational needs.

Three of the Learning Objects developed in frame of the AWIN project and presented on the Hub will be shown at Husdyrforsøksmøtet 2013.



Picture 1: A frame of the Learning Object “Needs of the farrowing sow”



Picture 2: A frame of the “Pig farm” Learning Object

The first video “Needs of the farrowing sow” visualizes the different housing systems in the pig industry giving a short overview about their advantages and disadvantages in an 8-minute presentation (*Picture 1*). This Learning Object highlights the option of keeping pigs in traditional pens, loose-housing huts or the “PigSafe” pen.

In another 3-D simulation, the user can actively navigate a character on the virtual “Pig farm” and can use the additional informational pop-up windows (*Picture 2*).



Picture 3: A frame out of the Learning Object “Pain recognition in horses”

The third Learning Object, “Pain recognition in horses”, which is under development together with Michigan State University, helps users to identify possible indicators of pain in horses. Users can watch five videos showing horses that may be in pain, and after the user expresses his or her opinion in an interactive way, more information about the signs of pain are explained (*Picture 3*).

4 Courses on animal welfare

In this part of the Hub, courses related to any field of animal welfare will be listed and prepared so that browsing between them is efficient. Users of any level, from school age through hobby owners to professionals, such as people working in the animal industry, students, veterinarians,

and animal scientist will be able to search different courses. They can find online or face-to-face courses locally or from abroad, filter by species, target audience, or price and time requirements of programmes. This section will be unique in being global regarding geographical distribution, including programmes in national languages, and will be user friendly by different filter options and personal preferences for a wide range of possible audiences. Additionally, in cooperation with the International Society for Applied Ethology (ISAE), teaching programmes will be evaluated by objective expert panels based on their pedagogic and scientific value according to the intended audience. In this way students can benefit from the web-site by easily finding courses they can attend from home if online or downloadable, or choose the most appropriate teaching programme to apply for. On the other hand, teachers and course organizers have the opportunity on the Hub to advertise their online and other courses. Many course materials will be available for sharing. This course overview is a further development of the earlier Virtual Animal Welfare Library developed at Norwegian University of Life Sciences in 2009.

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