

*There is only one meaning of life:
the act of living itself.
(Erich Fromm)*



BEHAViour management models across Europe

The BEHAVE application: user guide



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

Reference project number 2017-1-IT02-KA201-036540

www.behaveproject.eu

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This publication has been partially funded by the European Commission. The publication 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.

Project ID: ERASMUS + KA2 Strategic Partnership for school education - 2017-1-IT02-KA201-036540

Project website: <https://www.behaveproject.eu>

First edition 2020

ISBN: 978-88-903133-2-5

Published by: Istituto per le Tecnologie Didattiche, Consiglio Nazionale delle Ricerche,
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What are SEBDs?

We identify Students' with Social, Emotional and Behavioural Difficulties using the acronym (SEBD). Educational professionals are concerned about the many challenges arising from the management of children that display SEBD behaviour in the classroom and around the school. (Chafouleas, Volpe, Gresham & Cook, 2010), if we consider that these difficulties have a prevalence of 2-16%, are chronic, compromise the flow of lessons, and conflict with both learning objectives and the processes of learning. In this field, it is important to consider not only the student's issues but also the consequences of the overall classroom dynamics. Often, students with SEBDs display disturbing and/or disruptive behaviour that interferes with their own and others' social functioning, the academic engagement and the classroom social climate (Clunies Ross, Little, Kienhuis, 2008). In the school setting, SEBDs can manifest themselves through many different behaviours, for example, persistent rule-breaking, bullying, disruptive behaviour, social isolation and refusal to engage or failure to complete in learning tasks (Cooper and Cefai, 2013). It is quite clear that many children and young people with SEBDs have complex and persistent difficulties such as social competence, peer rejection, academic underachievement and higher rates of school drop-out. They will also tend to internalise problems like anxiety and/or withdrawal, which in turn place them at increased risk of academic failure and wider social exclusion (Riney and Bullock, 2012). In addition, students' misbehaviour interferes to the effectiveness of teaching and their levels of personal and professional distress (Clunies Ross et al., 2008). The daily presence of these behaviours often hinders the functioning of the class, which in turn, jeopardise the teaching and the learning processes for all. Educators are regularly faced with decisions about what is the most suitable strategy to ensure that the learning experience for the pupils is 'the best that it can be' (Miller, 1995). They can choose from a great number of strategies and these choices have important implications. The risk of compromising teaching and learning effectiveness motivates teachers and other professionals to seek effective behaviour management strategies (Sugai, Horner, 2002). In this sense, numerous studies report the need to equip teachers with proper training on practical and proven classroom management strategies that are supported by evidence (Simonsen et al, 2008) to support informed decisions and implement the best strategies to reduce disruptive and challenging behaviours in classrooms. These are the theoretical thoughts on which the development of the BEHAVE project is based.



What is BEHAVE project?

The BEHAVE project is a KA2 Strategic Partnership for school education Erasmus+ project funded by the European Commission in 2017 (2017-1-IT02-KA201-036540). BEHAVE is an acronym for "Behavioural management model across Europe". The BEHAVE project aims to reinforce and enlarge educational networks and to promote a positive transnational culture about some of the most effective strategies available to manage SEBDs in the classroom. The BEHAVE application is designed for use by in primary school teachers who are involved in the daily struggle of helping SEBD students to develop a better quality of life. The project is aimed at enhancing the primary teachers' experience and expertise in managing SEBDs, promoting the development of professional networks, increasing agreement and trust among educators and health professionals while building an experienced group of informed trained teachers delivering education through the best practices. The BEHAVE application provides an informed technological evidence-based support system to ease the monitoring and the management of challenging behaviour in schools. The design of the application covers the most popular and most effective models of behavioural management across Europe which were specifically selected for the use of primary school teachers. The contents are downloadable for free at the url: <https://www.oercommons.org/courseware/lesson/53493/overview>. The educational contents were used to train 50 teachers in a specially designed 'mobility course' which was held in all 5 of countries involved in its development, (Italy, Portugal, United Kingdom, Romania, Belgium);- supported by the creation of a survey to investigate how the governments of the nations, currently involved in the project, address behaviour management in school. The BEHAVE project has a socio-educational mission which is to become an important reference source for adapting policies and interventions in the education of children with special educational needs, equipping teachers with proper effective training on practical and proven classroom management strategies that can help teachers to efficiently manage difficult behaviours with confidence and competence. You can find more detailed information about the project at the url: <https://www.behaveproject.eu>



The BEHAVE application

The BEHAVE application is a tool which will help you to gather data and make it easier to evaluate the effect size created by the different behavioural interventions you introduce. The BEHAVE application supports the management of selected problem behaviours through the creation of custom measures using the operational definition of a particular behaviour, the collection of behavioural data and the comparison between the baseline scores and the intervention conditions. The application provides users with accurate features to interpret the results collected and present them with a visual comparison of data represented through scatter plots and with statistical analyses. In particular, the application can automatically identify the best effect size algorithm between those developed by Parker and al (2011) and Allison and Gorman (1993) and returns the effect size through a simplified visual speedometer which is helpful for "non-experts". A vital aim of this application is the introduction of a scientific evidence-based approach of data collection and analysis and bringing it into the educational setting. The BEHAVE application is designed for teachers who want to accurately assess the efficacy of their actions and strategies. Teachers who want to learn and develop new approaches during their learning journey in the management of problem behaviours with the assistance of an accurately designed open-source web application to support them.



Who can use the application?

The BEHAVE application is designed as a support for teachers and health professionals who are interested in applying evidence-based strategies to accurately assess and manage problem behaviours in schools.

How to use the BEHAVE application

Sign up and sign in

Simply sign up and sign in. Do you have a Google, Facebook, or Twitter account? Click on the respective thumbnail and log into the system. Alternatively, you could click the "Sign up" button and register as a new account.

The measure

When you want to evaluate the value of something you need to use a measurement tool. For example, if you want to know how long a table is, you need to use a tape measure. In the same way, if you want to know how many times a child disrupts your class in an hour you will need to use some form of 'counter'. A measure is simply a tool that allows you to gather information about a particular behaviour. In the BEHAVE application, you can combine up to 6 different types of questions – called 'items' – to collect data about a specific behaviour. For example, you may want to know the frequency and intensity of an identified behaviour. To do this you will need to create a specific measure with two identified items. It's that simple. When you have a measuring tape, you can measure a table but also a book, a box, or even a laptop. In the same way, if you create a measure to assess the frequency and intensity of a particular behaviour, you can use it to count the number of student interruptions during a class, the number of times he leaves his seat, or he raises his hand, calls out an answer or asks to go to the bathroom. Following this guide, you will learn how to design and build a measure. You will also find some useful information about how to share and introduce existing measures into your work. You will learn that different measures can be linked to create and build your favourite combination of items. The first step to create a new measure is by clicking on the "Measure" link on the top menu and then clicking on the "+" icon. Once you have filled in the fields "name of the measure" and "description", you will need to add the items that will make up your chosen measure. In the following paragraphs, you will find detailed description of each item type.



Choice item

Choice items are useful if you would like the question to have one or more answers among a group of predefined answers. A notable example of a choice item with one answer allowed is the Likert Scale, a scale composed of items that the respondents must indicate their level of agreement or disagreement on a symmetric agree-disagree scale. How do you choose the right option to create your perfect choice item? Please look at the following table and the detailed descriptions. For each example, you will find a screenshot displaying the interface of the application when you create the item and a second one to show how the item will appear in the data collection area.

	YES	NO
Does the item allow multiple answers?	Checkboxes Dropdown list with multiple selection	Dropdown list Radio buttons



Checkboxes

SCREENSHOT OF THE CREATION PHASE

Choice type*

Checkboxes

Text of the item*

What is your favourite color?

Options*

yellow x blue x red x

Write the options and press enter after entering each one.

SCREENSHOT OF THE COLLECTION PHASE

choice test

What is your favourite color?*

☐ yellow

☐ blue

☐ red

Submit Cancel



Dropdown list

SCREENSHOT OF THE CREATION PHASE

Choice type*

Dropdown list

Text of the Item*

What is your favourite color?

Empty value

-- select one option |--

Options*

yellow x blue x red x Write the options and pre

SCREENSHOT OF THE COLLECTION PHASE

 choice test

What is your favourite color?*

yellow

Submit

Cancel



Dropdown list with multiple selection

SCREENSHOT OF THE CREATION PHASE

Choice type*

Dropdown list with multiple selection

Text of the item*


What is your favourite color?

Options*

yellow x blue x red x

Write the options and press enter after entering each one.

SCREENSHOT OF THE COLLECTION PHASE

 choice test

What is your favourite color?*

yellow

blue

red

Submit

Cancel



Radio buttons

SCREENSHOT OF THE CREATION PHASE

Choice type*

Radio buttons

Text of the item*


What is your favourite color?

Options*

yellow x blue x red x

Write the options and press enter after entering each one.

SCREENSHOT OF THE COLLECTION PHASE

 choice test

What is your favourite color?*

☐ yellow*

☐ blue*

☐ red*

Submit

Cancel



Direct observation item

Direct observation items are tools to collect data on how long or how often a certain behaviour occurs by observing it directly in its context. These kinds of items support the frequency recording, the duration recording or the interval recording. In general, the choice of the recording procedure depends on the typology of behaviour that you want to observe.

Frequency

The frequency widget is simply to count the occurrences of a behaviour. In the data collection phase, you simply tap on the "+" button to increase the counter by one unit.

SCREENSHOT OF THE CREATION PHASE

Text of the item*

Observation length in minutes*

Typology*

SCREENSHOT OF THE COLLECTION PHASE

Frequency



Interruption of conversation 0*

+

Submit Cancel



Duration

The duration widget helps to measure the time that an identified behaviour lasts during the observation period. In the data collection phase, every time the behaviour begins, click on the  symbol to start the recording. Then click on the  symbol to stop the recording.

SCREENSHOT OF THE CREATION PHASE

Text of the item*

Interruption of conversation


Observation length in minutes*


1


Typology*

Duration Recording

SCREENSHOT OF THE COLLECTION PHASE

 Duration

Interruption of conversation *



Submit

Cancel



Interval recording

The interval recording widget is a shortcut procedure for estimating the duration of a behaviour. In this method, the observer periodically monitors the behaviour of the student at predetermined intervals and records whether the behaviour is occurring or not. During the data collection phase, the system calculates automatically the intervals. The clickable "+" button is red but becomes blue and clickable for five seconds each time the designated interval ends. If the behaviour occurred, according to the rules defined in the following table, the user confirms that the behaviour happened by clicking on the "+" button.

Whole interval time sampling	the behaviour occurred for the whole interval
Partial interval recording	the behaviour occurred at least once during the interval
Momentary time sampling	the behaviour occurred at least once exactly when an interval

SCREENSHOT OF THE CREATION PHASE

Text of the item*

Observation length in minutes*

Interval length in seconds


Typology*


Interval Recording - Partial Interval

SCREENSHOT OF THE COLLECTION PHASE

🏠 Direct observation

Interruption of conversation*








Number item

Number items are questions that can be answered only with numbers. For example, imagine that during your class you counted how many times a student threw an object at another class member. You can create a numeric item such as "How many times he threw an object?" understanding that the answer will be numerical.

SCREENSHOT OF THE CREATION PHASE

Text of the item*

SCREENSHOT OF THE COLLECTION PHASE

 Integer

How many spelling errors he made?*

Submit

Cancel



Four quadrant item

Imagine that you want to measure two different dimensions at the same time. The four-quadrant item is built specifically for this purpose. You have two dimensions on a cartesian plane, and you have to choose how to position yourself in relation to them. For example, you may want to measure "energy" and "pleasantness" at the same time. It is common to assess these two dimensions together to track their emotional levels over time and to increase personal self-awareness.

SCREENSHOT OF THE CREATION PHASE

Name of the diagram*

Mood meter

Y axis name*

Pleasantness

Label of the max value for the y axis*

High

Label of the min value for the y axis*

Low

X axis name*

Energy

Label of the max value for the x axis*

High

Label of the min value for the x axis*

Low

SCREENSHOT OF THE COLLECTION PHASE

Meter

Mood meter *

HIGH

ENERGY

LOW

MIN PLEASANTNESS HIGH

Submit Cancel



Range item

Range items are similar to number items but instead of accepting any integer value, they accept only values specifically sitting between a minimum and a maximum.

SCREENSHOT OF THE CREATION PHASE

Text of the item*

How many times he calls out in classroom?

Minimum value*

0


Maximum value*

10

Step*

1

SCREENSHOT OF THE COLLECTION PHASE

 Range test

How many times he calls out in classroom?*

0

10

Submit

Cancel



Text item

Text items are a way to gather qualitative data about a phenomenon and then generate open-ended questions.

SCREENSHOT OF THE CREATION PHASE


Text of the item*

For instance: What happens next, or as a result of the child's behavior?

Placeholder*

This is a short hint that describes the expected value of an input field

SCREENSHOT OF THE COLLECTION PHASE

 Text abc

What happens next, or as a result of the child's behavior?*

Describe the consequence of the behavior

Submit

Cancel



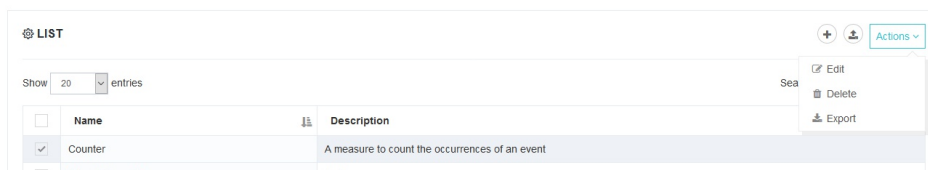
Export/import measures

Just as a mechanic has their toolbox with many tools in it, an expert in behaviour management has a collection of measures that they use to gather data about behaviour. The BEHAVE application allows experts to share custom measures with other experts.

Export


To export a measure, click on the "Measure" button on the menu to go to the measures list. Then, click on the checkbox near the measure you want to export, click on "Actions", and then "Export". Save the file in a folder and then send it to a colleague.

Measures



	Name	Description
<input type="checkbox"/>	Counter	A measure to count the occurrences of an event

Import

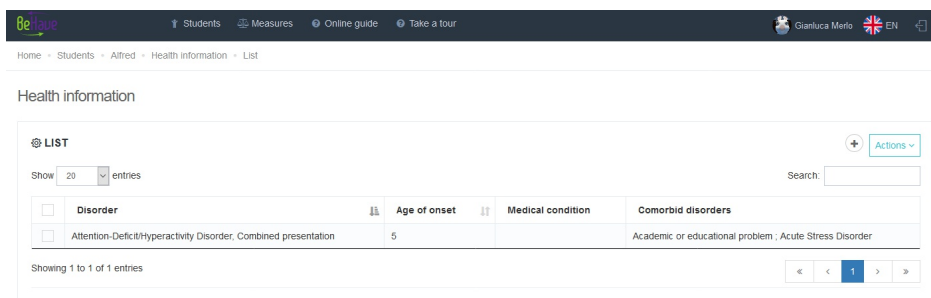
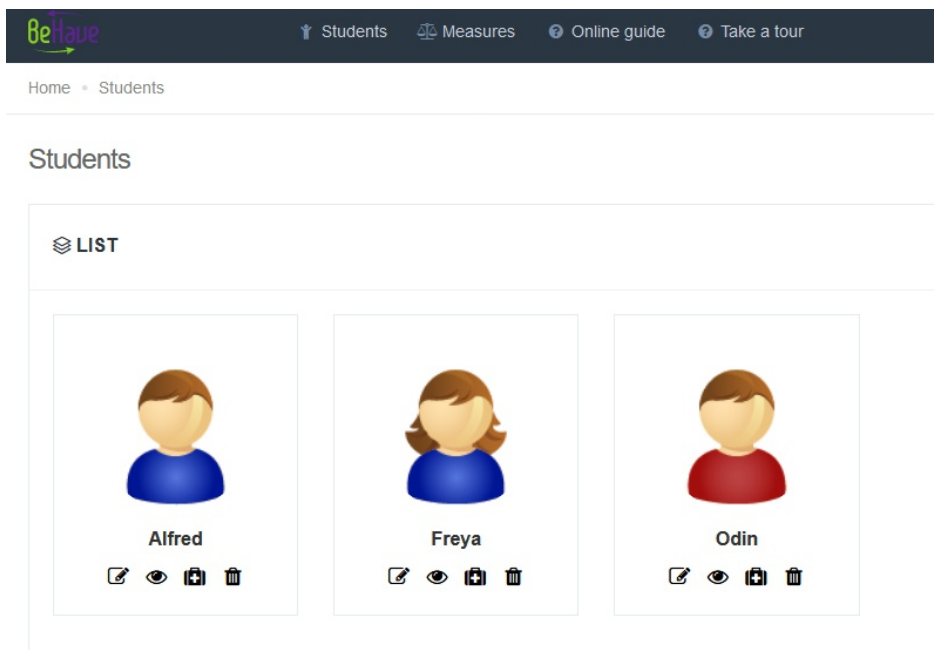
When you want to import a measure in the BEHAVE application, there are two possibilities. If you want to import a measure as it is, click on the "Measure" button on the menu to go to the measures list. Then, click on the  icon and upload the file with the measure.

If you want to import several items from different existing measures and combine them in a custom way, click on the "Measure" button on the menu, which takes you to the measures list. Then, click on the "+" button. Click on the "Choose file" in then the "Import items" section and import the first measure. Repeat this operation every time you want to import other new custom measures. When the import is completed, you will be able to reorder, edit, and delete the items at your leisure.



Add a student

In the BEHAVE application, if you want to observe the behaviour of a student, you will need to insert some basic data about them. The BEHAVE team are very focused on the security of personal data. For this reason, we encourage the use of identification codes, nicknames or pseudonyms and all the inserted data is encrypted. To add a new student, click on the "Students" menu item, then click on the "+" icon and fill in the form. Once you add a student the next step is to click on the medical pack icon, which is in the student list. This will give you access to an optional section in which, if you choose, you can add some information about their disorders or comorbidities as listed in the DSM 5.



Plan the observation


If you want to observe a specific behaviour, you need to define it in the most accurate way possible so that someone else can recognise the behaviour, even if they have never seen it before. Definitions such as "the student is aggressive", or "the student disrupts the class", uses an 'umbrella' term that is not clear or precise enough. What does the term aggressive means? A student can be aggressive by punching people, throwing chairs, biting, yelling etc. we need to understand the precise behaviour we are looking for. Moreover, where does this behaviour happen? In a classroom? In the playground? In the bathroom? We also need to identify the setting it happens in. Is it always during their math class or even during playtime? You will notice that in order to observe a behaviour we need a definition of that particular behaviour that is clear and concise but it also has to be observable. This is technically called "an operational definition of a behaviour". Here are some examples:

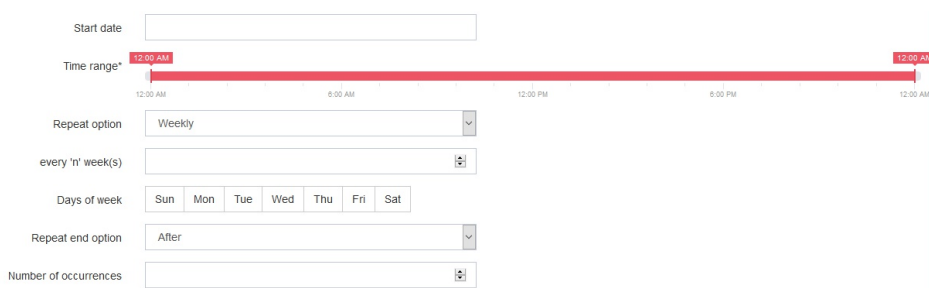
Behaviour to be observed: Hitting a school friend

Description: "Marc, punches his partner with a closed fist"

Place: Classroom

Setting: During the math class

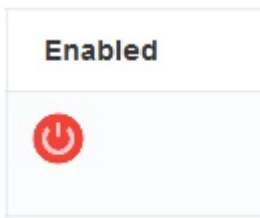
If you want to use the BEHAVE application to observe a specific behaviour, you have to insert its operational definition. First of all, you have to click on the "Students" menu item. Then click on the  icon to access the observations area. This area collects information about the behaviour that you are planning to observe, and the number of times the data is collected. Click on the "+" icon to plan a new observation for a specific target behaviour. Initially, you will need to fill in the form with the above-mentioned variables that define this behaviour in an operational way (behaviour to be observed, description, place and setting). Then you choose how to measure the behaviour, selecting one of the measures that you have created previously (see section "Measure" if you want to know how to create a measure). Finally, you have to decide if you want to collect data at specific time intervals and/or on specific days of the week, or if you prefer to collect data without time restrictions. If you want to schedule a set of observation dates click on the button "Schedule observation dates".




The screenshot shows a web form for scheduling observations. It includes a 'Start date' input field, a 'Time range' slider set from 12:00 AM to 12:00 AM, a 'Repeat option' dropdown set to 'Weekly', an 'every n week(s)' input field, a 'Days of week' row with buttons for Sun, Mon, Tue, Wed, Thu, Fri, and Sat, a 'Repeat end option' dropdown set to 'After', and a 'Number of occurrences' input field.





When you save data, the behaviour you observed will be recorded in the observation area. Initially, the icon of the "Enabled" column of the table is red.



This means that you have planned the observation, but you are not ready to collect data yet. When you are ready, simply click on the icon to activate the data collection. The icon will become green and you can begin to gather data (see the next paragraph). When you use the scheduler, the BEHAVE application will automatically create a calendar of observations. You can access it by clicking on the checkbox near the behaviour you want to observe, and then clicking on "Actions" followed by "Calendar".

 [Students](#) [Measures](#) [Online guide](#)

Gianluca Merlo  EN 

[Home](#) [Students](#) [Odin](#) [Observations](#) [Interruptions of class](#) [Scheduler](#)

Students

CALENDAR

< > TODAY MONTH WEEK DAY

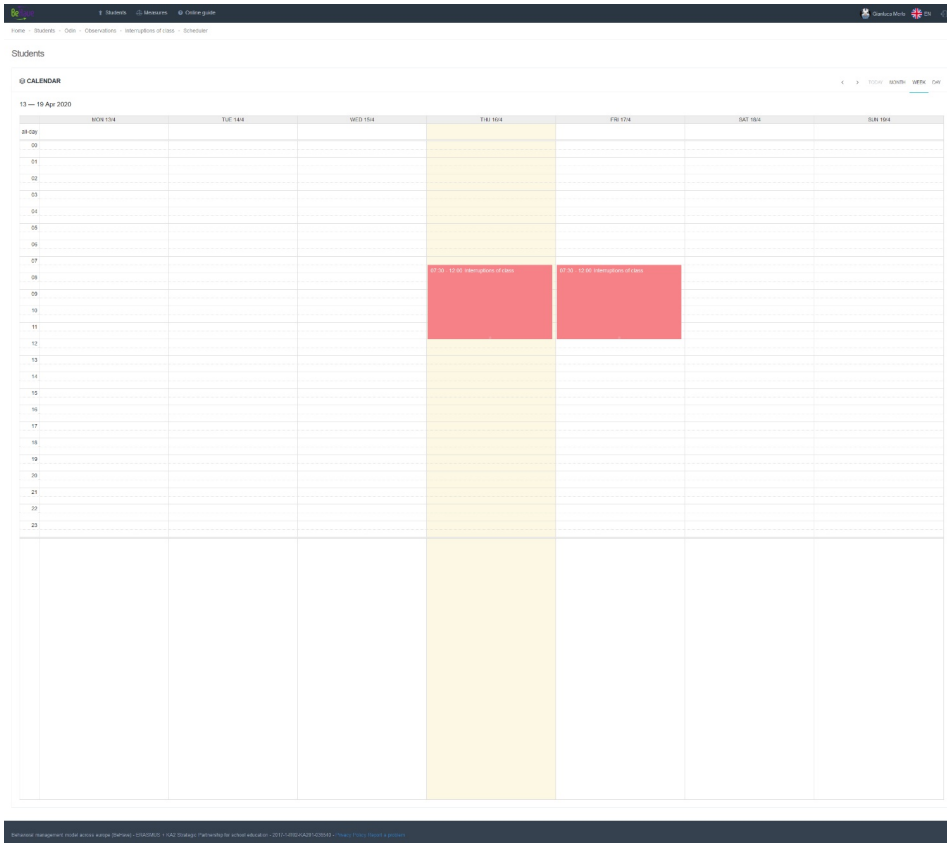
April 2020

MON	TUE	WED	THU	FRI	SAT	SUN
30	31	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	1	2	3
4	5	6	7	8	9	10

Behavioral management model across europe (BeHave) - ERASMUS + KA2 Strategic Partnership for school education - 2017-1-IT02-KA201-036540 - [Privacy Policy](#) [Report a problem](#)




What if you (or the intended observer) run into an unexpected event and you can't do the planned observation? You can simply reschedule the session! Just drag and drop the event from one day to another. If you want to change the time slot, click on the "week" view of the calendar. You can then drag and drop the appointment to another day. You can also increase or decrease the time slot by dragging and dropping into another time window and/or resizing the size of the event container.



Gather data

Once you have added a student, defined what you want to observe, decided when to do it and how to measure it, then you are ready to start collecting the data. What kind of data are you going to collect? The BEHAVE application supports the single-case research design. This is a research approach that enables you to compare two different phases and evaluate if there are significant-phase differences.


One of the most common single case designs is the comparison between a "Baseline" and an "Intervention". During the baseline, you initially observe the behaviour just as it is. Then, starting from the collected data, you introduce an intervention and then you observe again during this phase to assess if anything changed or not. A minimum of at least four data points is required to establish the level, trend, and variability within a given phase or design element. Let's say that you are collecting data for the baseline phase. Who is the observer? Is it you or did you assign this task to someone else (for example a parent, a support teacher, etc.)? In the first case, just go to the dashboard of the BEHAVE application clicking on the BEHAVE logo. In the calendar section, you will find the observations planned for the current date. Just click on it and fill in the form. If you want to invite someone to collect data for you, you have to access the observations area and then click on the "Students" menu item. Then click on the  icon to enter and select the checkbox near the behaviour you want the observer to make a note of, and then click "Actions" and "Share". A box will appear. Copy the URL and send it to the observer using your favourite channel (email, WhatsApp, Messenger, etc.). The recipient user has to be registered in the system to access the data collection area. When you have scheduled the observation dates, you could insert the email address of the observer and the system will automatically remind them, via email, one hour before the observation time.

Share

×

Assign the observation to the observers sharing the following url:

https://app.behaveproject.eu/measure/113/9c05694096b2b12f

 Copy url


If you scheduled the observation dates, you can insert the email addresses of the observers (press enter to add every new entry). They will be notified via email 1 hour before the observation:

Email addresses to be contacted with

Send



Label phases and data

Each time you or another observer collects data, the section "data to be categorised" on the dashboard will be populated. You may be asking 'what does the term "categorize" mean?' As we explained earlier, the BEHAVE application supports the single-case design research method. When you gather data, you have to label it e.g. "Baseline", "Intervention", "Follow up", etc. Assigning a label to the collected data will be necessary to display scatter plots and analyse data. To access to the data categorization section for a behaviour you can click on the "View" button in the "data to be categorised" section of the dashboard or click on the "Students" menu item, then click on the  icon to access the observations section, select the checkbox near the behaviour you want to work on, and then click on "Actions", and "List of phases".

DATA TO BE CATEGORISED			
Student Id	Name of the Observation	Description	Uncategorized data
Odin	Interruptions of class	The student interrupts the class making noises or saying inappropriate things	1 View

This area is made up of two sections: "Observation phases" and "Data categorization". The first "Action" serves to define the phase name. You will use it later to access the raw data and to see the scatter plot of the phase data. To add a phase name, for example, "Baseline", just click on the "+" icon, fill in the form and then save it. In the "data categorization" section you will find the list of all of the data that has been gathered. Each row represents specific data gathered on a specific date. Select the checkbox near the data you want to categorize, then click the "Phase's" button and select the phase name you want to associate – and categorize – it. Repeat this operation every time new data about the behaviour is collected.

Behave

StudentsMeasuresTake a tour

Gianluca Merlo

homeStudents › test › Observations › interruption of discussions during the class › Data

Data

Observation phase inserted successfully

OBSERVATION PHASES

Collected data

BASELINE

Collected data

INTERVENTION

DATA CATEGORIZATION

Phases

Show 20

Search

☐

Dates

☒

2019-05-29 08:53:57

☒

2019-05-29 08:53:59

☒

2019-05-29 08:54:02

☒

2019-05-29 08:54:04

☐

2019-05-29 08:54:07

☐

2019-05-29 08:54:08

☐

2019-05-29 08:54:11

☐

2019-05-29 08:54:14

Phase

Showing 1 to 8 of 8 records

1


Behavioral management model across Europe (Behave) - ERASMUS + KA2 Strategic Partnership for school education - 2017-1-IT02-KA201-030540





Access and analyze data

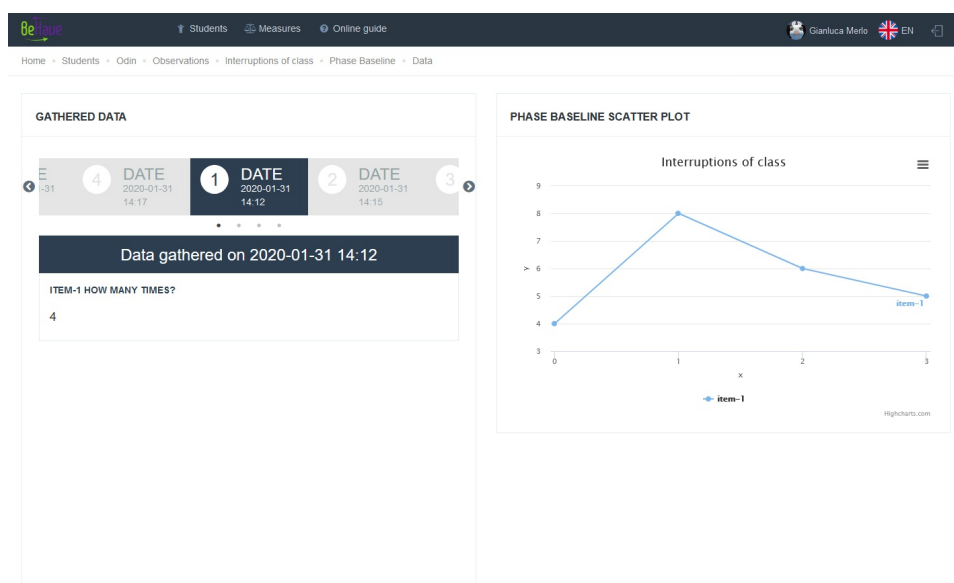
The BEHAVE application allows its users many options to access and analyse data. You can download the raw data, create scatterplots, compare two phases and automatically calculate the effect of your behavioural interventions.

Download the raw data


Simply click on the "Students" menu item. Then click on the  icon to access the observation section of the identified student. Select the checkbox near the behaviour of the data that you want to download and click on "Actions", followed by "Download". A file in csv format will be served and you will be able to edit it with your preferred software.


Visualize scatterplots per phase

Click on the "Students" menu item, then click on the  icon to access the observations section. Then select the checkbox near the behaviour you want to work on and click on "Actions", followed by "List of phases". In the section "Observation phases" you will find the list of the phases you defined earlier. Clicking on the  icon, you will access both the raw data and the scatterplot per phase.

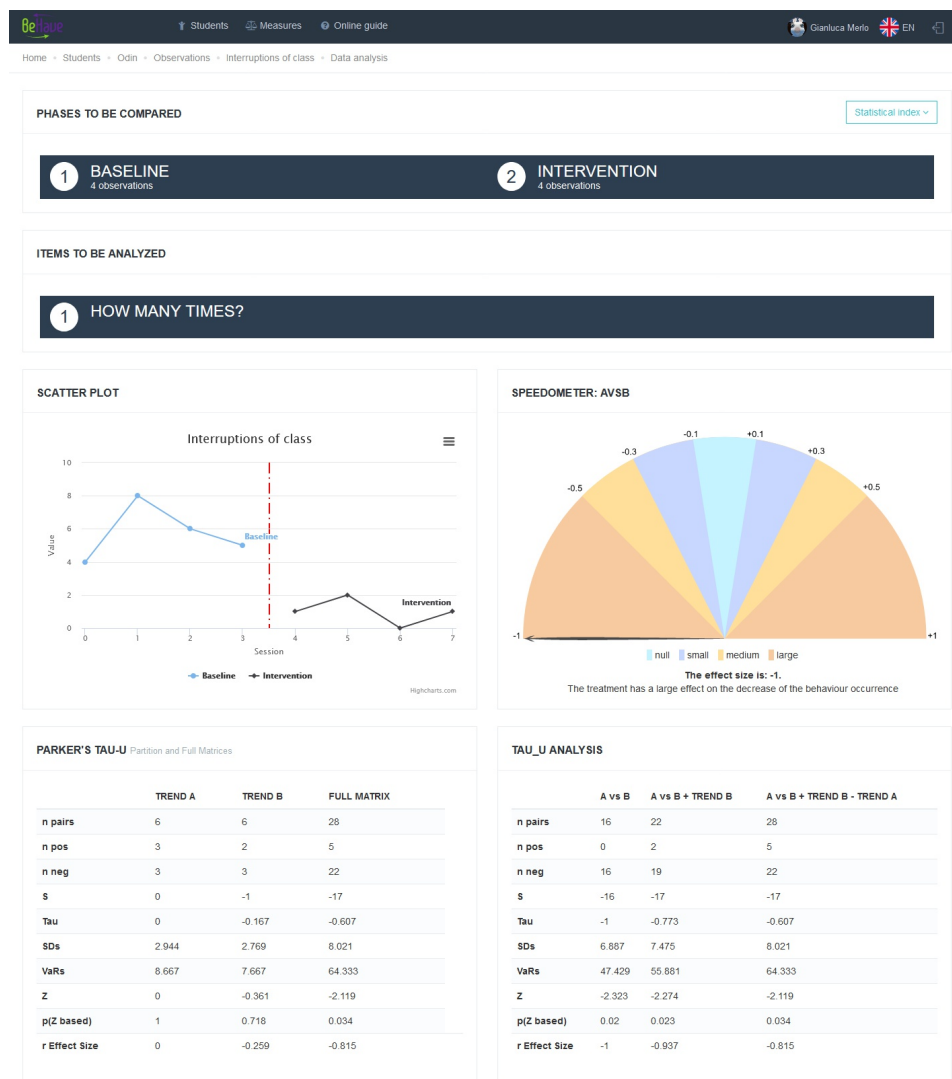


Compare two phases and evaluate the effect size

When you want to compare two phases and see the result and evaluate if there are significant differences between them, click on the "Students" menu item. Then click on the  icon to access the observations section and select the checkbox near the behaviour you want to work on. Next click on "Actions", and "List of phases".

In the "observation phases" section click on the  icon to access the data analyses area.

Click on the names of the two phases that you want to compare and on the item that you want to analyse. A scatter plot comparing the two phases will appear. The application automatically calculates the best effect size algorithm and returns the effect size through a simplified speedometer. The speedometer will show if there is an effect or not, the direction of the effect (has the behaviour increased or decreased?), and how strong the change is.

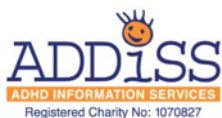




Istituto per le Tecnologie Didattiche
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