



Co-funded by the
Erasmus+ Programme
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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€

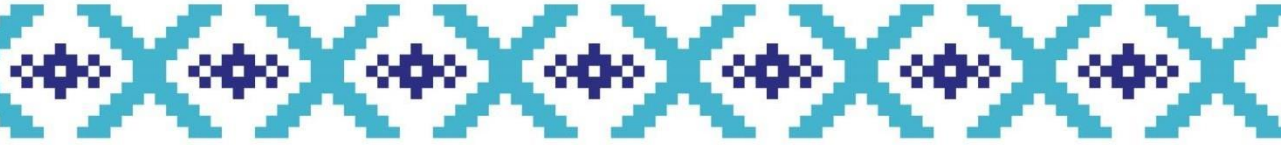
Coordinating Institution: University of Porto - **PORTUGAL**

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)



Specific Objectives

- Curriculum up-date
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- Equipment purchase
- Up-grade of Libraries
- Training of trainees
- **Creation and implementation of B-learning interface (BUzNet)**



Veterinary and Zootechnical students

practical competences provide the backbone of future work

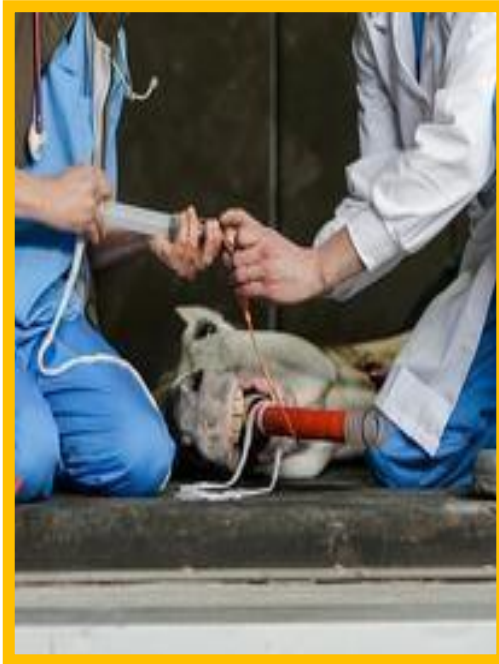




Veterinary and Zootechnical students

practical competences provide the backbone of future work

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

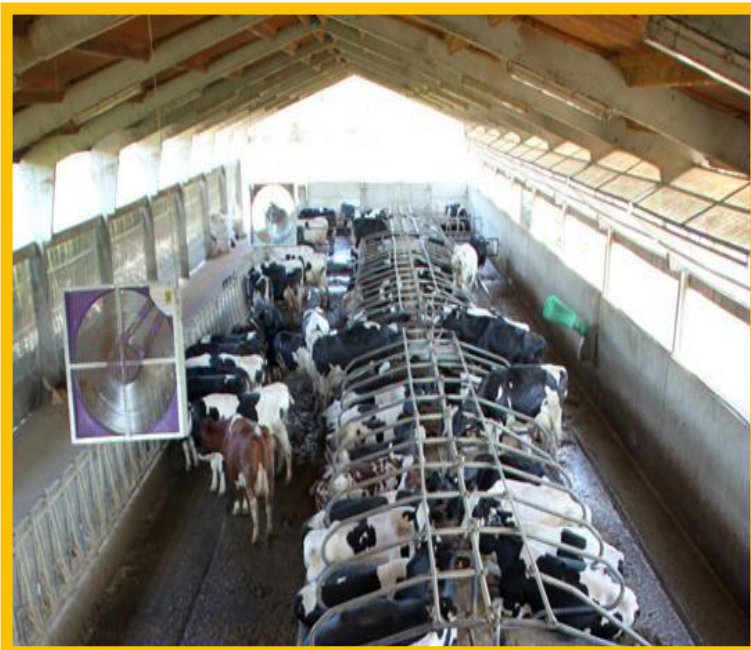




Veterinary and Zootechnical students

practical competences provide the backbone of future work

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

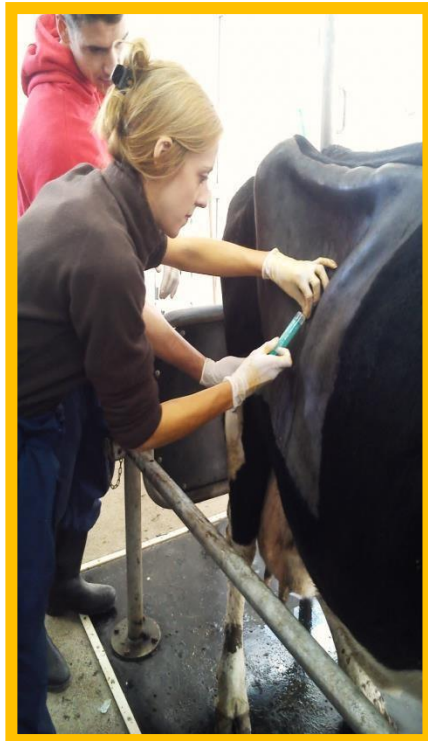




Veterinary and Zootechnical students

practical competences provide the backbone of future work

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



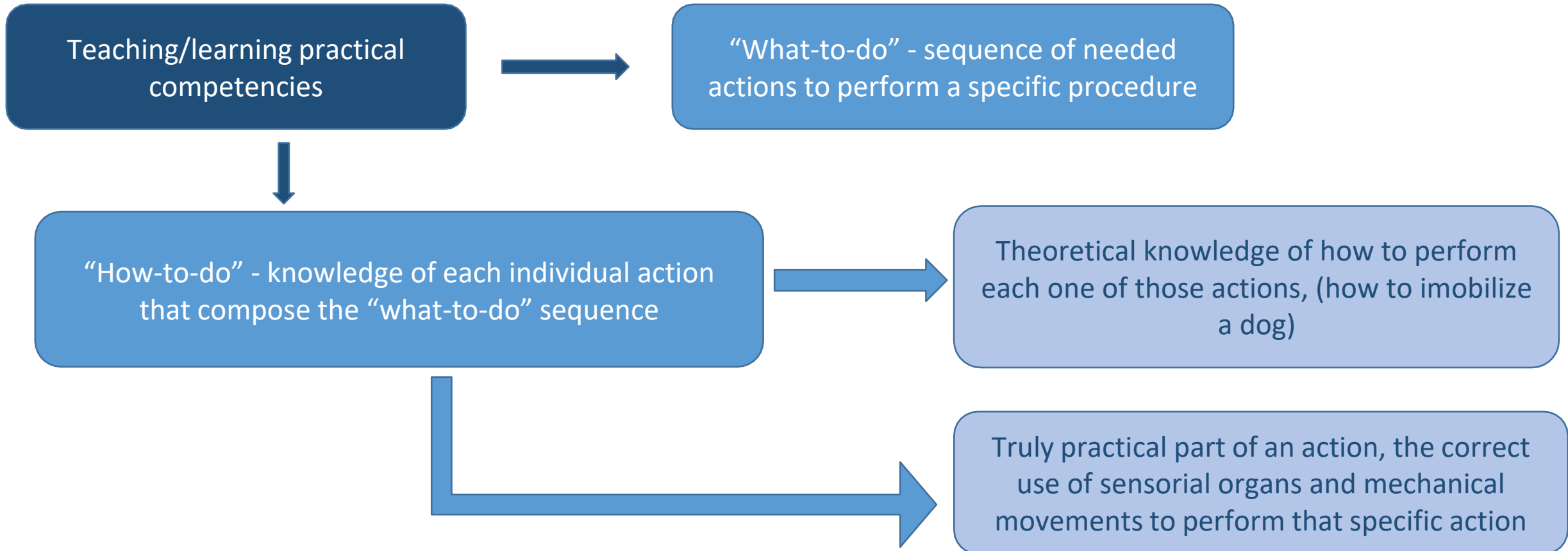


Blended Learning?

To learn/teach practical competences?



Practical competences





U.PORTO



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?

- “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.)



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**

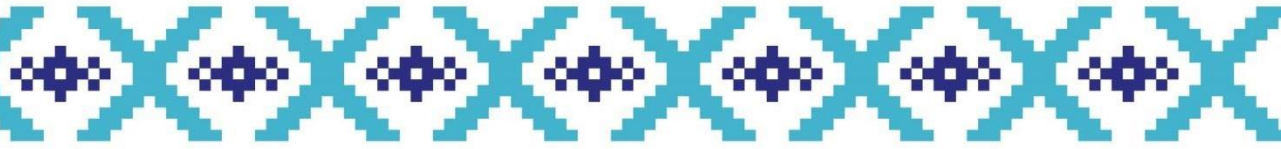


Internet ubiquitous in classroom
Covid increased its use...



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 all procedure present, missing the complexity and fullness of the whole situation.

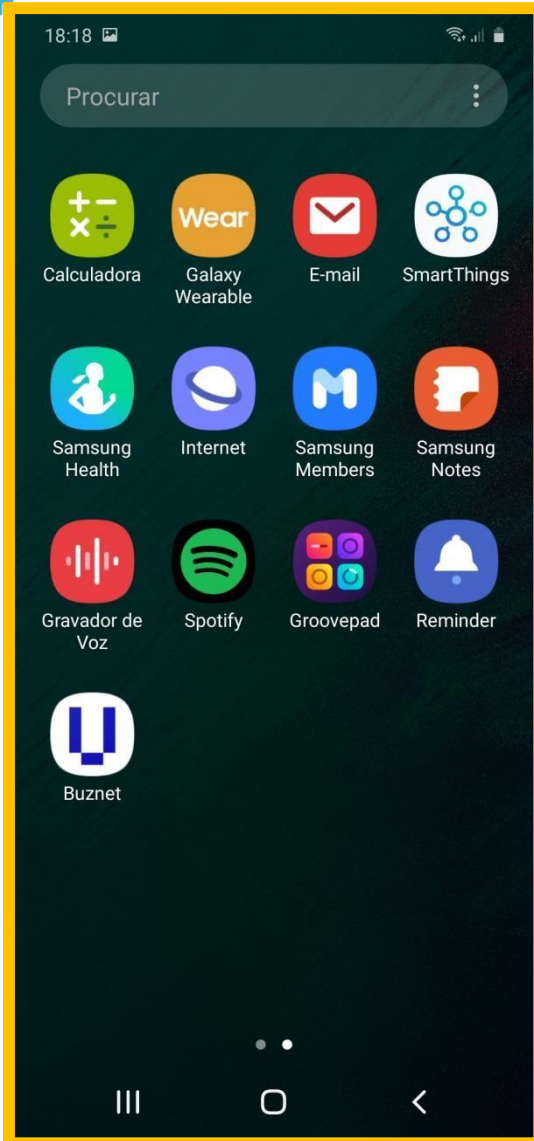
little contextualization - leads to a deficient capacity to relate and integrate all the available information into the resolution.

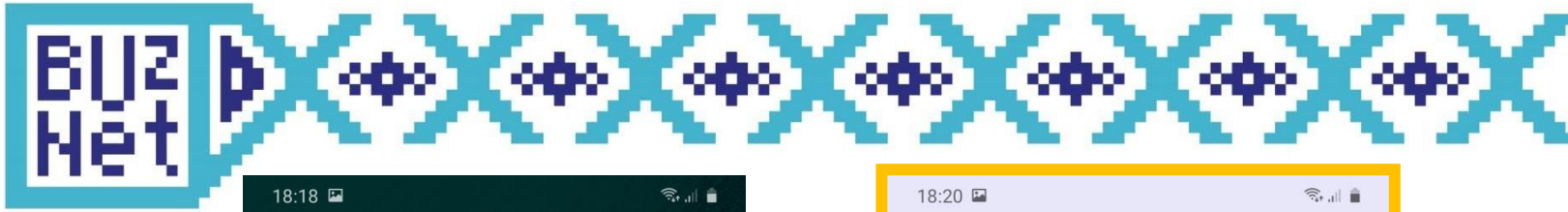
lack of active role - case already present on screen, no active collaborative role for student on the production of the cases



BuzNet app

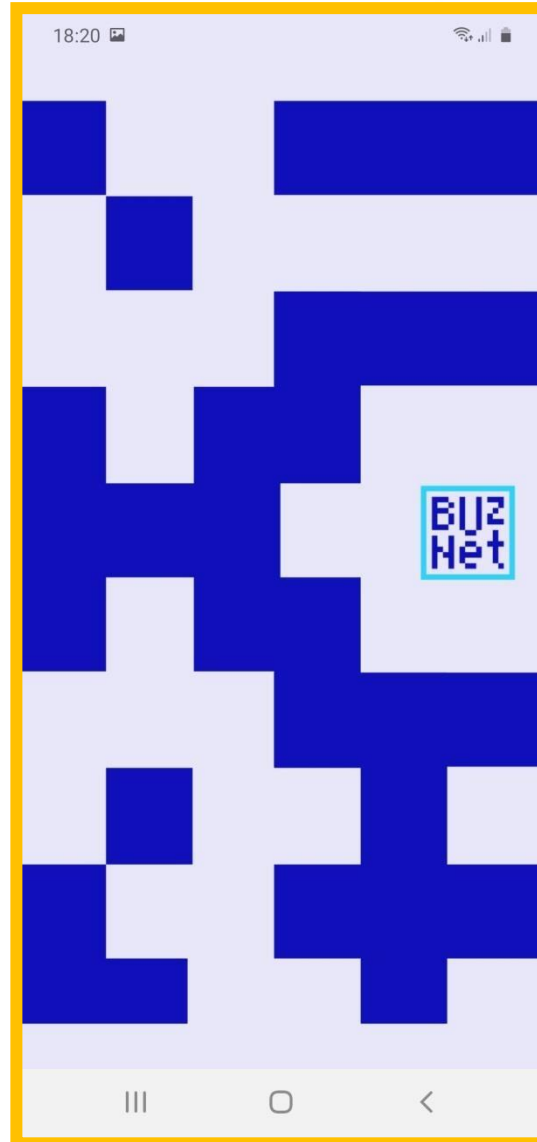
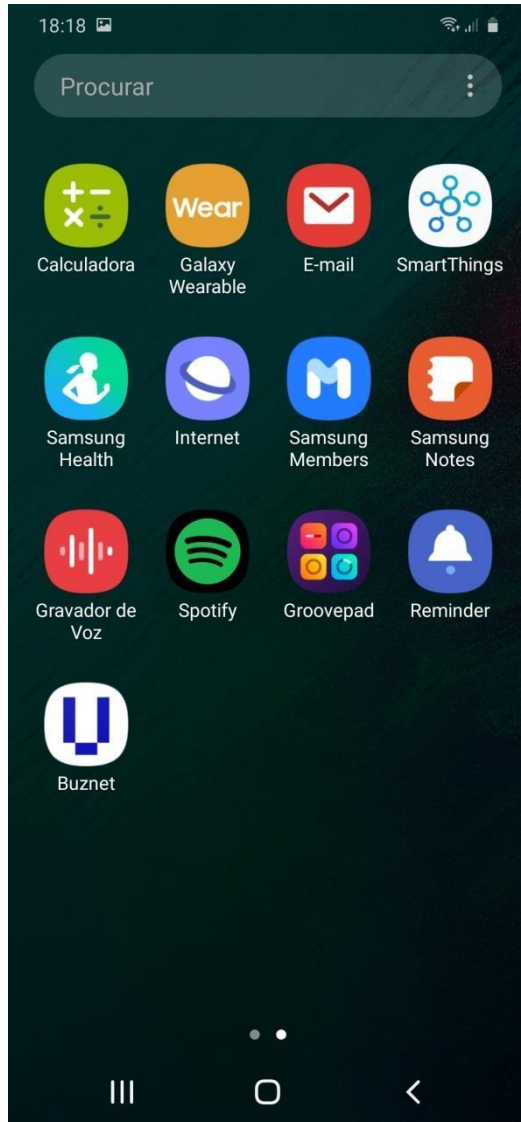
- digital system to increase the efficiency of teaching/learning practical subjects in veterinary medicine.
- take full advantage of all the internet potentialities, maximizing the efficiency of each visit/manipulation/action taken by a student during her/his practical classes.
- increase students' motivation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

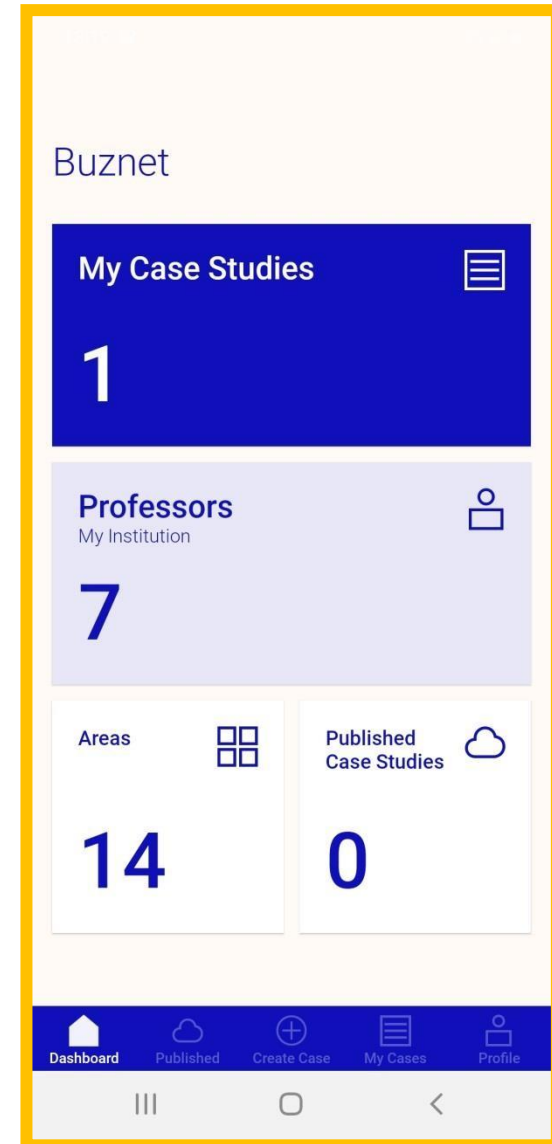
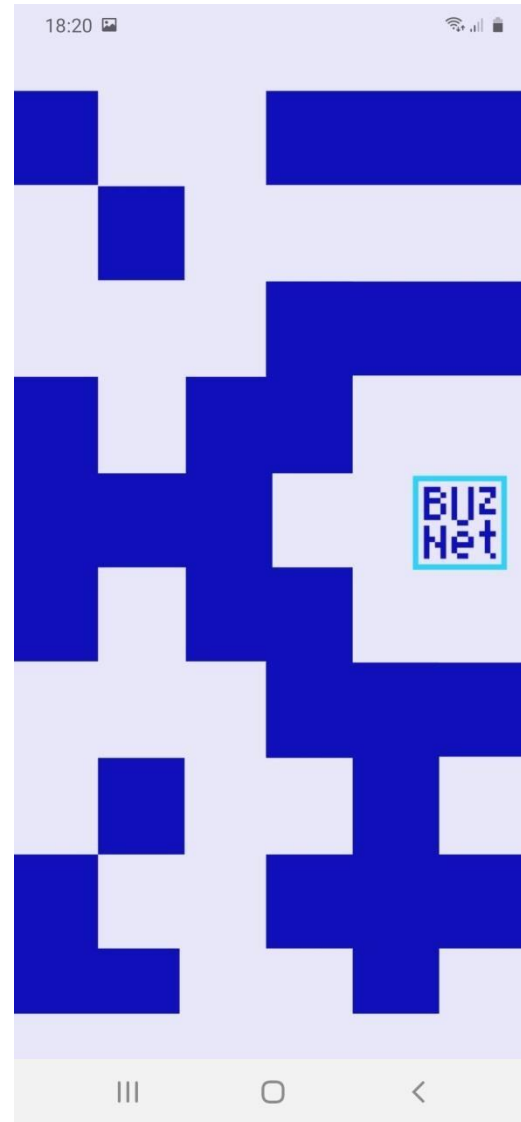
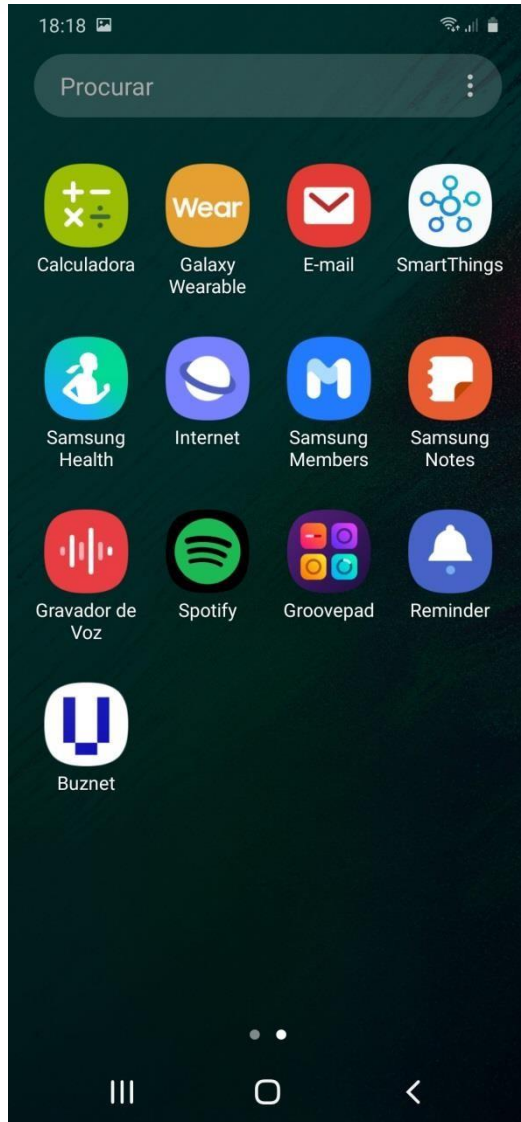




U. PORTO

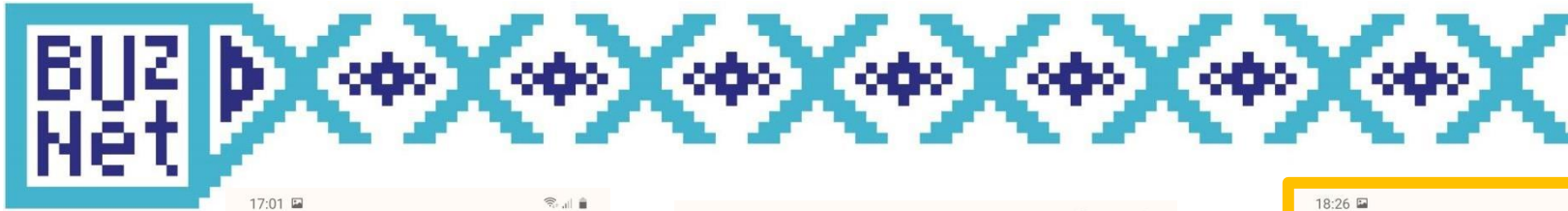
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of the European Union











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

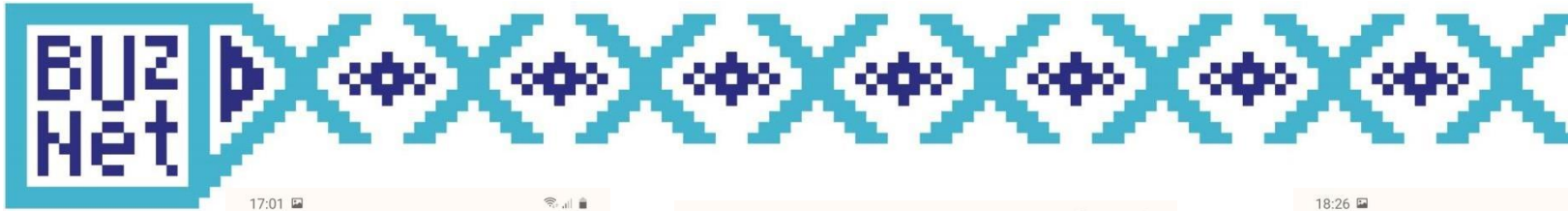
Country

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
- 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

12:42

Country

Portugal

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

Number of Animals

Next



18:27

<

Country

Portugal

County

Porto

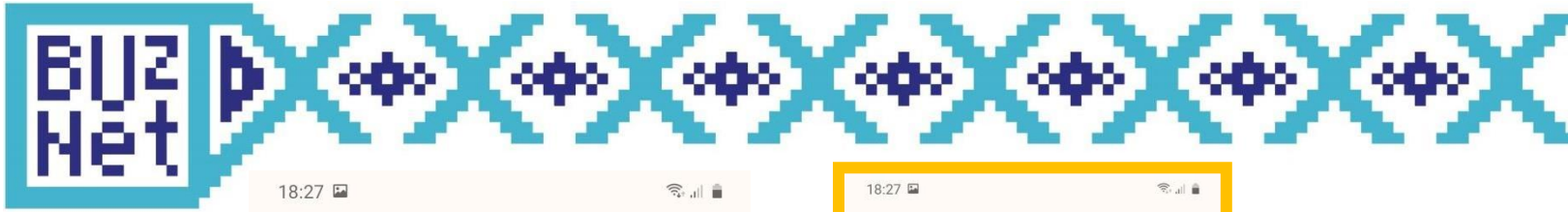
Species

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
				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



18:27

<

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
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- 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

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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. 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.cosmiccode.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 shows two tabs: "Submitted" (with a badge for 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



A photograph showing a close-up of a bird's feces. The feces is a thick, greyish, watery mass with many small bubbles, resting on a surface of dry straw and a piece of pink fabric.

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 list of questions and answers under the heading 'Section 05'. The questions and their corresponding answers are: '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 diferential diagnostics from the most likely.' (None), and 'Provide the complementay exams for the first 3 diferential diagnosis' (None). A blue sidebar on the left contains the BUZNet logo and navigation icons. The Windows taskbar at the bottom shows the system clock as 3:56 PM on 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.cosmicode.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... Videos | George Monb...

BUZNet

Case Case000007

Save Send Feedback Publish



Student
Student
UP - Portugal

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

AuE Professor

Type here to search

5:00 PM 10/20/2020

A screenshot of a web browser displaying a BUZNet case page. 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 contains a form with the following fields:

- Section 01** (0/4)
- Country**: Portugal
- County**: Porto
- Species**: Cow
- Number of Animals**: 100

The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons. The system tray on the right indicates the time is 5:00 PM on 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

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.cosmiccode.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... 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



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of the European Union

The screenshot shows a web browser window with the address bar displaying <https://buznet.cosmiccode.pt/cases/7>. The page content includes a user profile for 'Student Student' from 'UP - Portugal' and a list of five sections with their respective completion counts:

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

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, Microsoft Word, and Firefox. The system tray on the right indicates 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.cosmiccode.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 partial screenshot of the Buznet web application interface, showing the left sidebar with the 'BUZNet' logo and a list of sections: 'Section 01', 'Section 02', 'Section 03', 'Section 04', and 'Section 05'. The sidebar also includes a search bar at the bottom.



A screenshot of a web browser displaying the BUZNet interface. The browser's address bar shows the URL 'https://buznet.cosmiccode.pt/cases/7'. The page title is 'Case Case000007'. At the top right, there are buttons for 'Save', 'Send Feedback', and 'Publish'. A central notification box says 'Saved with success' with an 'OK' button. Below this, there is a list of sections: 'Section 01' (4/4), 'Section 02' (4/4), and 'Section 03' (29/29). On the left, a dark blue sidebar 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


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...

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

Type here to search

5:07 PM 10/20/2020

A partial screenshot of the BUzNet web application interface, showing the left 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

AuF Professor

Type here to search



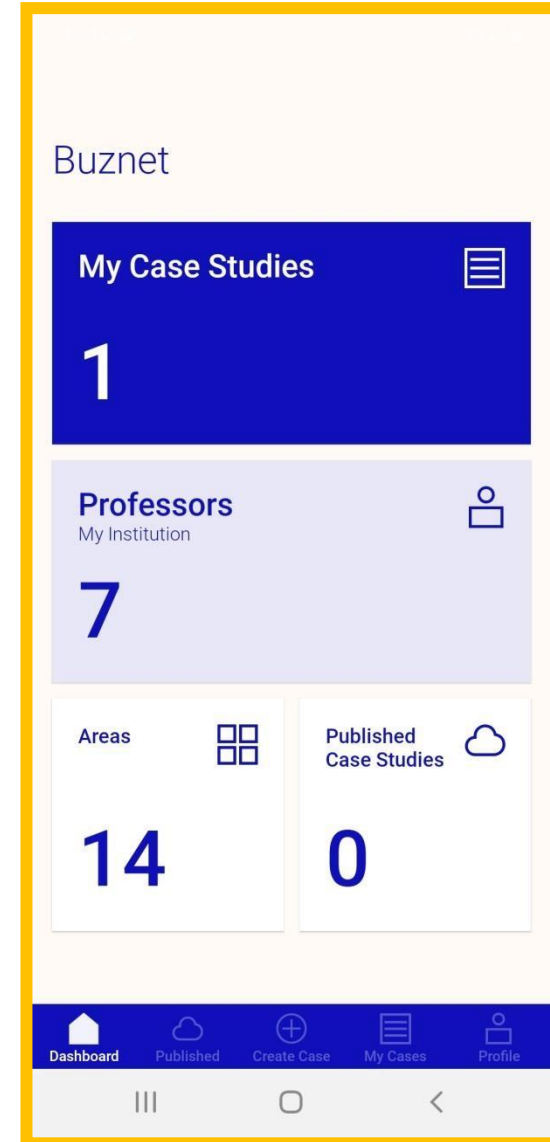
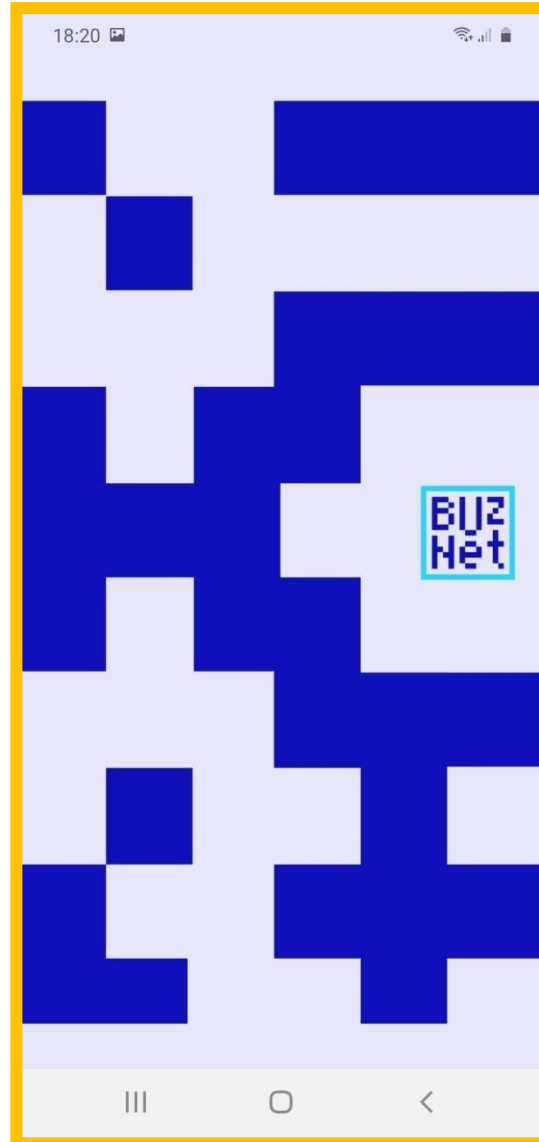
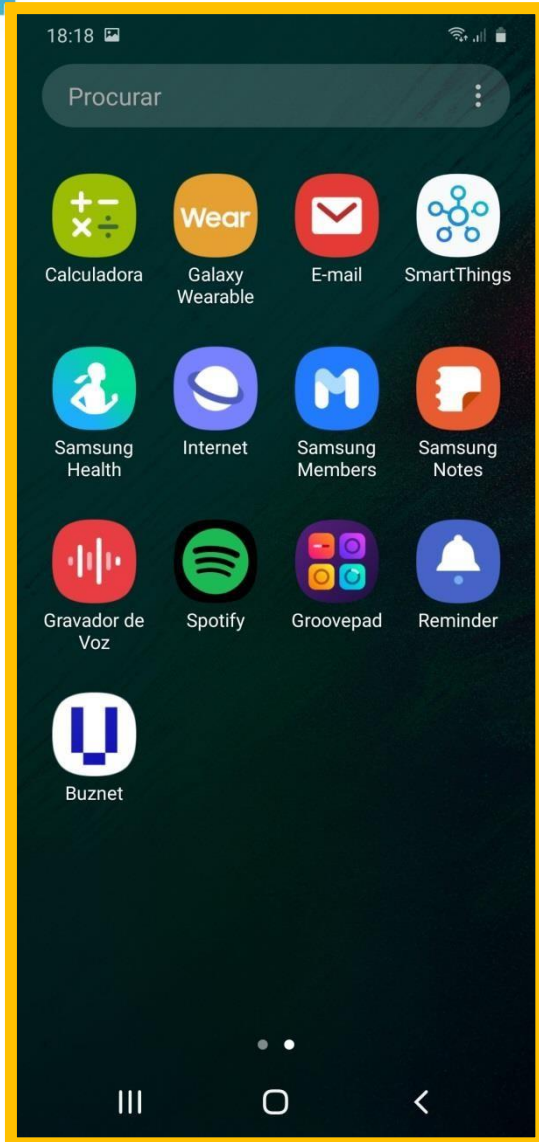
The screenshot shows a web browser window with the URL <https://buznet.cosmiccode.pt/cases>. The page title is "Case Studies". On the left, there is a dark blue sidebar with the BUzNet logo and a vertical menu of icons. The main content area is titled "Case Studies" and features a sub-header "Waiting 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 browser's taskbar at the bottom shows the time as 5:08 PM on 10/20/2020. The system tray includes icons for network, volume, and other background processes.

This block shows a partial view of the BUzNet sidebar from the screenshot above. It includes the BUzNet logo at the top, followed by a vertical list of icons for navigation. At the bottom of the sidebar, there is a search bar with the text "Type here to search" and a search icon.

This block shows a partial view of the main content area from the screenshot above. It includes the "Case Studies" title and the beginning of the table, showing the first row with a student user and a case code of Case000007.





A screenshot of a web browser window showing the BUZ Net login page. The browser's address bar displays 'https://buznet.cosmicode.pt/login'. The page features a large blue and white pixelated graphic on the left. On the right, there is a login form with the BUZ Net logo, a 'Hello!' greeting, and fields for 'Email' (containing 'admin@buznet.pt') and 'Password' (masked with dots). Below the password field are checkboxes for 'Remember me' and a link for 'Forgot Password?'. A blue 'Login' button is at the bottom right. 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

Admin Admin

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 the title 'BUZNet overview' and a large number '5'. The main content area features several data cards:

- Published Case Studies:** 0
- Students:** 3
- Externals:** 0 (with sub-categories 'My Guests' and 'Total')
- Professors:** 3 (with a donut chart showing 'Surgery' and 'Welfare' categories)
- Case Studies Awaiting:** 3 (with a donut chart showing 'Evaluating' category)

The Windows taskbar at the bottom shows the search bar, system tray, and the date/time '5:14 PM 10/20/2020'.



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.googlead... M Videos | George Monb...

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

eas

5

ofessors

AuF Professor

https://buznet.cosmiccode.pt

Type here to search



Buznet

a_faustino@yahoo.com - Yahoo

https://buznet.cosmiccode.pt/areas

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... M Videos | George Monb...

BuzNet

Category | Area

Area Manager

Professors

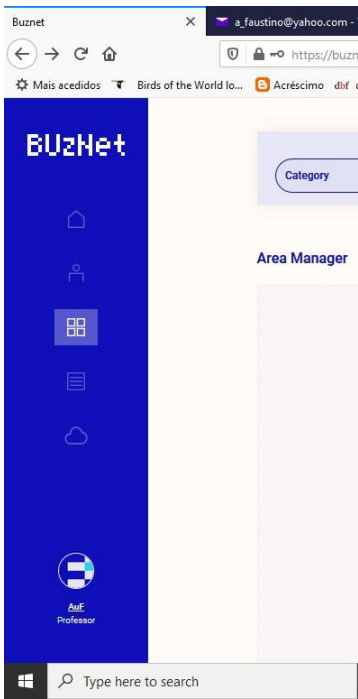
My Areas

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

AuF Professor

Type here to search

5:39 PM 10/20/2020



A screenshot of the BUZNet form editor interface. The browser address bar shows the URL 'https://buznet.cosmiccode.pt/areas/18/form'. The main content area is titled 'Ruminant Respiratory System' and includes 'Save' and 'Publish' buttons. Below the title is a section labeled 'Section 01' with a 'Remove Section' button. A text input field contains 'Farm Description'. A dashed box below it is labeled 'Drag Here'. At the bottom, there is a 'Questions to Solve' section with a 'Question' label and a 'Required' indicator. 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 5:41 PM on 10/20/2020.



This is 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 this is a dashed box labeled 'Drag Here' and a 'Questions to Solve' section. On the right side, there is a vertical toolbar with various content creation options: 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', 'Text Answer', and 'Dropdown'. At the top right of the content 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.



A screenshot of the BUZNet web application interface. 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

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... M Videos | George Monb...

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 system tray with the time '5:42 PM' and date '10/20/2020'.



A screenshot of a web browser displaying the BUZNet form. The browser's address bar shows the URL 'https://buznet.cosmiccode.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 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' section with an empty text box. A 'Capture Media' button is located 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 web form interface, showing the left sidebar with the BUZNet logo and navigation icons, and the top part of the form sections.



Buznet

Browser tabs: a_faustino@yahoo.com - Yahoo

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

Navigation: 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

Description

Form D

Question

Country

Remove

Description

BUzNet

Home

Profile

Grid

Text

Cloud

AuF Professor

Choose file or drag here Size limit: 10MB

Questions to Solve

Add Media

Capture Media

Text

Checkboxes

Multiple Choice

Text Answer

Windows taskbar: Type here to search, 5:43 PM, 10/20/2020

Buznet

Browser tabs: a_faustino@yahoo.com

Address bar: https://buznet

Navigation: Mais acedidos, Birds of the World lo..., Acréscimo, dbf

BUzNet

Home

Profile

Grid

Text

Cloud

AuF Professor

Windows taskbar: Type here to search

Browser tabs: M Videos | George Monb...

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

Windows taskbar: 5:42 PM, 10/20/2020



Buznet

Browser tabs: a_faustino@yahoo.com - Yahoo

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

Navigation icons: Back, Forward, Refresh, Home

Browser extensions: 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.googlelead...

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



A screenshot of the BUZNet web application interface. The browser address bar shows the URL https://buznet.cosmiccode.pt/areas/18/form. The main content area features a large dashed box with a cloud icon and the text "Choose file or drag here Size limit: 10MB". Below this is a section titled "Questions to Solve" containing a question "Kind of Farm" marked as "Required". The question has three radio button options: "Industrial", "Traditional", and "Mixed Type", each with a corresponding "X" icon to its right. A "Remove" button is located above the options, and an "Add Option" button is at the bottom. On the right side, there is a vertical toolbar with icons for "Add Media", "Capture Media", "Text", "Checkboxes", "Multiple Choice", and "Text Answer". A blue sidebar on the left contains navigation icons and the user's name "AuF Professor". The Windows taskbar at the bottom shows the time as 5:44 PM on 10/20/2020.

A partial screenshot of the BUZNet web application interface, showing the left sidebar and the top navigation bar. The sidebar contains navigation icons and the user's name "AuF Professor". The top navigation bar shows the "BUZNet" logo and a search bar.



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 interface 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 section titled "Section 02" with a "Remove Section" button. Below the title is a "Description" field with a text input area. Two dashed boxes labeled "Drag Here" are positioned below the description 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 5:44 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 titled 'Section 02' and includes a 'Remove Section' button. Below the title is a 'Description' field containing the text 'Animal Characterization'. There are two dashed boxes labeled 'Drag Here' for additional content. On the right side, a vertical toolbar offers various content types: 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The Windows taskbar at the bottom shows the time as 5:44 PM on 10/20/2020.

This is a partial screenshot of the BuzNet interface, showing the dark blue sidebar with the 'BUZNet' logo and a navigation menu. The sidebar contains icons for home, user profile, a grid of options, a list, a cloud, and the 'AuF Professor' logo. The Windows taskbar at the bottom shows the search bar and the time as 5:44 PM on 10/20/2020.

This is a partial screenshot of the BuzNet interface, showing the vertical toolbar on the right side. The toolbar contains icons for 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The Windows taskbar at the bottom shows the time as 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

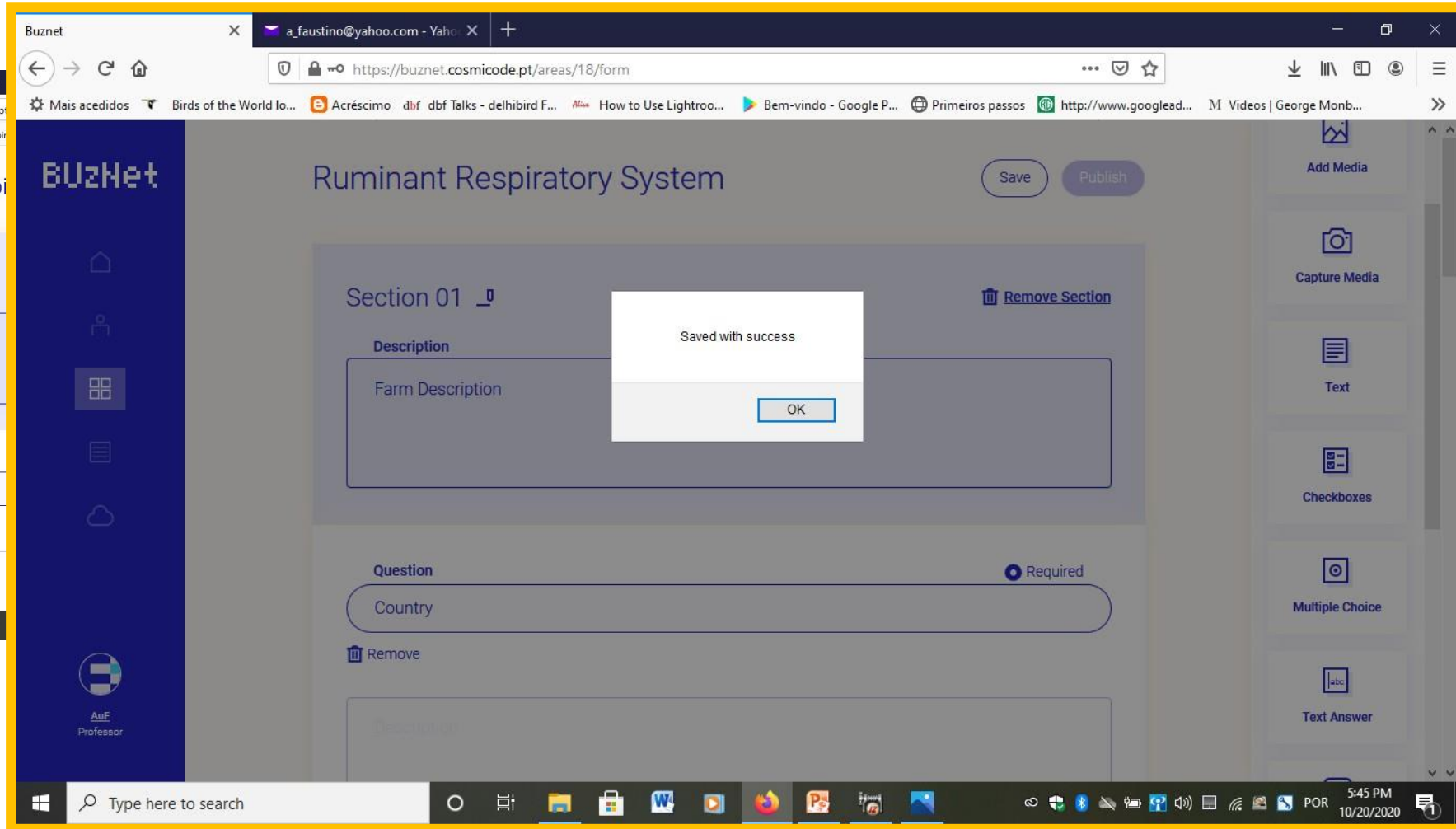
Multiple Choice

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..., 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 (selected), List, Cloud, AuF Professor

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

Buznet

Navigation icons: Home, Profile, Grid (selected), List, Cloud, AuF Professor

Taskbar: Type here to search

Browser tabs: http://www.googlead... M Videos | George Monb...

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

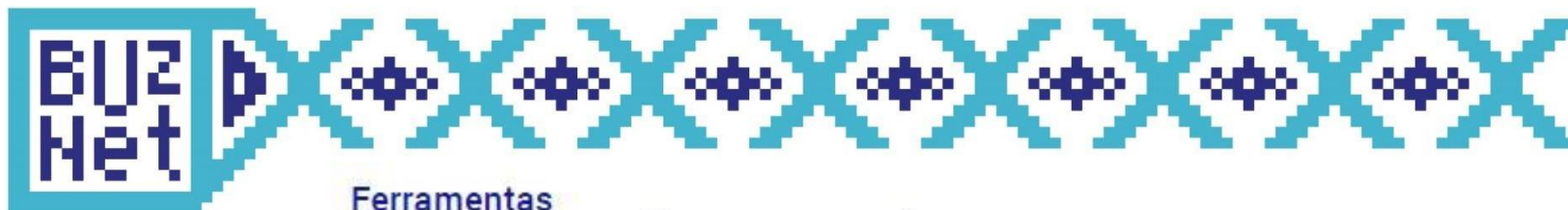
Taskbar: 5:45 PM 10/20/2020













A screenshot of a web browser window displaying the BUZNet interface. The browser's address bar shows the URL 'https://buznet.cosmiccode.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 and shows 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.

A partial screenshot of the BUZNet interface, showing a vertical navigation menu on the left side. The menu includes icons for home, user profile, a grid of content blocks, and a search icon. The text 'BUZNet' is visible at the top of the menu.

A partial screenshot of the BUZNet interface, showing the right-hand sidebar with content block options. The options include 'Add Media', 'Capture Media', 'Text', 'Checkboxes', 'Multiple Choice', and 'Text Answer'. The text 'BUZNet' is visible at the top of the sidebar.



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.



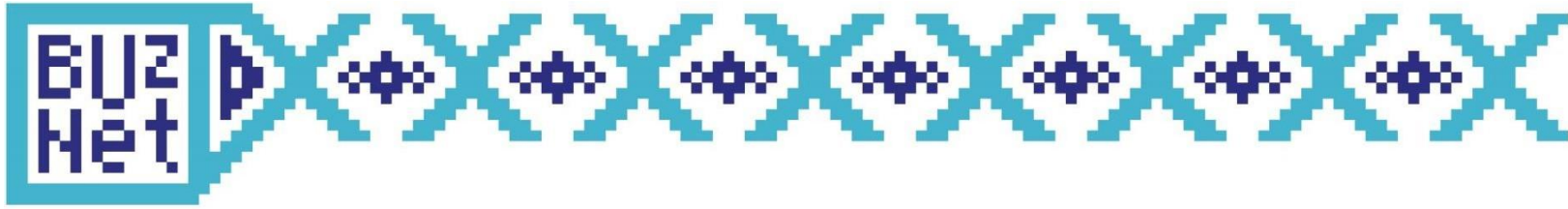
Conclusions

- 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!

buznet@reit.up.pt