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BUzNet App – an internet aid for veterinary medicine hands-on teaching and learning

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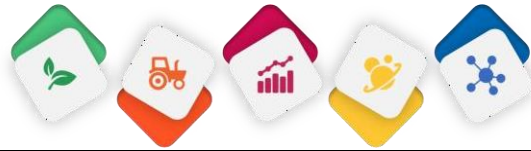
Keywords: Veterinary; practical teaching-learning; “hands-on”; Internet Application;
BUzNet



Summary

Teaching-learning practical subjects presents one of the biggest challenges higher education institutions face nowadays. The use of a hands-on contextualize strategy, putting students in real-life situations and allowing them to solve it under a teacher supervision, is the best strategy to achieve this. However, this approach presents several difficulties. The logistics, equipment and teaching personal needed to present each student with enough cases/situations to cover even the most simple and basic aspects are so huge that makes it very difficult as well as expensive. Internet is now almost ubiquitous in the classroom. However, problems and shortfalls are usually present in using internet in teaching/learning and they also don't take the full advantage of all the potentials that an internet system can provide. Taking this into consideration, we developed an application based in the internet and using cellphones in order to create a digital system to be used to increase the efficiency of teaching/learning practical subjects in veterinary medicine. This system, the BUzNet app, was built in a way to take full advantage of all the internet potentialities, maximizing the efficiency of each visit/manipulation/action taken by a student during her/his practical classes as well increase students' motivation in the teaching/learning process.

For veterinary students, acquiring practical competences is essential as this will provide the backbone of their future work. As such, teaching and learning practical skills are paramount in a veterinary degree. In fact, international bodies controlling Veterinary Teaching Institutions stress this by providing minimum numbers of hands-on cases/animals that each student should follow in order to approve the quality of the teaching establishment (SOP of EUROPEAN ASSOCIATION ESTABLISHMENTS OF VETERINARY EDUCATION 2019). Nevertheless, teaching-learning practical subjects presents one of the biggest challenges higher education institutions face nowadays. The use of a hands-on contextualize strategy, putting students in real-life situations and allowing them to solve it under a teacher supervision, is the best strategy to achieve this (PARKINSON 2017). However, this approach presents several difficulties. The logistics, equipment and teaching personal needed to present each student with enough cases/situations in order to cover even the most simple and basic aspects are so huge that makes it very difficult as well as expensive. This is the main reason why medical (human and veterinary), agricultural, etc. degrees are much more expensive to provide compare to the more theoretical (humanities, math, etc.) ones. In addition, there is also the problem of efficiency. In order to make it effective, each contextualize case/situation is in general only used by a very small number of students, sometimes only one, and so, if the strategy is to provide this type of learning experience to all and every student, the expenses are enormous. So it is paramount to increase the efficiency of hands-on contextualize practical learning/teaching (WINDE et al. 2017).

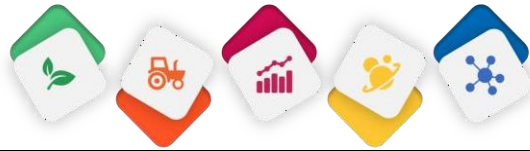


The teaching/learning process of practical competencies can be divided in two parts:

“What-to-do” and “How-to-do”. Both are essential to achieve a good practical training. “What-to-do” is the sequence of needed actions to perform a specific procedure (a surgery, a blood analysis, a control in a meat production line, etc.). All these sequences can be transformed into algorithms and thus transferred into a digital environment. “How-to-do” can be defined as the knowledge of each individual action that compose the “what-to-do” sequence and can be further divided in two aspects: 1 - the theoretical knowledge of how to perform each one of those actions, (how to open a dog’s mouth or which kind of scalpel to use in a certain surgery, for instance); 2 - the truly practical part of an action, the correct use of sensorial organs and mechanical movements in order to perform that specific action. So, in terms of practical teaching/learning there is a true practical part, and two other aspects that can be more exactly defined as the theoretical part of the practical

teaching/learning process. With this in mind the question now is: is it possible to transfer all the components of practical learning into a digital environment? (WINDER et al. 2018). The practical part of “How-to-do” implies the acquisition of a series of fine mechanical movements and the training of sensorial systems by the students in order to allow them to execute specific actions in the real world. Only by the repetitive execution of these same actions, preferably in initial times under the supervision of a teacher, can these be mastered. This is why it is impossible to teach/learn how to be a veterinarian without a direct contact with animals and their peculiar situations that requires the presence of a veterinarian (PARKINSON 2017). These same situations are the exact ones that should be used to teach and learn the future veterinarian. So the answer to our question is no. It is not possible to teach/learn practical subjects without a direct contact with real cases and so a teaching/learning system with hands-on in contextualized situations is essential to learn how to be a veterinarian. Or to better put it, it is not possible to teach/learn the practical part of “How-to-do” without a direct contact with real cases. But what about the other parts of the practical learning process? Are those possible to learn/teach without a direct contact with real case situations? The “What-to-do” part should not be a problem as it is can be described as an algorithm (computer way of thinking). Also, the theoretical part of the “How-to-do”, as it can be transformed in a series of documents (texts, pictures, videos, etc.) that can be posted digitally. So we need a system based on a hands-on contextualized experience by the students that allows some parts of the process of practical learning to be transfer to a digitalized environment, some kind of blended learning.

Internet is now almost ubiquitous in the classroom and the actual pandemic situation only increased its use. In veterinary schools internet is usually used in two ways to teach/learn



practical subjects. The first uses internet as a medium to transmit cases/situations in order

to expose the students to a specific type of procedure (clinical visit, surgery, meat inspection, etc.). In this case, internet acts just like a television and the behavior of the student is completely passive. The only action required is to observe. The second is a development from the first and can be achieved with the creation of cases/situations coupled with a series of questions or comments to be fill by the student (KORICH and KEEFE 2017). This second type can be more or less complex, giving the chance to promote discussions between all the students and teachers or even make it possible to evaluate the students (HARDIE 2017). However, some problems and shortfalls are usually present in these systems and they also don't take the full advantage of all the potentials that an internet system can provide. The main problems can be summarized as follow:

- Students are confronted with cases/situations that they already know are not normal. This is a big shortfall as in the real life work of a veterinarian this is one of the major issues to solve – is this that I'm observing normal or abnormal? So, these systems do not allow for the teaching and training of this fundamental skill.
- The cases/situations are usually presented in a poorly structured way. Students will only look to one or few aspects of the procedure, thus missing the complexity and fullness of the whole system.



-
- The same to the lack or little contextualization of the cases. This leads to a deficient training of the capacity to relate and integrate all the available information into the case resolution.
 - Although the role of the student is more active as she/he must interact with the system, it is nevertheless usually not very interesting and/or exciting as all is already present there on the screen. There is no active collaborative (TUDOR et al. 2017) role for the student on the production of the cases.

Taking all this into consideration, we set a goal of producing an application based in the internet and using cell phones in order to create a digital system that can be used to increase the efficiency of teaching/learning practical subjects in veterinary medicine. This system is built in a way to overcome the problems mentioned previously and also take full advantage of all the internet potentialities.

Work system. The system is based in pathways made up by all the necessary actions that must be taken during a veterinary procedure (KORICH and KEEFE 2017). So, for example in a “Neurologic Examination” of a dog, the pathway includes “Anamnesis”; “General Clinical Examination” and “Neurologic Examination”. Each pathway is designed by a team of experts in that area and is build up in the system by a drag and drop of different types of tools. These tools can be images, videos, multiple choices boxes, dropdown boxes, etc., depending on the objectives on that specific step of the pathway. Each pathway is formed by two different sets of tools. One comprises the tools to upload information from the real case; the other the tools used to comment or answer questions derived from the information provided by the first set of tools. So, a pathway will have one set of tolls to build the case and a second set to solve the case.

A student uploads a case, using the specific pathways already built in the system, during a real veterinarian situation witnessed by him using a smartphone with the application installed. This comprises both the uploaded information to build-up the case and also the information to solve the case. After this is completed the student submits the full case to the system by internet. The teacher responsible for that pathway/student checks the submitted case and approves it if it is OK (case approved). After that the teacher checks the comments and answers provided by the student and also sends back to him the evaluation about that case. The case is now complete with the comments and answers validated by the teacher (if originally correct) or corrected by the teacher (if originally wrong).

The complete case will now be available to other students/users to be viewed and solved. However, the solution can only be obtained after the filing and submission of all the comments and answers to the questions of that specific case by the new student/user. Only after that submission, the student/user will get a response from the system with the

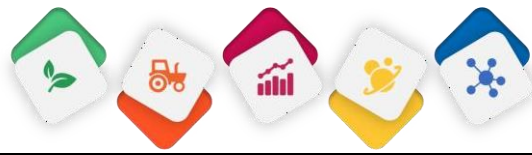


correct comments and answers of that particular case, validated by the responsible teacher.

The BUzNet Application. The objective of this system is to provide a digital platform to be used on the teaching/learning process of practical competencies/skills of a veterinary degree. It is formed by a collection of practical, well-structured contextualized cases, uploaded by the students during their own practical experiences on the real world, thus combining the necessary real hands-on experience with the advantages of the digital world (WİNDE et al. 2017). After up-loading and validation, the cases will be available to be solved by an infinite number of users from any geographical part of the world improving the low efficiency of practical classes (usually each case can only serve one or a very limited number of students). The results achieved by the students solving the cases will provide a feed-back to the teacher on the success and deficiencies of his own teaching. This will thus provide an opportunity to correct any aspect that may not be clearly learned by the students before their final examination. The collection of cases built up in time will increase the quality of the teaching/learning experience by the inclusion of rare, unusual or uncommon cases from particular locations, making it possible to use cases from far away places dealing with unusual diseases or species not common or present at that given location. Moreover, it is also possible to use these highly contextualized cases in student's evaluations, scientific research or even in improvement of management practices.

It is not possible to provide a full training in practical subjects in veterinary medicine without a direct contact with animals and their peculiar situations that require a veterinarian practitioner. This type of training should be based on a structured hands-on contextualized experience, but these come as very expensive and time-consuming activities that should be brought to the maximum of efficiency. However, some parts of the practical training can be done in a digital environment. With this in mind, we built a digital platform in order to retrieve and store, in a structured way, the overall experience of a practical class in veterinary medicine. The advantages of this system can be summarized as follows:

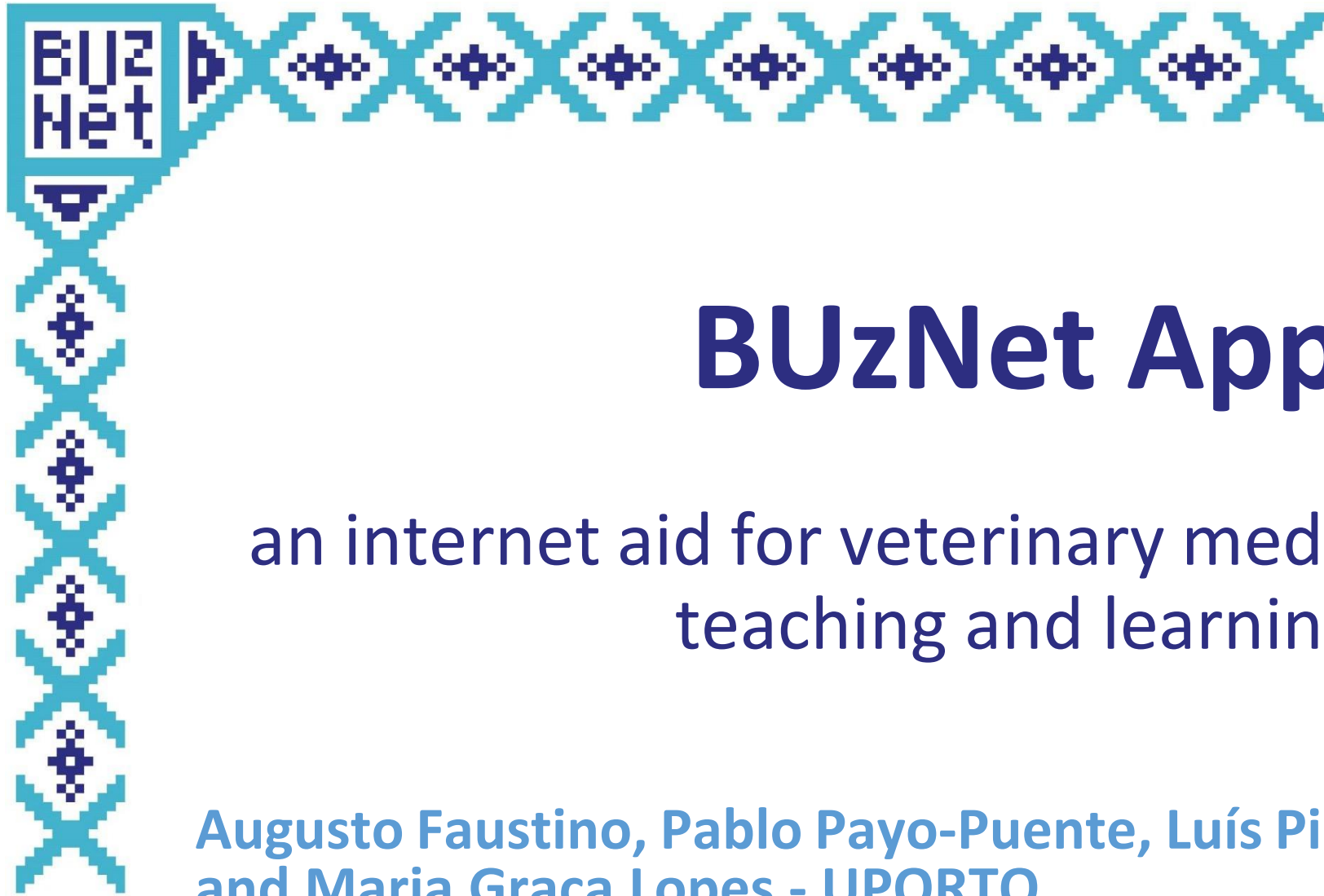
- Production of a collection of structured high contextualized cases from veterinary practice available for anyone to use to train himself anywhere in the world;
- Huge increase in the efficiency of each visit/manipulation/action taken by a student during her/his practical classes as it will be shared among all interested in doing it;
- Students highly motivated as they produce their own studying material. Material that will be used by many others too in a kind of peer-assisted learning (MOLGAARD and READ 2017);
- Knowledge by the teachers and students of the level achieved in the teaching/learning process well before the final examination. Thus giving the possibility of correcting, both to teachers and students, any deficiencies in the learning process well before the end of school time;



- Cases can be used in evaluation systems;
Increased self-knowledge of the highs and lows of the teacher's capacities in transmit the relevant information in order to be apprehended by the students;
- Creation of a database with well structures and highly contextualized veterinary cases that can be used in improving practical teaching/learning, research and animal management.

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BUzNet App

an internet aid for veterinary medicine hands-on teaching and learning

Augusto Faustino, Pablo Payo-Puente, Luís Pinho, Carla Mendonça and Maria Graça Lopes - UPORTO

**Sustainable agricultural development regional cooperation for inclusive growth in Central Asia
International Scientific Online Conference, 20 – 22 October 2020 | Tashkent, Uzbekistan**



BUzNet Project- Overview

Reference number: 586000-EPP-1-2017-1-PT-EPPKA2-CBHE-JP

Contractual dates: 15-10-2017 » 14-10-2021

Granted budget: 971.852,00€

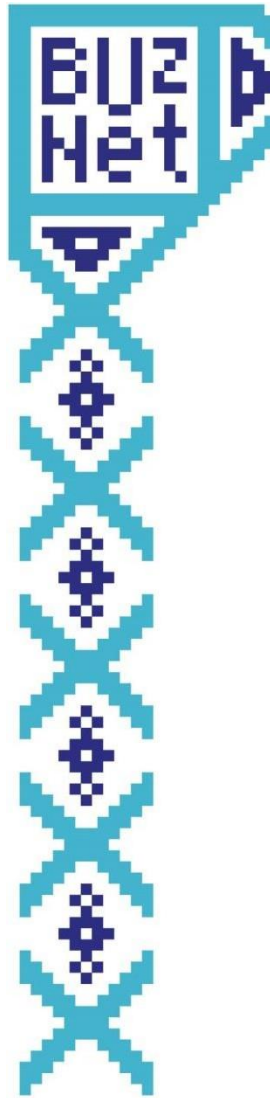
Coordinating Institution: University of Porto - **PORTUGAL**

Partners: Estonian University of Life Sciences – **ESTONIA**

University of Padua & University of Pisa – **ITALY**

Samarkand Agricultural Institute, Tashkent State Agrarian University, Nukus Branch

Tashkent State Agrarian University & Andijan Agricultural Institute - **UZBEKISTAN**



Main Objective

Improve the quality of veterinary and animal production professionals in Uzbekistan

Improve the learning/teaching of veterinary medicine and dairy production control in Uzbekistan with a contextualized hands-on approach using a B-learning strategy to create a learning/teaching network with all members of the consortium.



Specific Objectives

- Curriculum up-date
- Computer Room
- Equipment purchase
- Up-grade of Libraries
- Training of trainees

- Creation and implementation of B-learning interface (BUzNet)



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Veterinary and Zootechnical students

practical competences provide the backbone of future work

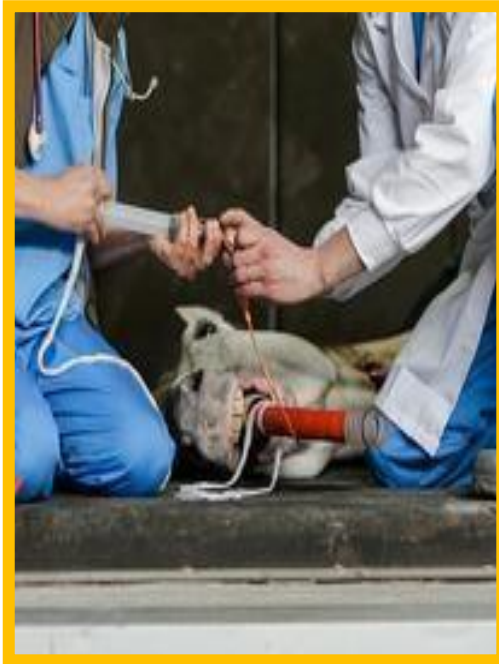




Veterinary and Zootechnical students

practical competences provide the backbone of future work

hands-on contextualize strategy - solving real-life situations under a teacher supervision

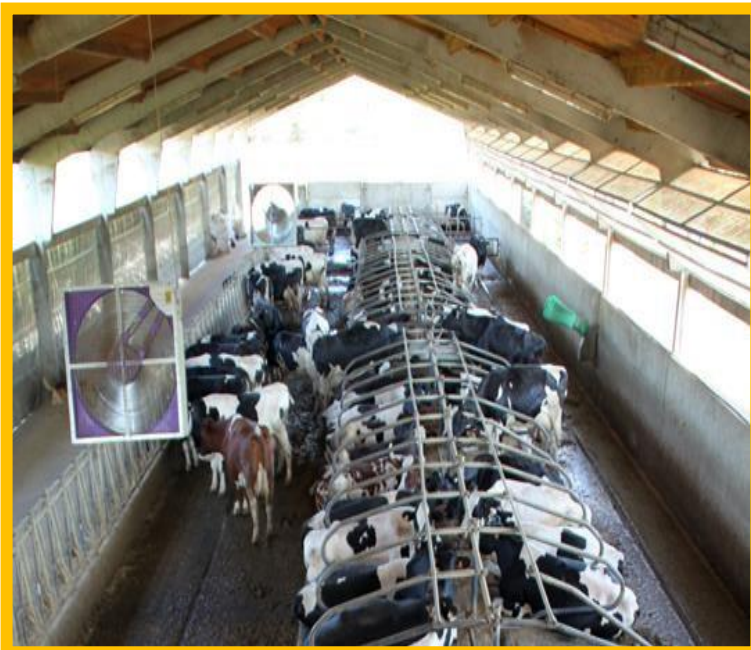




Veterinary and Zootechnical students

practical competences provide the backbone of future work

logistics, equipment and teaches to cover even the most simple and basic very **difficult and expensive**

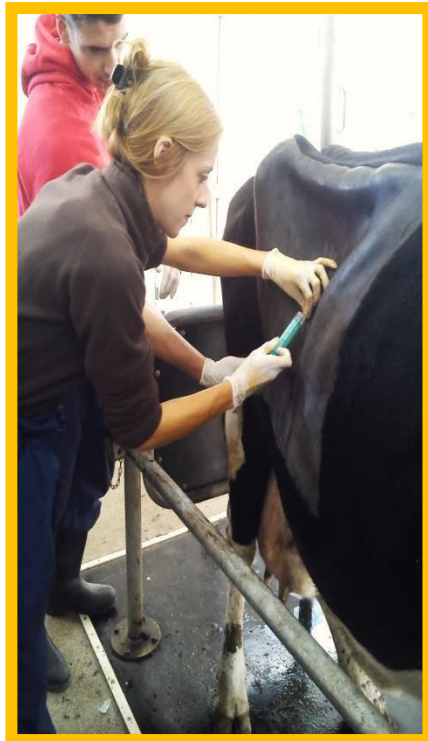




Veterinary and Zootechnical students

practical competences provide the backbone of future work

Effectiveness vs efficiency - each contextualize case only used by small number of students, even only one



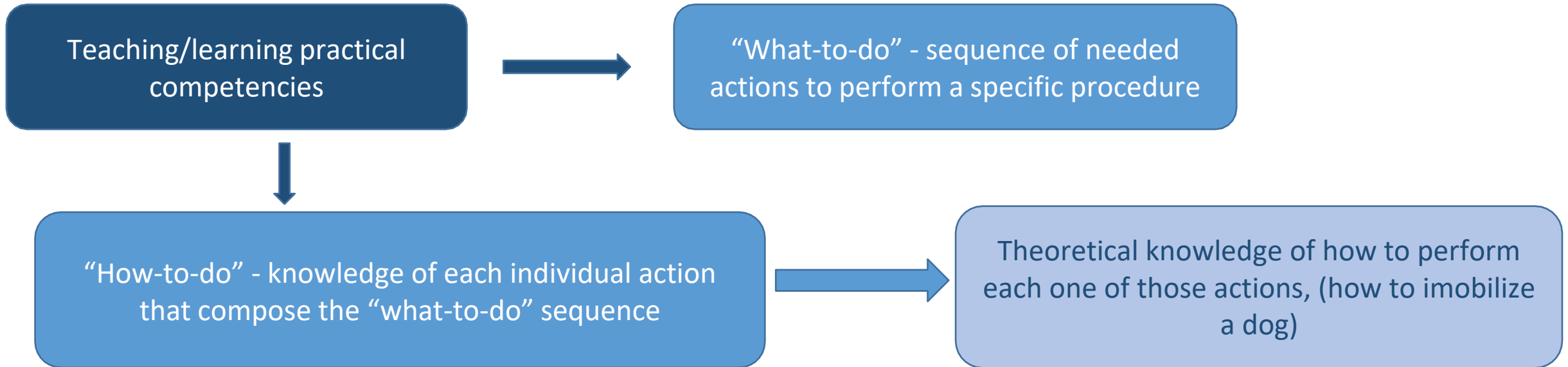


Blended Learning?

To learn/teach practical competences?



Practical competences





Truly practical part of an action, the correct use of sensorial organs and mechanical movements to perform that specific action



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Is it possible to transfer all the components of practical learning into a digital environment?



Is it possible to transfer all the components of practical learning into a digital environment?

It is NOT possible to teach/learn the practical part of “How-to-do” without a direct contact with real cases!



Is it possible to transfer part of practical learning into a digital environment?



Is it possible to transfer part of practical learning into a digital environment?

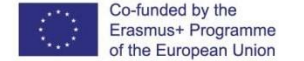
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- theoretical part of the “How-to-do” **Yes** - documents (texts, pictures, videos, etc.)



Is it possible to transfer part of practical learning into a digital environment?

- “What-to-do” **Yes** - can be described as an algorithm (computer way of thinking)
- theoretical part of the “How-to-do” **Yes** - documents (texts, pictures, videos, etc.)

System based on a hands-on contextualized experience by the students allowing some parts of the process of practical learning to be transfer to a digitalized environment - **Blended Learning**



Internet ubiquitous in classroom
Covid increased its use...



Internet ubiquitous in classroom Covid increased its use...

- internet to expose students to a specific procedure like television or zoom
 - passive behavior - action observe or listen
- creation of cases with questions or comments to be filled
 - chance to promote discussions

- evaluate



Internet in classroom - Problems

cases known to be not normal - in real life one of the major issues to solve – is this normal or abnormal? Impossible to learn and train this fundamental skill.

cases poorly structured - only few aspects of the whole procedure present, missing the complexity and fullness of the whole situation.

little contextualization - leads to a deficient capacity to relate and integrate all the available information into the resolution.

lack of active role - case already present on screen, no active

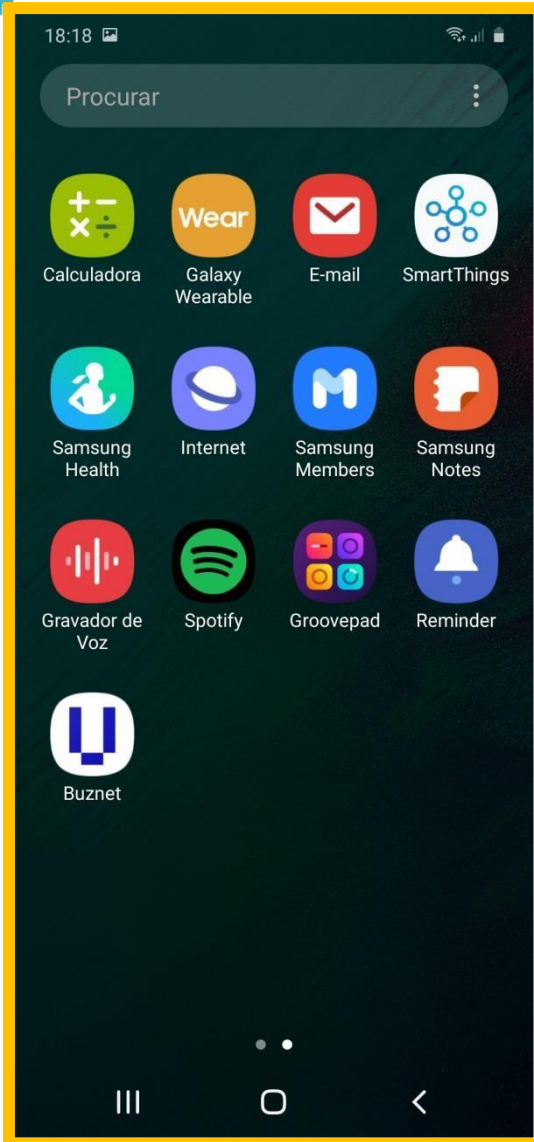
collaborative role for student on the production of the cases

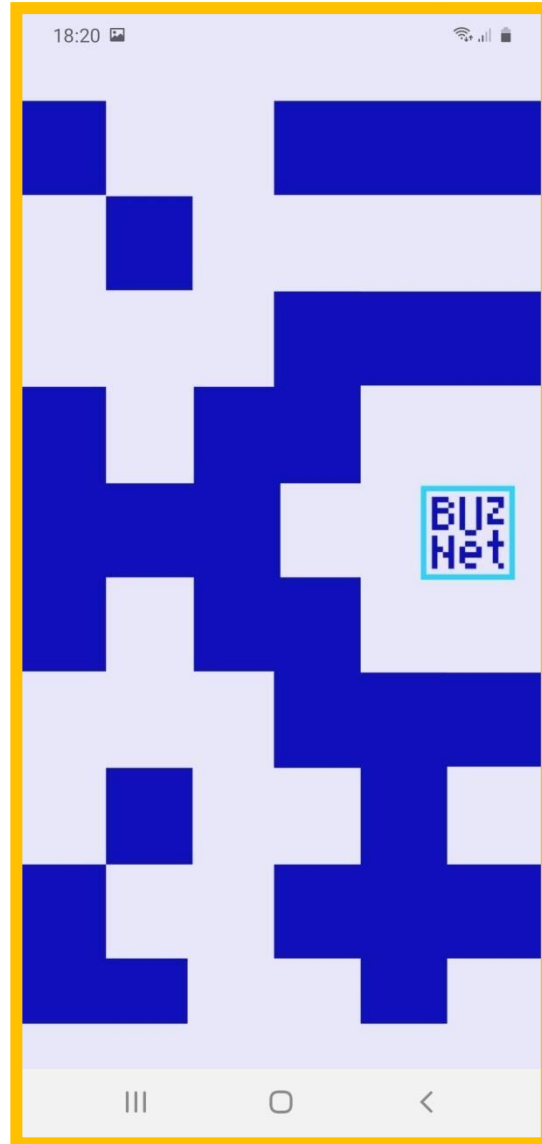
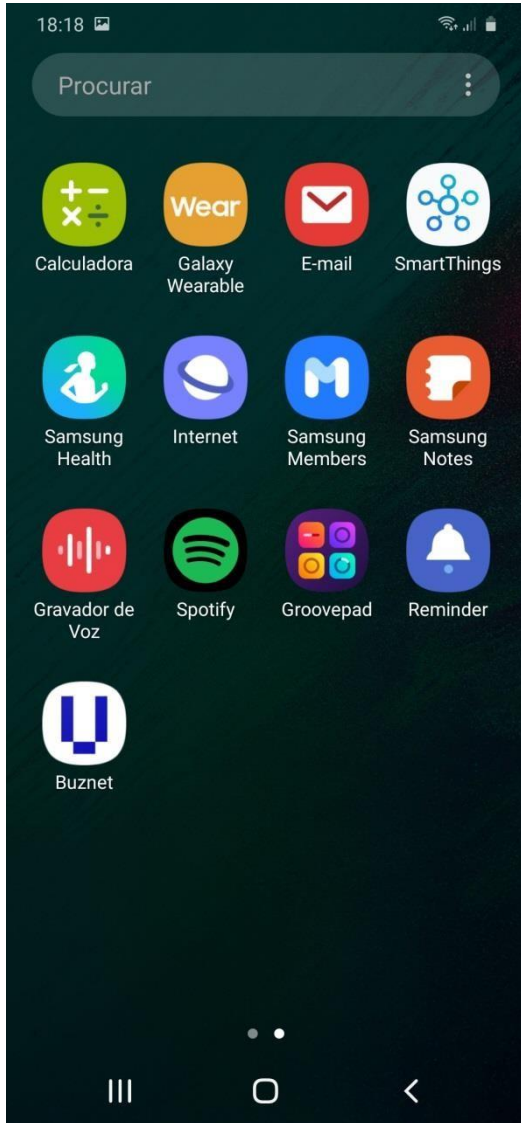


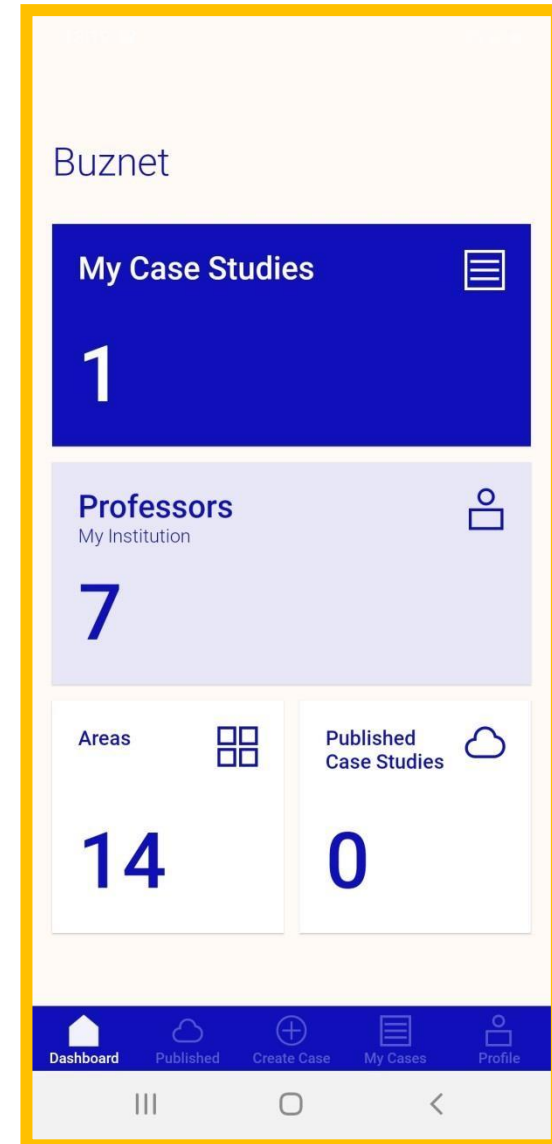
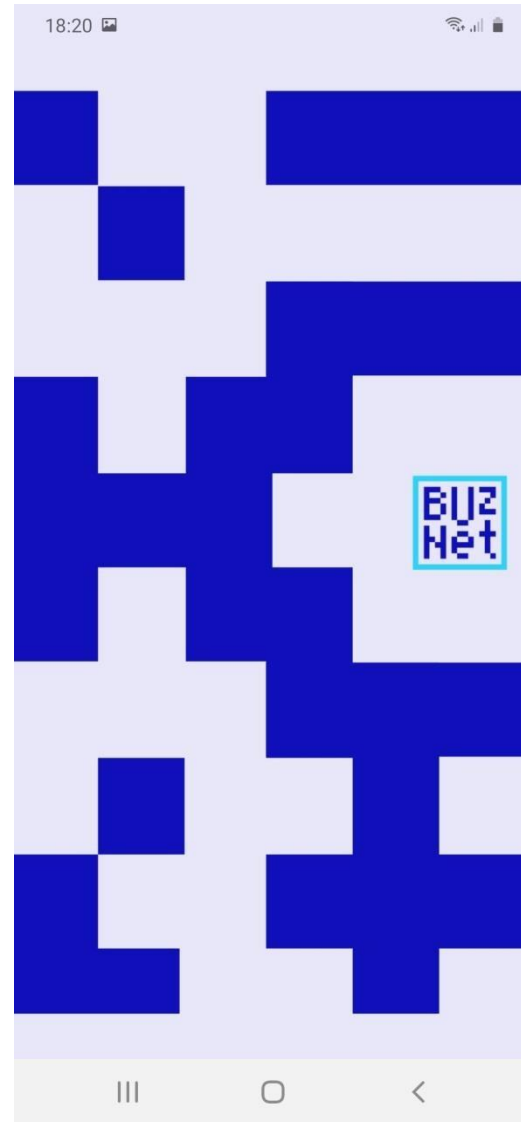
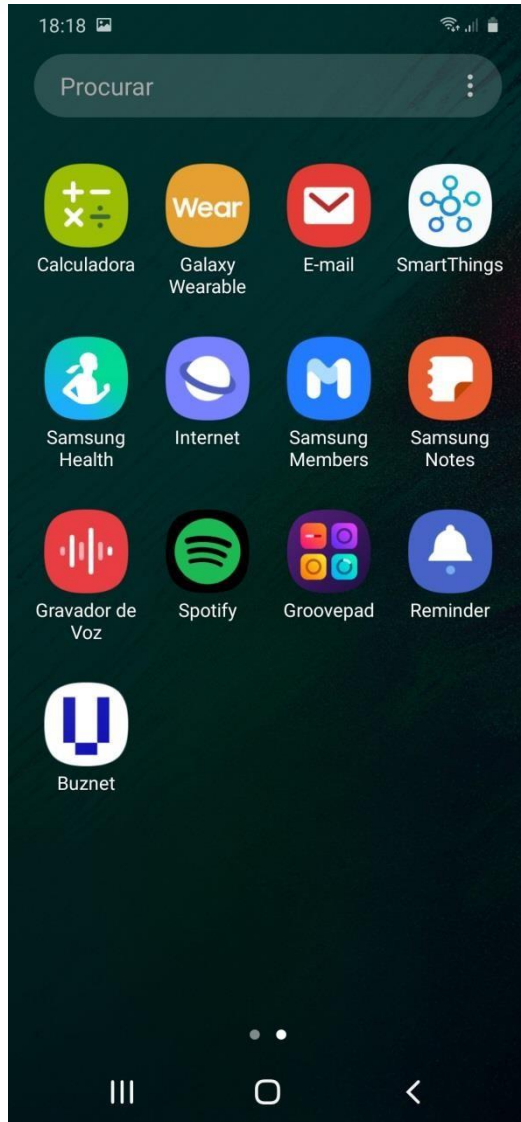
BuzNet app

- digital system to increase the efficiency of teaching/learning practical subjects in veterinary medicine.
- take full advantage of all the internet potentialities, maximizing the efficiency of each visit/manipulation/action taken by a student during her/his practical classes.

- increase students' motivation in the teaching/learning process

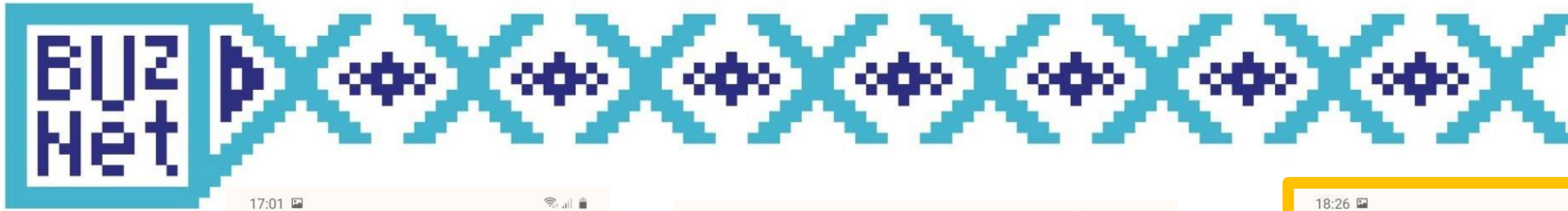












17:01

Choose a Case Studies Area

- Wild Animal
- Farm Animal
- Facilities
- Companion Animal
- Products
- Equipment

Dashboard Published Create Case My Cases Profile

18:26

Farm Animal

- Internal Medicine
- Surgery
- Welfare
- Ruminant Digestive Tract
- Horse Digestive Tract
- Ruminant Respiratory System

18:26

Case Ruminant Digestive Tract

01

01. Section 01
Farm Characterization

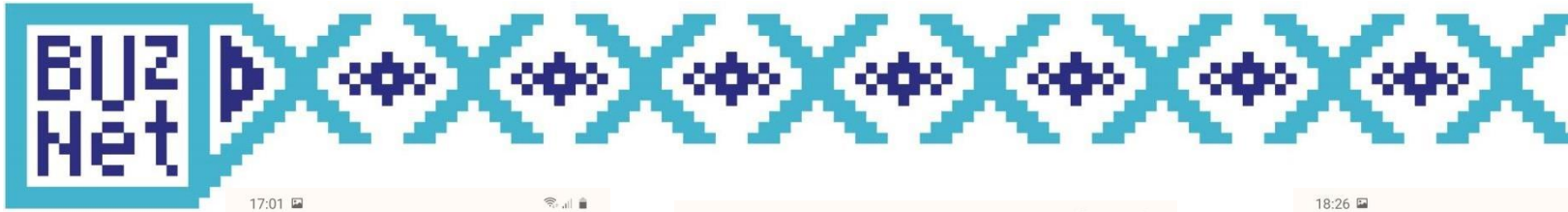
Country

County

Species

Number of Animals

Next



17:01

Choose a Case Studies Area

- Wild Animal
- Farm Animal
- Facilities
- Companion Animal
- Products
- Equipment

Dashboard Published Create Case My Cases Profile

18:26

Farm Animal

- Internal Medicine
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18:26

Case Ruminant Digestive Tract

01

01. Section 01
Farm Characterization

Country

County

Species

Number of Animals

Next

12:42

Country

Portugal

- Cow
- Sheep
- Goat
- Other Ruminant Species
- Cancel

Number of Animals

Next



18:27

<

Country

Portugal

County

Porto

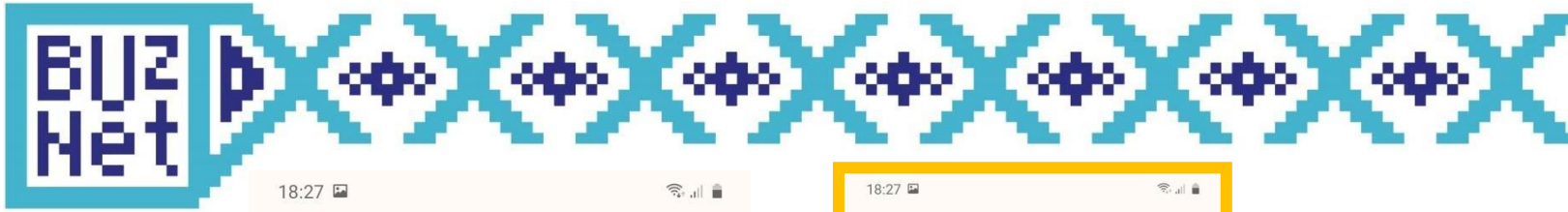
Species

Cow

Number of Animals

88

Next



18:27

<

Country

Portugal

County

Porto

Species

Cow

Number of Animals

88

Next

18:27

<

Case
Ruminant Digestive
Tract

02

02. Section 02
Animal Characterization

Animal Identification

Date of Birth

Is this a First Case

Yes No

Animal Production Status

Previous Next



18:27

<

Country

Portugal

County

Porto

Species

Cow

Number of Animals

88

Next

18:27

<

Case Ruminant Digestive Tract

02

02. Section 02
Animal Characterization

Animal Identification

Date of Birth

Is this a First Case

Yes No

Animal Production Status

Previous Next

12:43

<

2020

terça, 20/10

< outubro de 2020 >

D	S	T	Q	Q	S	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

CANCELAR OK

Previous Next



18:27

<

Country

Portugal

County

Porto

Species

Cow

Number of Animals

88

Next

18:27

<

Case Ruminant Digestive Tract

02

02. Section 02
Animal Characterization

Animal Identification

Date of Birth

Is this a First Case

Yes No

Animal Production Status

Previous Next

12:43

<

2020
terça, 20/10

< outubro de 2020 >

D	S	T	Q	Q	S	S	
					1	2	3
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	

CANCELAR OK

Previous Next

18:28

<

Animal Identification

Az44

Date of Birth

2020-05-20 18:28

Is this a First Case

Yes No

Animal Production Status

Youngstock

Previous Next



18:28

<

Case
Ruminant Digestive
Tract

03

03. Section 03
Gastrointestinal Signals

Major Complaint

Loss of Appetite

Loss of Weight

Decrease in Gain Weight

Diarrhea

Overall Status

Choose a file to upload (Size limite: 10MB)

Overall Status Classification

Normal

Depressed

Semi-comatose

Estas duas é só para ver se funciona :)



18:28

<

Case
Ruminant Digestive
Tract

03

03. Section 03
Gastrointestinal Signals

Major Complaint

- Loss of Appetite
- Loss of Weight
- Decrease in Gain Weight
- Diarrhea

Overall Status

Choose a file to upload (Size limite: 10MB)

Overall Status Classification

- Normal
- Depressed
- Semi-comatose

Estas duas é só para ver se funciona :)

18:30

<

Faeces Aspect

Choose a file to upload (Size limite: 10MB)

Faeces Characterization

- Normal
- Bloody
- Greyish
- Yellowish
- Dark
- With Bubbles
- Diarrhea
- Dry (Horse like)
- Not Digested
- Watery



18:28

<

Case
Ruminant Digestive
Tract

03

03. Section 03
Gastrointestinal Signals

Major Complaint

- Loss of Appetite
- Loss of Weight
- Decrease in Gain Weight
- Diarrhea

Overall Status

Choose a file to upload (Size limite: 10MB)

Overall Status Classification

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- Depressed
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18:30

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Choose a file to upload (Size limite: 10MB)

Faeces Characterization

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- Dry (Horse like)
- Not Digested
- Watery

18:30

<

Faeces Aspect

Choose a file to upload (Size limite: 10MB)

Take Photo...

Choose from library...

Cancel

- Yellowish
- Dark
- With Bubbles
- Diarrhea
- Dry (Horse like)
- Not Digested
- Watery



18:28

<

Case
Ruminant Digestive Tract

03

03. Section 03
Gastrointestinal Signals

Major Complaint

- Loss of Appetite
- Loss of Weight
- Decrease in Gain Weight
- Diarrhea

Overall Status

Choose a file to upload (Size limite: 10MB)

Overall Status Classification

- Normal
- Depressed
- Semi-comatose

Estas duas é só para ver se funciona :)

18:30

<

Faeces Aspect

Choose a file to upload (Size limite: 10MB)

Faeces Characterization

- Normal
- Bloody
- Greyish
- Yellowish
- Dark
- With Bubbles
- Diarrhea
- Dry (Horse like)
- Not Digested
- Watery

18:30

<

Faeces Aspect

Choose a file to upload (Size limite: 10MB)

Take Photo...

Choose from library...

Cancel

- Yellowish
- Dark
- With Bubbles
- Diarrhea
- Dry (Horse like)
- Not Digested
- Watery

18:31

<

Remove

Faeces Characterization

- Normal
- Bloody
- Greyish
- Yellowish
- Dark
- With Bubbles
- Diarrhea
- Dry (Horse like)
- Not Digested
- Watery



12:47

<

04

04. Section 04
Complementary Tests

Did you performed a Scour Test?

Yes No

Results of the Scour Test (if performed)

Rotavirus
 Coronavirus
 E. coli
 Cryptosporidium

Other Complementary Tests Performed



12:47

<

04

04. Section 04

Complementary Tests

Did you performed a Scour Test?

Yes No

Results of the Scour Test (if performed)

Rotavirus

Coronavirus

E. coli

Cryptosporidium

Other Complementary Tests Performed

12:47

<

Case Ruminant Digestive Tract

05

05. Section 05

Diagnosis

Is this Animal Normal?

Yes No

If the Animal is not Normal do you have a Final Diagnostic?

Yes No



12:47

<

04

04. Section 04

Complementary Tests

Did you performed a Scour Test?

Yes No

Results of the Scour Test (if performed)

Rotavirus

Coronavirus

E. coli

Cryptosporidium

Other Complementary Tests Performed

||| ○ <

12:47

<

Case Ruminant Digestive Tract

05

05. Section 05

Diagnosis

Is this Animal Normal?

Yes No

If the Animal is not Normal do you have a Final Diagnostic?

Yes No

||| ○ <

12:49

<

If you have a Final Diagnostic what is it?

Enteritis

Without a final diagnostic provide a list (up to 10) of diferential diagnostics from the most likely.

None

Provide the complementay exams for the first 3 diferential diagnosis

None

Previous Submit

||| ○ <



12:47

<

04

04. Section 04

Complementary Tests

Did you performed a Scour Test?

Yes No

Results of the Scour Test (if performed)

Rotavirus

Coronavirus

E. coli

Cryptosporidium

Other Complementary Tests Performed

12:47

<

Case Ruminant Digestive Tract

05

05. Section 05

Diagnosis

Is this Animal Normal?

Yes No

If the Animal is not Normal do you have a Final Diagnostic?

Yes No

12:49

<

If you have a Final Diagnostic what is it?

Enteritis

Without a final diagnostic provide a list (up to 10) of diferential diagnostics from the most likely.

None


Provide the complementay exams for the first 3 diferential diagnosis

None

Previous Submit

12:49

Good Job!



Nice Work!

We are sending the case Ruminant Digestive Tract! The case will be evaluated as soon as possible.

Go back to Dashboard

Create New Case



The screenshot shows a web browser window with the URL <https://buznet.cosmicode.pt/cases>. The page title is "My case studies". On the left, there is a dark blue sidebar with the BUZNet logo and several navigation icons. The main content area has two tabs: "Submitted" (with a badge showing "1 Total") and "Published". Below the tabs is a table with the following data:

Name	Code	Date	Status
Student Student	Case000006	3 days ago	Feedback

The Windows taskbar at the bottom shows the search bar with the text "Type here to search", several application icons, and the system tray with the date and time "3:54 PM 10/19/2020".



How bugs put food on the tabl... | TSUE 2020 - ConfTool Pro - Ind... | Buznet | a_faustino@yahoo.com - Yaho... | +


← → ↻ 🏠 🔒 https://buznet.cosmiccode.pt/cases/6 ⋮ 🛡️ ☆

⚙️ Mais acedidos 📄 Birds of the World lo... 📄 Acréscimo 📄 dbf dbf Talks - delhibird F... 📄 Alisa 📄 How to Use Lightroo... 📄 Bem-vindo - Google P... 📄 Primeiros passos 📄 http://www.googlead... 📄 M Videos | George Monb...

BUZNet

Case Case000006

Waiting for corrections



Student
Student
UP - Portugal

Section 01

Section 02

Section 03

Type here to search

3:54 PM 10/19/2020



How bugs put food on the tabl X TSUE 2020 - ConfTool Pro - Ind X Buznet X a_faustino@yahoo.com - Yaha X

https://buznet.cosmiccode.pt/cases/6

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alas How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

BUZNet


- Home
- Profile
- Grid
- Menu
- Cloud

Student Student

Abdominal Auscultation/Percussion Results
No Tympanic Sounds

Sensed Gut Movements
Diminished

Faeces Aspect



Faeces Characterization
Greyish, With Bubbles, Watery

Section 04

Type here to search

3:56 PM 10/19/2020

A screenshot of a web browser window displaying a case study on the BUZNet platform. The browser's address bar shows the URL 'https://buznet.cosmicode.pt/cases/6'. The page content is organized into a vertical list of questions and answers. On the left side of the browser window, a dark blue sidebar contains the BUZNet logo and several navigation icons: a home icon, a person icon, a grid icon, a list icon, a cloud icon, and a student profile icon labeled 'Student Student'. The main content area has a light blue header for 'Section 05' and contains the following text:

Section 05

Is this Animal Normal?
No

If the Animal is not Normal do you have a Final Diagnostic?
Yes

If you have a Final Diagnostic what is it?
Enteritis

Without a final diagnostic provide a list (up to 10) of diferencial diagnostics from the most likely.
None

Provide the complementay exams for the first 3 diferencial diagnosis
None

The browser's taskbar at the bottom shows the Windows logo, a search bar with the text 'Type here to search', and several application icons including File Explorer, Mail, Word, and Firefox. The system tray on the right indicates the time as 3:56 PM and the date as 10/19/2020.



Buznet

https://buznet.cosmiccode.pt/cases

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlelead... Videos | George Monb...

BUZNet

Case Studies

Waiting Evaluation **3** Total My Cases

Name	Area	Code	Date	Status
Student	Ruminant Digestive Tract	Case000007	4 hours ago	New
Student	Ruminant Digestive Tract	Case000006	4 days ago	Feedback
Admin	Ruminant Digestive Tract	Case000005	5 days ago	Evaluating

AuF Professor

Type here to search

5:00 PM 10/20/2020



Buznet


https://buznet.cosmiccode.pt/cases/7

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BUZNet

Case Case000007

Save Send Feedback Publish



Student
Student
UP - Portugal

Section 01	0/4
Section 02	0/4
Section 03	0/29

Windows Type here to search

5:00 PM 10/20/2020



Buznet

https://buznet.cosmicode.pt/cases/7

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alia How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

UP - Portugal

BUZNet

- Home
- Profile
- Grid
- Menu
- Cloud
- AtUF Professor

Section 01 0/4

Country
Portugal

County
Porto

Species
Cow

Number of Animals
100

Type here to search

5:00 PM 10/20/2020



Buznet

https://buznet.cosmiccode.pt/cases/7

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alice How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

UP - Portugal

BUZNet

Section 01 1/4

Country
Portugal

County
Porto

Species
Cow

Number of Animals
100

Correction

Correct Incorrect

Comments

AuE Professor

Type here to search

5:01 PM 10/20/2020



Buznet

https://buznet.cosmicode.pt/cases/7

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alive How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

Section 01 4/4

Country Portugal ✓

County Porto ✓

Species Cow ✓

Number of Animals 100 ✗

Questions to Solve

Correction ✕

Correct Incorrect

Comments

They were 101 cows

Type here to search

5:01 PM 10/20/2020



Buznet

https://buznet.cosmiccode.pt/cases/7

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... Videos | George Monb...

BUZNet


- Home
- Profile
- Grid
- Menu
- Cloud
- AvF Professor

Section 02 4/4

Section 03 4/29

Major Complaint ✓
Loss of Appetite

Overall Status [comment icon] [close icon]



Overall Status Classification ✓
Depressed

Correction ✕

Correct Incorrect

Comments

This is not the required picture!

Type here to search

5:03 PM 10/20/2020



Buznet

https://buznet.cosmiccode.pt/cases/7

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlelead... M Videos | George Monb...


BUZNet

- Home
- Profile
- Grid
- Menu
- Cloud
- AuF Professor

Metal-tympanic Sounds on the left flank

Sensed Gut Movements ✓
Diminished

Faeces Aspect ✓



Faeces Characterization ✓
Greyish, With Bubbles, Watery

Questions to Solve

Overall Status Classification

Correction ✕

Correct Incorrect

Comments

Type here to search

5:04 PM 10/20/2020



Buznet

https://buznet.cosmicode.pt/cases/7

Mais acedidos Birds of the World Io... Acréscimo dbf dbf Talks - delhibird F... Alia How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Vídeos | George Monb...

BUZNet

- Home
- Profile
- Grid
- Menu
- Cloud
- AuF Professor

Questions to Solve

Overall Status Classification

- Normal
- Depressed
- Semi-comatose
- Not possible to evaluate

Body Condition Classification

- Normal
- High
- Emaciated
- Not possible to evaluate

Dehydration Percentage Classification

- < 5%
- 5% to 7%

Type here to search

5:05 PM 10/20/2020



U. PORTO

Co-funded by the
Erasmus+ Programme
of the European Union

The screenshot shows a web browser window with the URL <https://buznet.cosmiccode.pt/cases/7>. The page features a dark blue sidebar on the left with the BUZNet logo and navigation icons. The main content area displays a user profile for 'Student Student' from 'UP - Portugal' and a list of five sections with their respective progress counts:

Section	Progress
Section 01	4/4
Section 02	4/4
Section 03	29/29
Section 04	3/3
Section 05	9/9

The Windows taskbar at the bottom shows the search bar and various application icons, with the system tray displaying the time as 5:07 PM on 10/20/2020.



A screenshot of a web browser displaying the BUzNet application. The browser's address bar shows the URL 'https://buznet.cosmicode.pt/cases/7'. The page has a dark blue sidebar on the left with the BUzNet logo and navigation icons. The main content area is white and features a header with 'Case Case000007' and three buttons: 'Save', 'Send Feedback', and 'Publish'. Below the header is a profile card for a 'Student' from 'UP - Portugal'. Underneath the profile card is a list of sections with their completion status: 'Section 01' (4/4), 'Section 02' (4/4), and 'Section 03' (29/29). The Windows taskbar is visible at the bottom of the screenshot, showing the time as 5:07 PM on 10/20/2020.

A smaller, partially visible screenshot of the BUzNet web application interface, showing the sidebar and the top navigation area.



U. PORTO

Co-funded by the
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of the European Union

A screenshot of a web browser displaying the BUZNet application. The browser's address bar shows the URL 'https://buznet.cosmiccode.pt/cases/7'. The page title is 'Case Case000007'. At the top right of the page are three buttons: 'Save', 'Send Feedback', and 'Publish'. A central modal dialog box displays 'Saved with success' and an 'OK' button. Below the modal, there is a user profile section for 'Student Student' from 'UP - Portugal'. The main content area lists three sections: 'Section 01' (4/4), 'Section 02' (4/4), and 'Section 03' (29/29). A dark blue sidebar on the left contains navigation icons and the 'BUZNet' logo. At the bottom, the Windows taskbar is visible with the search bar and various application icons. The system tray shows the date '10/20/2020' and time '5:07 PM'.

A screenshot of a web browser displaying the BUzNet application. The browser's address bar shows the URL https://buznet.cosmiccode.pt/cases/7. The page features a dark blue sidebar on the left with the BUzNet logo and navigation icons. The main content area is white and displays 'Case Case000007' with 'Evaluated by You' and buttons for 'Save', 'Send Feedback', and 'Publish'. Below this, a student profile is shown with a circular icon and the text 'Student Student UP - Portugal'. A list of sections follows: 'Section 01' (4/4), 'Section 02' (4/4), and 'Section 03' (29/29). The Windows taskbar at the bottom shows the time as 5:07 PM on 10/20/2020.

Buznet

https://buznet.cosmiccode.pt/cases/7


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BUzNet

Case Case000007

Save Send Feedback Publish

Evaluated by You

 **Student Student**
UP - Portugal

Section 01	4/4
Section 02	4/4
Section 03	29/29

Type here to search

5:07 PM 10/20/2020

A partial screenshot of the BUzNet web application interface, showing the sidebar and the top of the main content area. The sidebar contains the BUzNet logo and navigation icons. The main content area shows the start of a case page.

Buznet

https://buznet...

Mais acedidos Birds of the World lo... Acréscimo dbf...

BUzNet

Case C...

Section 01

Section 02

Section 03

Type here to search



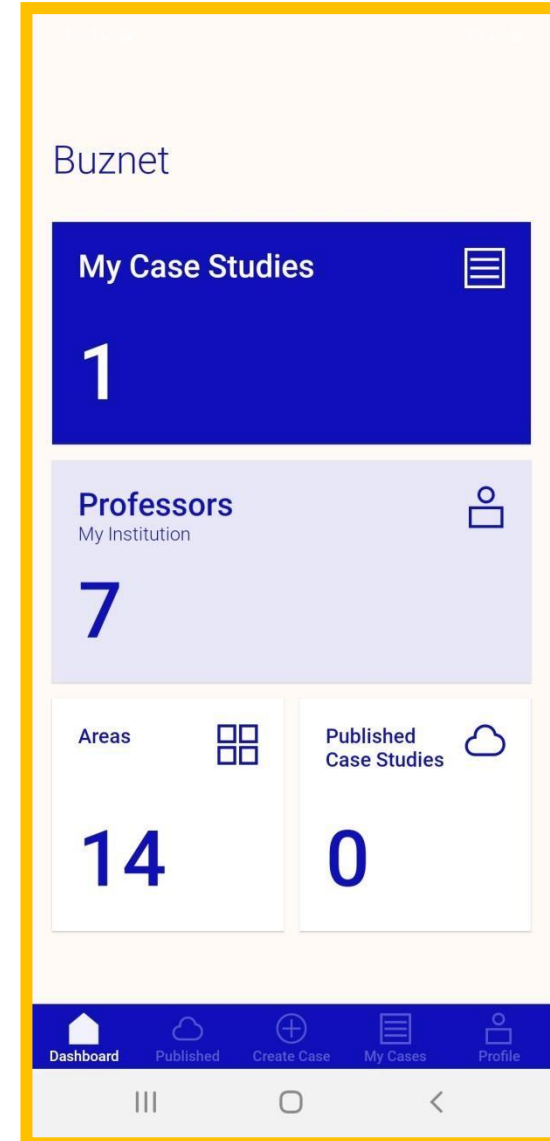
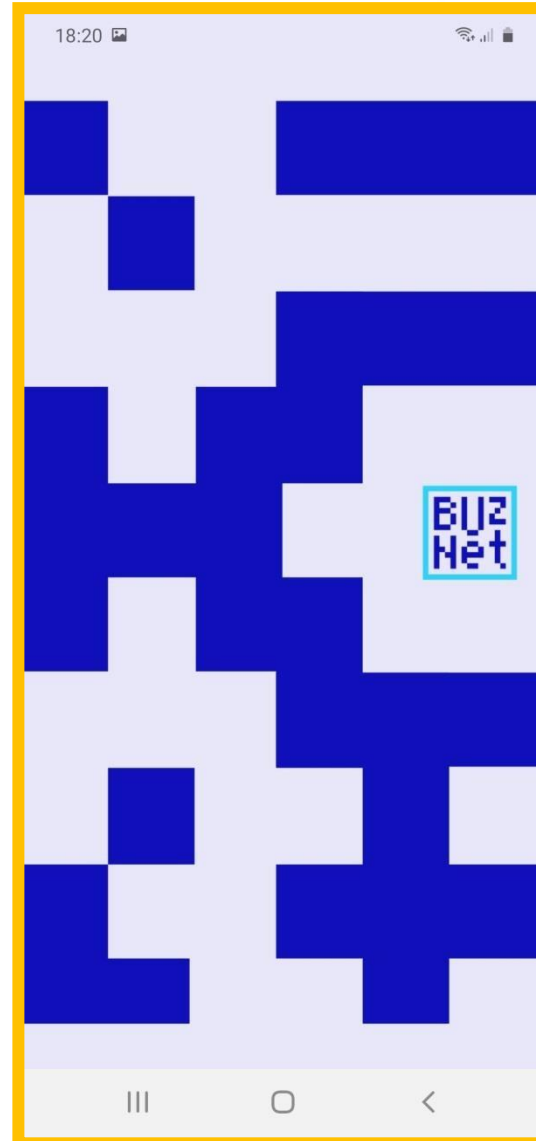
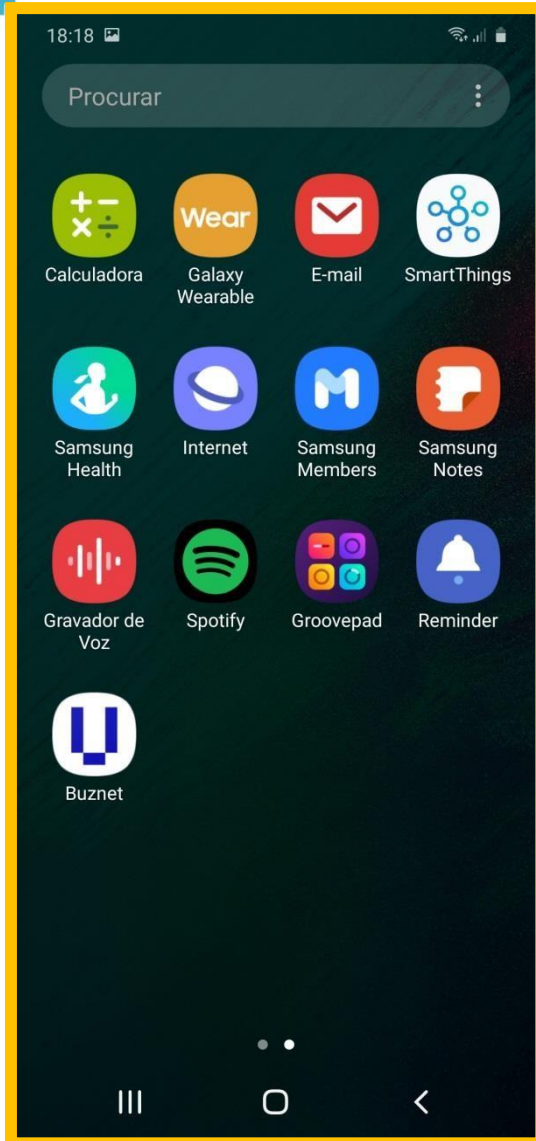
The screenshot shows a web browser window with the URL <https://buznet.cosmiccode.pt/cases>. The page title is "Case Studies". On the left, there is a blue sidebar with the BUzNet logo and navigation icons. The main content area shows a section titled "Waiting Evaluation" with a badge indicating 3 total cases. Below this is a table with the following data:

Name	Area	Code	Date	Status
Student Student	Ruminant Digestive Tract	Case000007	4 hours ago	Feedback
Student Student	Ruminant Digestive Tract	Case000006	4 days ago	Feedback
Admin Admin	Ruminant Digestive Tract	Case000005	5 days ago	Evaluating

The Windows taskbar at the bottom shows the time as 5:08 PM on 10/20/2020.

This block shows a partial view of the BUzNet sidebar from the left. It includes the BUzNet logo, a search bar with the text "Type here to search", and several navigation icons for home, profile, and other functions.

This block shows a partial view of the main content area from the right. It includes the "Case Studies" title and the beginning of the "Waiting Evaluation" section.





A screenshot of a web browser displaying the BUZ Net login page. The browser's address bar shows the URL 'https://buznet.cosmicode.pt/login'. The page features a large, abstract blue and white geometric pattern on the left side. On the right, there is a login form with the BUZ Net logo at the top. Below the logo, there is a link for 'Sign Up here!' for users without an account. The main heading is 'Hello!'. The form includes an 'Email' field with 'admin@buznet.pt' entered, a 'Password' field with masked characters, a 'Remember me' checkbox, and a 'Forgot Password?' link. A blue 'Login' button is positioned at the bottom right of the form. The browser's taskbar at the bottom shows various application icons and the system clock indicating 5:08 PM on 10/20/2020.



Buznet

https://buznet.cosmiccode.pt

Overview

Area Managers	Professors	Students	Externals
Active		Registered	Registered
4	8	3	0
2 Waiting, 4 Needed			

Areas	Published Case Studies
14	0
8 With Manager, 2 Waiting, 4 Needed	

Area Manager Professors

Admin Admin

Type here to search

5:11 PM 10/20/2020



Buznet

https://buznet.cosmiccode.pt/areas

BUZNet

Areas **0** Total

Farm Animal **x** | **v** Ruminant Digestive Tr... **x** | **v**

Area Manager

Professors **2** Total

AuF
5 areas
UP
Portugal
Profile Details

AuF
UP

Teacher CC
UP

Categories/Areas

- Wild Animal
- Farm Animal
- Internal Medicine
- Surgery
- Welfare
- Herd Health

Windows taskbar: Type here to search, 5:12 PM 10/20/2020



The screenshot shows a web browser window displaying the BUZNet dashboard. The browser's address bar shows the URL <https://buznet.cosmicode.pt>. The dashboard has a dark blue sidebar on the left with navigation icons and a large white number '5'. The main content area features several data cards:

- Published Case Studies:** A light purple card with a cloud icon and the number '0'.
- Students:** A white card with a person icon and the number '3'.
- Externals:** A white card with a person icon, the number '0', and sub-labels 'My Guests' and 'Total'.
- Professors:** A white card with a person icon, the number '3', and a donut chart. The chart is divided into three segments: 'Surgery' (blue), 'Welfare' (dark blue, with a '2' in a circle), and 'Others' (light blue).
- Case Studies Awaiting:** A white card with a list icon, the number '3', and a yellow donut chart. The chart has a segment labeled 'Evaluating' with a '3' in a circle.

The Windows taskbar at the bottom shows the search bar with the text 'Type here to search', several application icons, and the system tray with the date '10/20/2020' and time '5:14 PM'.



Buznet

https://buznet.cosmiccode.pt/cases

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BUZNet

Case Studies

Waiting Evaluation **3** Total My Cases

Name	Area	Code	Date	Status
Student Student	Ruminant Digestive Tract	Case000007	4 hours ago	Feedback
Student Student	Ruminant Digestive Tract	Case000006	4 days ago	Feedback
Admin Admin	Ruminant Digestive Tract	Case000005	5 days ago	Evaluating

AuF Professor

Type here to search

5:14 PM 10/20/2020

Buznet

https://buznet.cosmiccode.pt

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks

BUZNet

erview

5

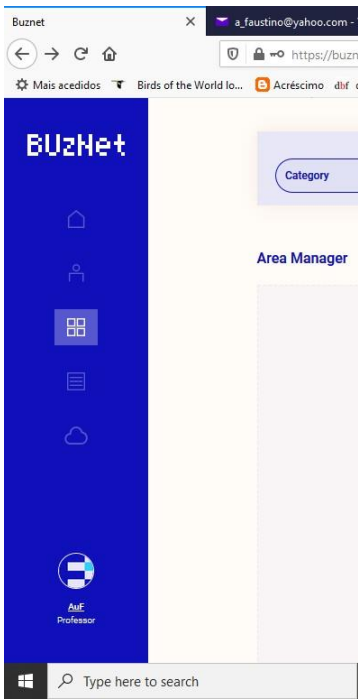
ofessors

AuF Professor

Type here to search



A screenshot of a web browser displaying the BUZNet application. The browser's address bar shows the URL "https://buznet.cosmiccode.pt/areas". The page features a dark blue sidebar on the left with the "BUZNet" logo and a vertical menu of icons. The main content area is divided into two columns: "Area Manager" and "Professors", both of which are currently empty. At the top of the main area, there are two dropdown menus labeled "Category" and "Area". On the right side, there is a "My Areas" section containing a list of five items: "Ruminant Respiratory System", "Welfare", "Surgery", "Horse Digestive Tract", and "Ruminant Digestive Tract". The Windows taskbar at the bottom shows the time as 5:39 PM on 10/20/2020.



A screenshot of the BUZNet form editor in a web browser. The browser address bar shows 'https://buznet.cosmiccode.pt/areas/18/form'. The page title is 'Ruminant Respiratory System'. On the left is a blue sidebar with navigation icons and the 'AuF Professor' logo. The main editor area contains a 'Section 01' with a 'Description' field containing the text 'Farm Description'. Below this is a dashed box labeled 'Drag Here' and a 'Questions to Solve' section. On the right is a vertical toolbar with options: 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. At the top right of the editor are 'Save' and 'Publish' buttons. The Windows taskbar at the bottom shows the time as 5:41 PM on 10/20/2020.



The image shows a screenshot of the BuzNet web application. The browser address bar shows the URL 'https://buznet.cosmiccode.pt/areas/18/form'. The main content area is titled 'Ruminant Respiratory System' and contains a 'Section 01' with a 'Description' field containing the text 'Farm Description'. Below the description is a dashed box labeled 'Drag Here' and a 'Questions to Solve' section. On the right side, there is a vertical toolbar with various question types: 'Text', 'Checkboxes', 'Multiple Choice', 'Text Answer', and 'Dropdown'. At the top right of the main area are 'Save' and 'Publish' buttons. The left sidebar contains navigation icons and the 'AuF Professor' logo. The Windows taskbar at the bottom shows the time as 5:41 PM on 10/20/2020.



The screenshot shows the BUZNet web application interface for creating a quiz. The browser address bar shows the URL https://buznet.cosmicode.pt/areas/18/form. The main content area is titled "Ruminant Respiratory System" and contains a section titled "Section 01" with a description "Farm Description". Below this is a "Question" field with a "Required" indicator and a "Remove" button. A "Description" field is also visible. On the right side, there is a "Capture Media" sidebar with options for "Text", "Checkboxes", "Multiple Choice", "Text Answer", and "Dropdown". The interface includes a "Save" button and a "Publish" button. The bottom of the screen shows the Windows taskbar with the time 5:41 PM and date 10/20/2020.



Buznet

a_faustino@yahoo.com - Yahoo

https://buznet.cosmiccode.pt/areas/18/form

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BUZNet

Ruminant Respiratory System

Save Publish

Section 01

Remove Section

Description

Farm Description

Question Required

Country

Remove

Description

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

Dropdown

Questions

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

5:40 PM 10/20/2020

Type here to search

Type here to search

5:41 PM 10/20/2020



A screenshot of a web browser displaying the Buznet application. The browser's address bar shows the URL 'https://buznet.cosmicode.pt/areas/18/form'. The page has a dark blue sidebar on the left with the 'BUZNet' logo and navigation icons. The main content area is titled 'Section 01' and contains a 'Description' field with the text 'Farm Description'. Below this is a 'Question' field with the text 'Country' and a 'Required' indicator. A 'Remove' button is located below the question field. On the right side, there is a vertical toolbar with icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The Windows taskbar at the bottom shows the time as 5:42 PM on 10/20/2020.



A screenshot of a web browser displaying the BUZNet form interface. The browser's address bar shows the URL https://buznet.cosmiccode.pt/areas/18/form. The page features a blue sidebar with navigation icons and the BUZNet logo. The main content area is divided into sections: 'Description' with a text box containing 'Farm Description', 'Question' with a text input field containing 'Country' and a 'Required' indicator, and another 'Description' text box. A 'Capture Media' button is visible below the second description box. On the right side, there is a vertical toolbar with icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The Windows taskbar at the bottom shows the time as 5:42 PM on 10/20/2020.

A partial screenshot of the BUZNet interface, showing the blue sidebar with navigation icons and the BUZNet logo. The main content area is partially visible, showing a 'Section 01' header and a 'Description' section with a text box containing 'Farm Description'. The Windows taskbar at the bottom shows the search bar with the text 'Type here to search'.



Buznet

a_faustino@yahoo.com - Yahoo

https://buznet.cosmiccode.pt/areas/18/form

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BUzNet

Description

Question Required

Question

Remove

Choose file or drag here Size limit: 10MB

Questions to Solve

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

AuF Professor

Type here to search

5:42 PM 10/20/2020

Buznet

a_faustino@yahoo.com - Yahoo

https://buznet.cosmiccode.pt/areas/18/form

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alive How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

BUzNet

Section

Descri

Farm D

Question

Countr

Remove

Descri

AuF Professor

Type here to search

M Videos | George Monb...

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

5:42 PM 10/20/2020



Buznet

Browser tabs: a_faustino@yahoo.com - Yahoo

Address bar: https://buznet.cosmiccode.pt/areas/18/form

Navigation: Mais acessidos, Birds of the World lo..., Acréscimo, dbf dbf Talks - delhibird F..., Alisa, How to Use Lightroo..., Bem-vindo - Google P..., Primeiros passos, http://www.googlead..., M Videos | George Monb...

BUZNet

Home, Profile, Grid (selected), List, Cloud, AuF Professor

Choose file or drag here Size limit: 10MB

Questions to Solve

Question Required

Kind of Farm

Remove

Industrial

Traditional

Add Option

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

Windows taskbar: Type here to search, File Explorer, Word, Firefox, Photoshop, 5:44 PM 10/20/2020



This is a screenshot of a web browser displaying the BUZNet interface. The browser's address bar shows the URL 'https://buznet.cosmiccode.pt/areas/18/form'. The page features a blue sidebar on the left with the BUZNet logo and navigation icons. The main content area is titled 'Questions to Solve' and contains a question editor. The question is 'Kind of Farm', marked as 'Required'. Below the question, there are three radio button options: 'Industrial', 'Traditional', and 'Mixed Type', each with a red 'X' icon to its right. An 'Add Option' button is at the bottom of the list. Above the question editor is a dashed box with a cloud icon and the text 'Choose file or drag here Size limit: 10MB'. On the right side of the page, there is a vertical toolbar with icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The Windows taskbar at the bottom shows the search bar, system tray, and the date '10/20/2020' at '5:44 PM'. A smaller, semi-transparent version of the same interface is visible in the background on the left.



BUZNet

Questions to Solve

Question Required

Kind of Farm

Remove

- Industrial X
- Traditional X
- Mixed Type X
- [Add Option](#)

----- Add Section -----

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

AuF Professor

Type here to search

5:44 PM 10/20/2020



A screenshot of a web browser displaying the BUZNet interface. The browser's address bar shows the URL 'https://buznet.cosmiccode.pt/areas/18/form'. The page features a dark blue sidebar on the left with the BUZNet logo and navigation icons. The main content area is light blue and contains a form editor for 'Section 02'. The form has a 'Description' field with a placeholder 'Description'. Below this is a dashed box labeled 'Drag Here'. Further down is a section titled 'Questions to Solve' with another dashed box labeled 'Drag Here'. On the right side, there is a vertical toolbar with icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time as 5:44 PM on 10/20/2020.

This is a screenshot of a web browser displaying the BuzNet interface. The browser's address bar shows the URL <https://buznet.cosmiccode.pt/areas/18/form>. The page features a dark blue sidebar on the left with the 'BUZNet' logo and a navigation menu. The main content area is light blue and contains a form editor for 'Section 02'. The form has a 'Description' field with the text 'Animal Characterization'. Below the description are two dashed boxes labeled 'Drag Here'. On the right side of the form editor, there is a vertical toolbar with icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The browser's taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time is 5:44 PM on 10/20/2020.

This is a partial screenshot of the BuzNet web interface, showing the left sidebar and the top navigation area. The sidebar is dark blue with the 'BUZNet' logo and a navigation menu. The top navigation area is light blue and contains the 'BUZNet' logo and a search bar. The system tray at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right indicates the time is 5:44 PM on 10/20/2020.



Buznet

a_faustino@yahoo.com - Yahoo

https://buznet.cosmiccode.pt/areas/18/form

Mais acedidos Birds of the World lo... Acréscimo dbf dbf Talks - delhibird F... Alus How to Use Lightroo... Bem-vindo - Google P... Primeiros passos http://www.googlead... M Videos | George Monb...

Ruminant Respiratory System

Save Publish

Section 01

Remove Section

Description

Farm Description

Question Required

Country

Remove

Description

Add Media

Capture Media

Text

Checkboxes

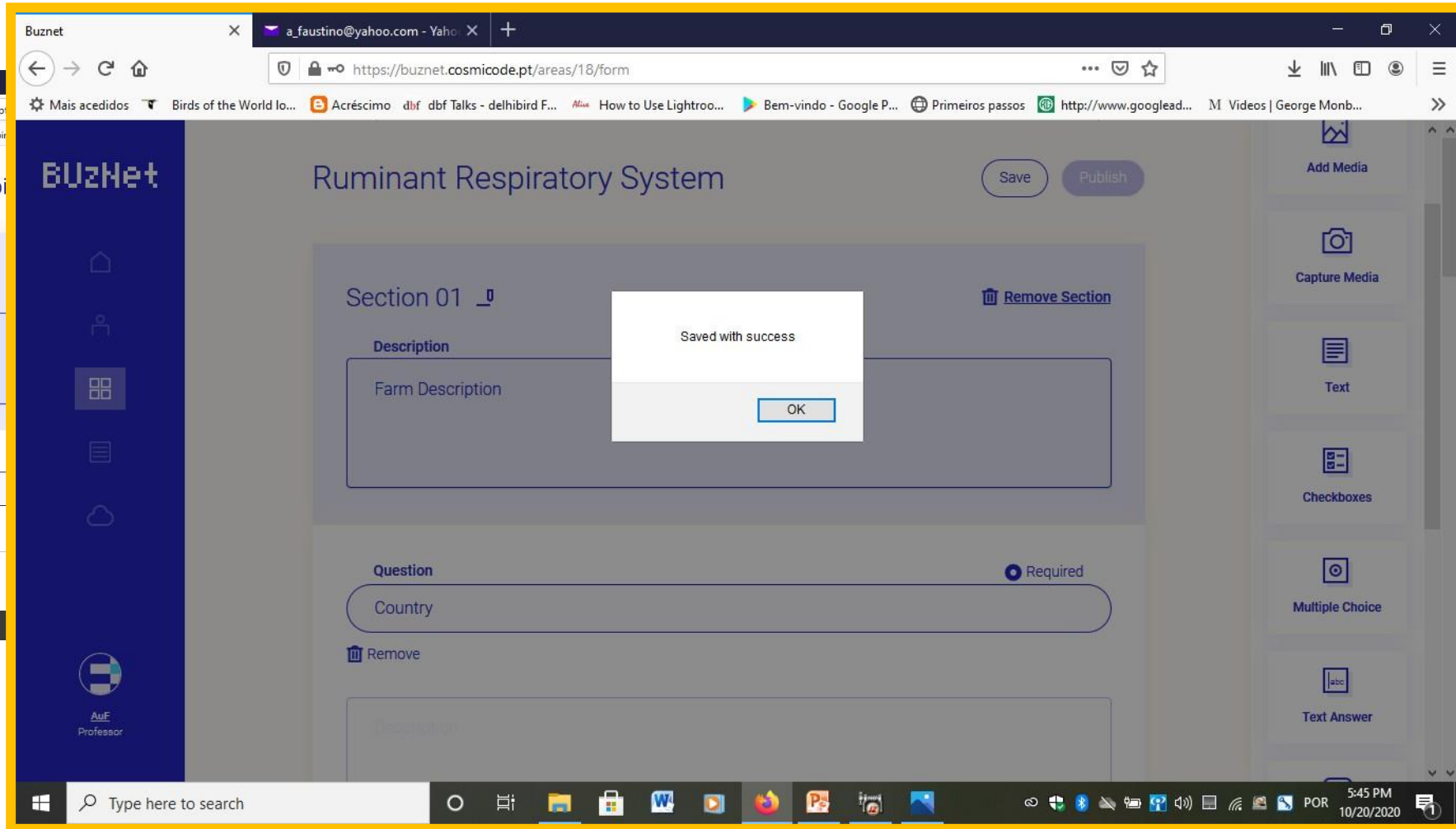
Multiple Choice

Text Answer

AuF Professor

Type here to search

5:45 PM 10/20/2020





Buznet

Browser tabs: a_faustino@yaho...

Address bar: https://buznet.cosmiccode.pt/areas/18/form

Navigation: Mais acedidos, Birds of the World lo..., Acréscimo, dbf dbf Talks - delhibird F..., Almas, How to Use Lightroo..., Bem-vindo - Google P..., Primeiros passos, http://www.googlead...

Ruminant Respiratory System

Save Publish

Section 01 [Remove Section](#)

Description

Farm Description

Question Required

Country

[Remove](#)

Description

BUZNet

Navigation icons: Home, Profile, Grid, List, Cloud, AuF Professor

Taskbar: Type here to search, File Explorer, Word, Firefox, Photoshop, Windows, 5:46 PM 10/20/2020

Buznet

Navigation icons: Home, Profile, Grid, List, Cloud, AuF Professor

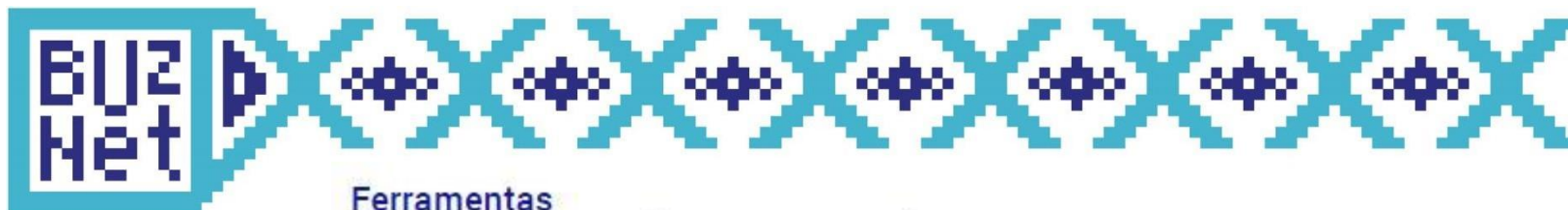
Taskbar: Type here to search

Navigation icons: Add Media, Capture Media, Text, Checkboxes, Multiple Choice, Text Answer











Taskbar: 5:45 PM 10/20/2020



A screenshot of a web browser window displaying the BUZNet interface. The browser's address bar shows the URL 'https://buznet.cosmicode.pt/areas/18/form'. The page title is 'Ruminant Respiratory System'. A central dialog box with a white background and a blue border contains the text 'Published with success' and an 'OK' button. The background interface is dimmed, showing a 'Section 01' editor with a 'Description' field containing 'Farm Description', a 'Question' field containing 'Country', and a 'Text Answer' field. A right-hand sidebar contains various content blocks like 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The top navigation bar includes 'Save' and 'Publish' buttons. The bottom of the screenshot shows the Windows taskbar with the search bar and several application icons.



Ferramentas para criar questionários para cada área

 Add Media	Descarregar uma ou várias imagens ilustrativas de questões para o aluno analisar/avaliar.	 Capture Image	Pergunta onde é pedido ao aluno para capturar imagem ou vídeo.
 Text	Inserir texto descritivo ou informativo. Poderá ser um texto de apoio à questão.	 Checkboxes	Pergunta onde o aluno pode seleccionar várias opções como resposta.
 Multiple Choice	Pergunta onde o aluno só pode seleccionar uma opção como resposta em poucas opções.	 Text Answer	Pergunta para resposta de texto aberto, com limite de caracteres.
 Dropdown	Pergunta onde o aluno só pode seleccionar uma opção como resposta em várias opções.	 Date & Time	Pergunta onde é pedido um intervalo de tempo ou uma data/hora específica.
 Option Scale	Pergunta com escalas para dar classificação.	 Yes/No	Pergunta com apenas duas opções de resposta.



Conclusions

- Is **not** possible to provide a full training in practical subjects in veterinary medicine without a contact with animals and their peculiar situations that require a veterinarian practitioner
- This training should be based on a **structured hands-on contextualized experience**, very expensive and time consuming and should be brought to the maximum of efficiency
- some parts of the practical training **can be done** in a digital environment
- built a digital platform in order to retrieve and store, in a structured way, the

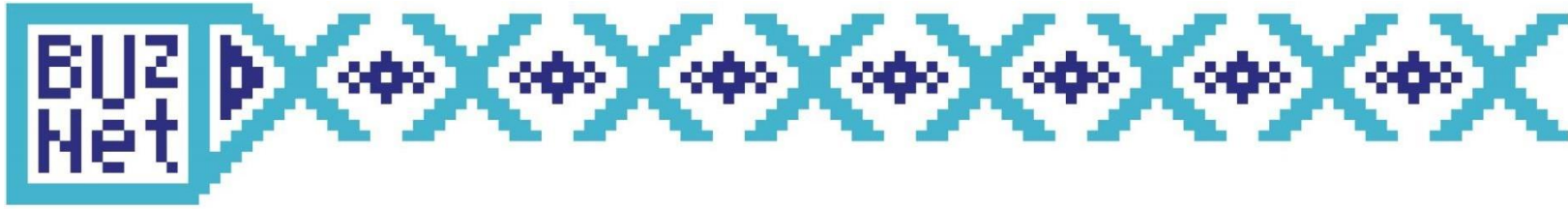
experience of a practical class in veterinary medicine – **BUzNet App**



Conclusions – BUzNet App

- Production of a **collection of structured high contextualized cases** , both with normal and abnormal aspects, from veterinary practice available for anyone to use to train himself anywhere in the world
- Huge **increase in the efficiency** of each visit/manipulation/action taken by a student during practical classes as it will be shared by all interested
- Students **highly motivated** as they produce their own studying material, that will be use by many others in a kind of **peer-assisted learning**
- Knowledge by teachers and students of the **level achieved in the teaching/learning**

process before the final examination. Possibility of correcting deficiencies in the teaching/learning process well before the end of learning time



Conclusions – BUzNet App

- Cases can be used in **evaluation** systems
- Increased self-knowledge of the **highs and lows of the teacher's capacities** in transmit the relevant information in order to be apprehended by the students
- Database with well structures and highly contextualized veterinary cases, both with normal and abnormal aspects, used in **improving practical teaching/learning, research and animal management**



B-LEARNING UZBEKISTAN VETERINARY NETWORK

Thank you very much
for your attention

RAHMAT!

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“This project has been funded with support from the European Commission. This communication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein”