

Southern Regional Hub-funded project

Instructor Manual



Active Video Watching Space AVW-Space 2.0

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1 Introduction

Presentation skills and other transferable (soft) skills are highly sought by employers and widely deemed to be crucial for employability in the knowledge economy [1-8].

Such skills are difficult to teach in tertiary courses, due to their resource-intensive nature [9]. The learner needs to practise under various conditions, receive feedback, reflect on it and do more practise. Teachers do not have enough resources to provide such support to each individual student.

Videos have become the main means for content production and consumption for the millennials and iGeneration. Video-based learning [10,11] is used in a wide spectrum of instructional settings, ranging from flipped classrooms [12], online learning and MOOCs [13-15] to informal learning using YouTube.

Videos can be a powerful method for soft skills [16-18], where learning requires contextualisation in personal experience and ability to see different perspectives.

Although videos are a highly popular digital medium for learning, video watching can be a passive activity and results in limited learning [13-20]. It is therefore necessary to provide support for active video learning.

Our approach is to support engagement during video watching via interactive notetaking, tapping into learners' familiarity with commenting on videos in social networking sites.

Supported by an Ako Aotearoa Southern Hub Regional Hub Project grant, we developed the [Active Video Watching \(AVW-Space\)](#) system in 2017. AVW-Space is described in the next section. In 2018, we received another grant from the Ako Aotearoa Southern Hub, which enabled us to enhance AVW-Space with intelligent support for student engagement. This support consists of interactive visualizations and personalized nudges, described in the later sections of this manual.

2 AVW-Space

AVW-Space is a controlled video-watching environment designed for self-study that resembles informal learning with popular social environments, such as YouTube.

It can be customised by the teacher who defines a list of *aspects* that serve as scaffolds for learning with the selected videos. The choice of aspects should direct the student's attention on skill-related concepts and foster reflection.

Learning in AVW-Space consists of two phases.

In **Phase 1**, students watch and comment on videos individually, using aspects to tag their comments made anytime during the viewing. AVW-Space shows time-stamped comments (i.e. the time elapsed from the start of video). The student can watch the video multiple times, including rewinding or skipping parts of the video.

At the beginning of **Phase 2**, the teacher needs to review comments and approve comments for sharing. Anonymised comments are then available to the whole class. Students can browse and rate comments made by others. The students can sort the comments by timestamp or aspect, so that they can position their own comments amongst the others. The options for rating are predefined by the teacher to promote deeper reflections. In addition to reading/rating the comments, the students can watch the part of the video that associates with a comment.

AVW-Space is a general-purpose online platform for video-based learning. In this project, we focus on presentation skills. All explanations of how to use AVW-Space are given in the context of the Presentation Skills space.

3 Logging into AVW-Space

AVW-Space is available online at <https://ictg.cosc.canterbury.ac.nz:8009/login>

Please email Prof Mitrovic (tanja.mitrovic@canterbury.ac.nz) to get a teacher account.

The login screen is shown below.

← → ↻ https://ictg.cosc.canterbury.ac.nz:8009/login

AVW-Space Not logged in | Contact us

Sign in

Username:

Password:

[Forgot password?](#)

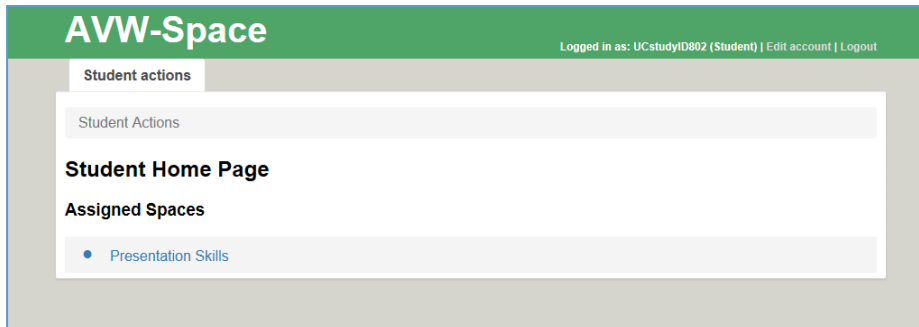
Having issues? [Contact us](#)

After entering the username and password, AVW-Space shows the list of available spaces.

If the user cannot recall his/her password, the [Forgot password](#) link is available. The user will receive an email with the link allowing the password to be reset.

4 Types of accounts in AVW-Space

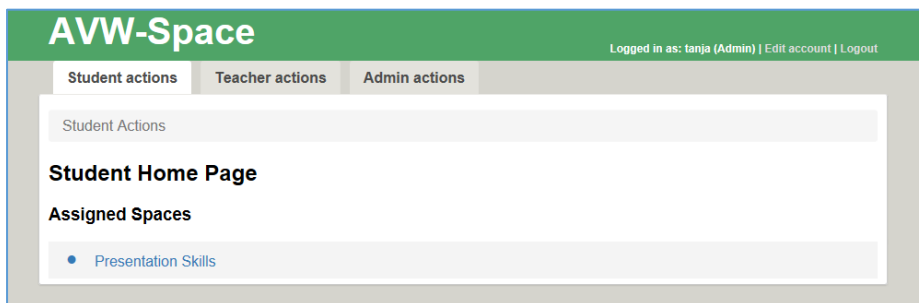
There are three types of accounts in AVW-Space: teacher, student and admin. If a user has a student account, the initial screen would like this:



The screenshot below shows AVW-Space when a teacher logs in. The teacher can access both the Student actions and Teacher actions tab.

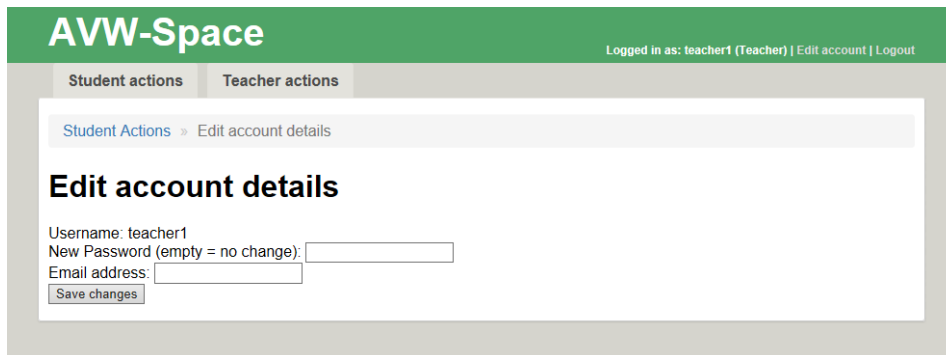


The administrator account has the highest privileges and has access to both student/teacher actions plus additional actions which can be performed only by administrators. The screenshot below shows the initial screen of AVW-Space for an administrator.



4.1 Editing your account

To modify the details of your account, click the *Edit account* link at the top right of your home page. The resulting page allows you to change your password and modify the email address.



The screenshot shows the AVW-Space interface. At the top, there is a green header with the text "AVW-Space" on the left and "Logged in as: teacher1 (Teacher) | Edit account | Logout" on the right. Below the header, there are two tabs: "Student actions" and "Teacher actions". The "Teacher actions" tab is active. Underneath, there is a breadcrumb trail: "Student Actions » Edit account details". The main content area is titled "Edit account details" and contains the following information:

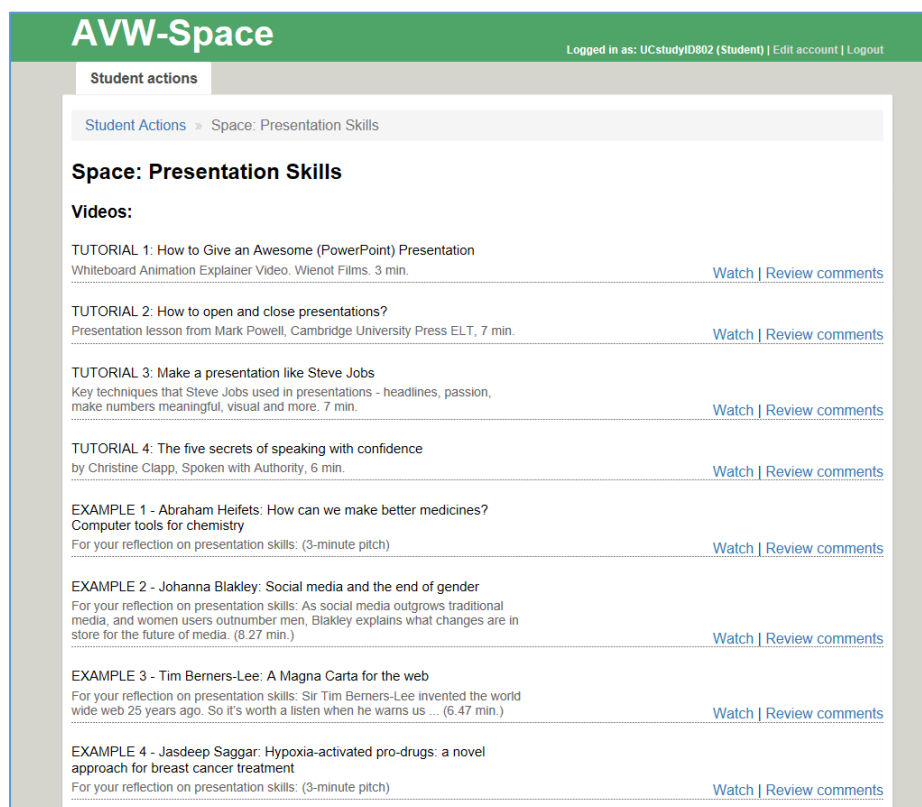
- Username: teacher1
- New Password (empty = no change):
- Email address:
- A "Save changes" button.

In the following sections, we describe the actions that students can take in AVW-Space, followed by a description of teacher actions.

5 Student actions

A student has access to spaces he/she is associated with. In the screenshot above, there is only one space available to the student. The *Presentation Skills* space is the space we have used in the studies performed in this project.

Once the student clicks on the space name, the following screen is displayed.



The screenshot shows the AVW-Space interface. At the top, there is a green header with 'AVW-Space' and 'Logged in as: UCstudyID802 (Student) | Edit account | Logout'. Below the header, there is a navigation bar with 'Student actions' and a breadcrumb trail 'Student Actions > Space: Presentation Skills'. The main content area is titled 'Space: Presentation Skills' and 'Videos:'. It lists eight videos, each with a title, description, duration, and 'Watch | Review comments' links.

Title	Description	Duration	Links
TUTORIAL 1: How to Give an Awesome (PowerPoint) Presentation	Whiteboard Animation Explainer Video. Wienot Films.	3 min.	Watch Review comments
TUTORIAL 2: How to open and close presentations?	Presentation lesson from Mark Powell, Cambridge University Press ELT.	7 min.	Watch Review comments
TUTORIAL 3: Make a presentation like Steve Jobs	Key techniques that Steve Jobs used in presentations - headlines, passion, make numbers meaningful, visual and more.	7 min.	Watch Review comments
TUTORIAL 4: The five secrets of speaking with confidence	by Christine Clapp, Spoken with Authority.	6 min.	Watch Review comments
EXAMPLE 1 - Abraham Heifets: How can we make better medicines? Computer tools for chemistry	For your reflection on presentation skills: (3-minute pitch)		Watch Review comments
EXAMPLE 2 - Johanna Blakley: Social media and the end of gender	For your reflection on presentation skills: As social media outgrows traditional media, and women users outnumber men, Blakley explains what changes are in store for the future of media.	8.27 min.	Watch Review comments
EXAMPLE 3 - Tim Berners-Lee: A Magna Carta for the web	For your reflection on presentation skills: Sir Tim Berners-Lee invented the world wide web 25 years ago. So it's worth a listen when he warns us ...	6.47 min.	Watch Review comments
EXAMPLE 4 - Jasdeep Saggarr: Hypoxia-activated pro-drugs: a novel approach for breast cancer treatment	For your reflection on presentation skills: (3-minute pitch)		Watch Review comments

The student can see all the videos included in the space. In the Presentation Skills space, there are four tutorials and four example videos. We have selected all videos from YouTube. The tutorials instruct students how to give presentations, while for the example videos, the students are asked to comment on their quality. The title and additional information is shown for each video. On the right-hand side, there are two links, for watching and reviewing comments. Please note that in Phase 1, only the *Watch* link is shown. The *Review comments* link appears only when the teacher approves comments to be shown to the class.

When a student selects the video he/she wants to watch, the following screen is shown:


AVW-Space Logged in as: tanja (Admin) | Edit account | Logout | Contact us

Student actions | Teacher actions | Admin actions

Student Actions » Space: ENGR101-2018 » Watch Video: TUTORIAL 4: The five secrets of speaking with confidence

Watch video: TUTORIAL 4: The five secrets of speaking with confidence

by Christine Clapp, Spoken with Authority, 6 min.



Add comment

Your previous comments

AVW-Space contains standard controls for playing the video, pausing or jumping to another part of the video. Students can watch videos as many times as they wish.


AVW-Space Logged in as: tanja (Admin) | Edit account | Logout | Contact us

Student actions | Teacher actions | Admin actions

Student Actions » Space: ENGR101-2018 » Watch Video: EXAMPLE 3 - Tim Berners-Lee: A Magna Carta for the web

Watch video: EXAMPLE 3 - Tim Berners-Lee: A Magna Carta for the web

For your reflection on presentation skills: Sir Tim Berners-Lee invented the world wide web 25 years ago. So it's worth a listen when he warns us ... (6.47 min.)

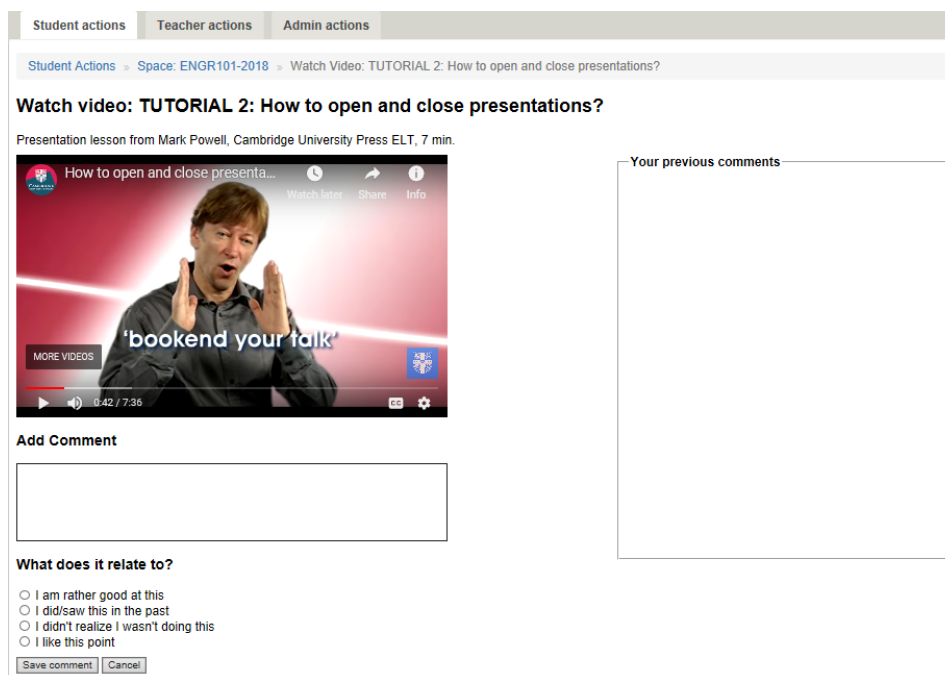


Add comment

Your previous comments

5.1 Writing comments

To write a comment, the student clicks the *Add comment* button (shown below the video). The video is automatically paused while the student is writing a comment. The following screenshot shows a situation when the student is adding a comment. AVW-Space shows the box where the student can type the text of the comment. The aspects are shown as options, following “*What does it relate to?*”



For the Presentation Skills space, we have defined four aspects for tutorials, and four aspects for example videos. As visible on the screenshot, the aspects for tutorials are:

- I am rather good at this
- I did/saw this in the past
- I didn't realize I wasn't doing this
- I like this point

The goal of aspects is to support the student to reflect on their past experience in giving presentations. The student can then save the comment, and the video then continues playing.

If the student has already written some comments, they are listed below the video, as illustrated in the following screenshot.


AVW-Space Logged in as: UCstudyID491 (Student) | Edit account | Logout

Student actions

Student Actions > Space: Presentation Skills > Watch Video: TUTORIAL 2: How to open and close presentations?

Watch video: TUTORIAL 2: How to open and close presentations?

Presentation lesson from Mark Powell, Cambridge University Press ELT, 7 min.



Add Comment

What does it relate to?

I am rather good at this
 I did/saw this in the past
 I didn't realize I wasn't doing this
 I like this point

Your previous comments

01:54 Strong use of Adjectives in opening
Aspect: I like this point

03:16 Less use of specific details, shorter sentences. Easier to follow
Aspect: I like this point

07:29 "Always give priority to the first and last 3 minutes"
Aspect: I did/saw this in the past

In our studies, we asked the participants to watch the tutorials first, and then later to watch the example videos, and to comment on their quality. For comments on videos, students are given four aspects: Structure, Delivery, Speech and Visual Aids. These aspects have been previously covered in the tutorials. We have deliberately selected examples so that they differ in quality, the gender of the presenter, and the topic of presentation.

5.2 Rating comments

In Phase 2, students rate comments written by their peers. Once the teacher approves the comments for viewing by the class¹, the student can see them by clicking the [Review comments](#) link. The following screenshot shows comments for one of the example videos. The comments are ordered by the elapsed time in the video. The student can read comments and rate them. The screenshot below shows the list of ratings, which is available by clicking on the drop-down menu.


¹The instructions for how to approve comments for viewing are presented in a later section.

AVW-Space Logged in as: UCstudyID491 (Student) | Edit account | Logout

Student actions

Student Actions > Space Instance: Presentation Skills
 > Review video comments: EXAMPLE 1 - Abraham Heifets: How can we make better medicines? Computer tools for chemistry

Review video comments for "EXAMPLE 1 - Abraham Heifets: How can we make better medicines? Computer tools for chemistry"



Comments

00:00 Finished with a clear summary of what his research is for. The finish linked nicely with his opening statements.
 Aspect: Speech
 Commenter: Other
 Your response:

00:28 Good silence at 00:28
 Aspect: Delivery
 Commenter: You
 Your response:

00:30 'Story' in intro in 00:30
 Aspect: Delivery
 Commenter: You
 Your response:

00:34 Give the audience a story and lead them on it, even if the story is only a short one as a motivation
 Aspect: Structure
 Commenter: Other
 Your response:

00:38 No. Don't like it. A meaningless slide at this point dominates my view and the speaker is shoved of the the edge.
 Aspect: Visual aids
 Commenter: Other
 Your response:

00:44 Good opening, straight into the topic in an accessible way
 Aspect: Speech
 Commenter: Other
 Your response:

When reviewing comments made on the same videos by other students, the student sees other opinions, and might notice something he/she missed. We have specified five rating options, which also aim to focus the student's attention to comments and support learning:

- This is useful for me
- I hadn't thought of this
- I didn't notice this
- I do not agree with this
- I like this point

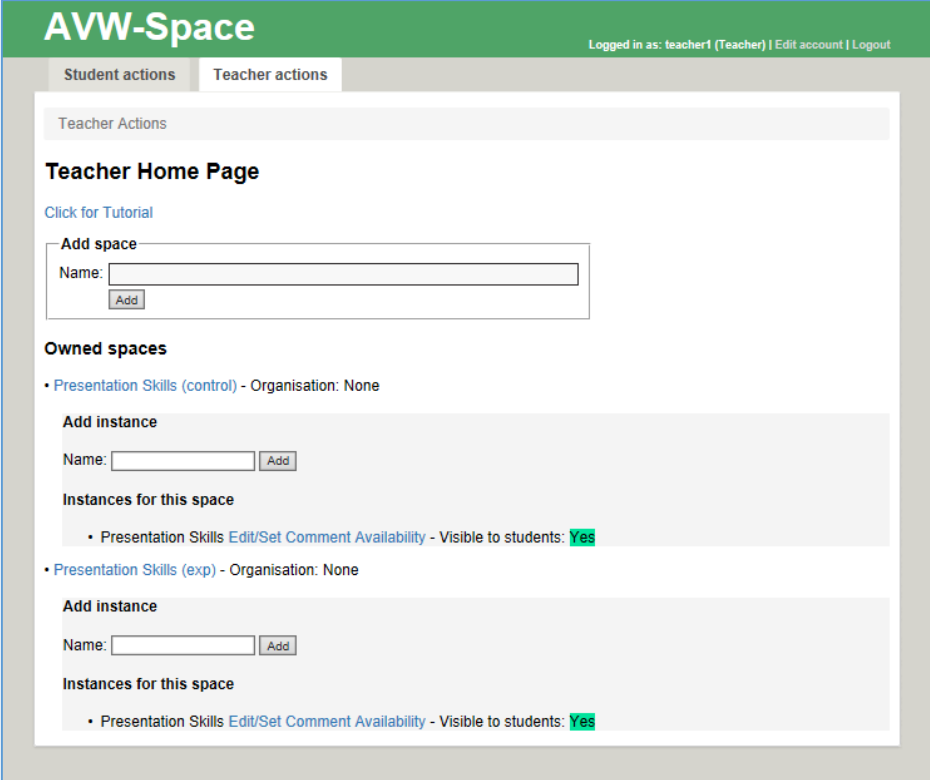
The first three ratings show that the student has noticed something new and useful in comments (thus indicating learning). The last two options allow the student to state their opinion about a comment.

6 Teacher actions

Teachers can create new spaces, specify videos and aspects for them.

Instructions for performing teacher actions are available within AVW-Space via the [Click for Tutorial](#) link.

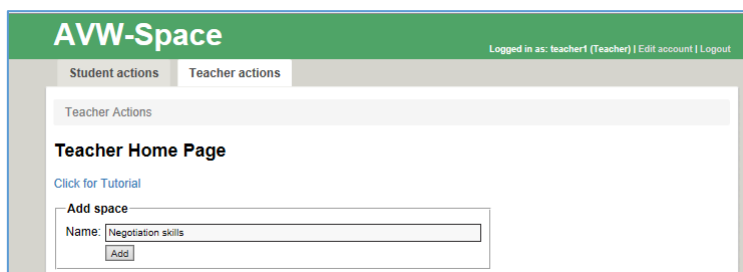
The screenshot below shows the Teacher Home Page. Please note that the page shows the spaces the teacher has previously defined (below *Owned spaces*).



The screenshot displays the AVW-Space interface. At the top, a green header contains the logo 'AVW-Space' and the user status 'Logged in as: teacher1 (Teacher) | Edit account | Logout'. Below the header, there are two tabs: 'Student actions' and 'Teacher actions', with the latter being selected. The main content area is titled 'Teacher Actions' and 'Teacher Home Page'. It includes a 'Click for Tutorial' link, an 'Add space' form with a 'Name:' input field and an 'Add' button, and a section for 'Owned spaces'. This section lists two spaces: 'Presentation Skills (control) - Organisation: None' and 'Presentation Skills (exp) - Organisation: None'. Each space has an 'Add instance' form with a 'Name:' input field and an 'Add' button, and a list of 'Instances for this space'. The first instance for the 'control' space is 'Presentation Skills Edit/Set Comment Availability - Visible to students: Yes'. The second instance for the 'exp' space is 'Presentation Skills Edit/Set Comment Availability - Visible to students: Yes'.

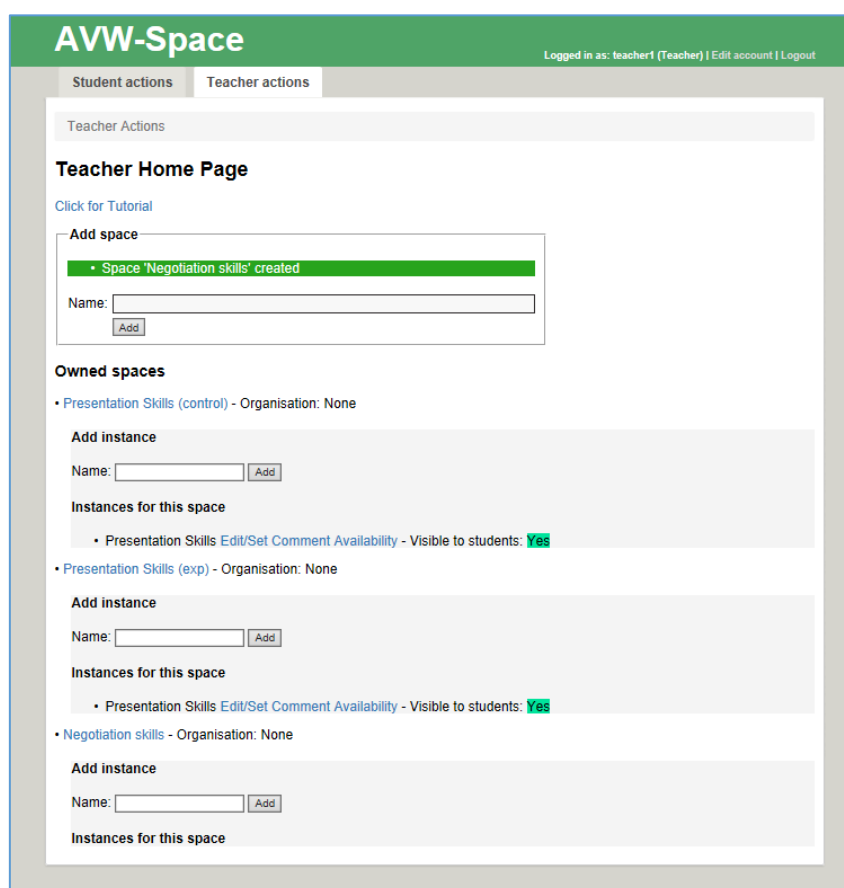
6.1 Creating a new space

The teacher can add a new space by specifying the name of the space and clicking the [Add](#) button. For each space, the teacher needs to define a name. For example, let us create a space related to negotiation skills.



The screenshot shows the AVW-Space interface. At the top, there is a green header with the text 'AVW-Space' and 'Logged in as: teacher1 (Teacher) | Edit account | Logout'. Below the header, there are two tabs: 'Student actions' and 'Teacher actions'. The 'Teacher actions' tab is active. Underneath, there is a section titled 'Teacher Actions' and 'Teacher Home Page'. A link 'Click for Tutorial' is visible. The 'Add space' section contains a text input field with the value 'Negotiation skills' and an 'Add' button.

The teacher then clicks the [Add](#) button, and AVW-Space confirms that the new space has been created. Please note that the new space has appeared at the end of the page.



The screenshot shows the AVW-Space interface after the 'Add' button was clicked. The 'Add space' section now displays a green confirmation message: '• Space 'Negotiation skills' created'. Below this, there is a list of 'Owned spaces'. The first space is 'Presentation Skills (control) - Organisation: None', which has an 'Add instance' section with a text input field and an 'Add' button. Below this, there is a section 'Instances for this space' with a message: '• Presentation Skills Edit/Set Comment Availability - Visible to students: Yes'. The second space is 'Presentation Skills (exp) - Organisation: None', which also has an 'Add instance' section and an 'Instances for this space' section with the same message. The third space is 'Negotiation skills - Organisation: None', which has an 'Add instance' section and an 'Instances for this space' section.

The next step is to add other components of the space – videos, aspects and rating options. To do that, the teacher needs to click on the space name (in this case, [Negotiation skills](#)), which leads him/her to the following page.

[Student actions](#) [Teacher actions](#)

[Teacher Actions](#) » Space: Negotiation skills

Space - Negotiation skills

Edit Properties

Name:

Use same aspects for all videos *If this is selected, then each video will have any 'space-wide' aspects available to them*

Clone Space

This will clone the current space, creating copies of the properties, videos, and aspects. Users will not be copied across. This cloned space can then be edited without affecting this copy.

Name for new cloned space:

Videos:

Add video

Youtube ID: Name: Description:

Aspects

Note: 'In space-wide group' is only relevant if 'Use same aspects for all' is set above for the space

Add aspect

Text:

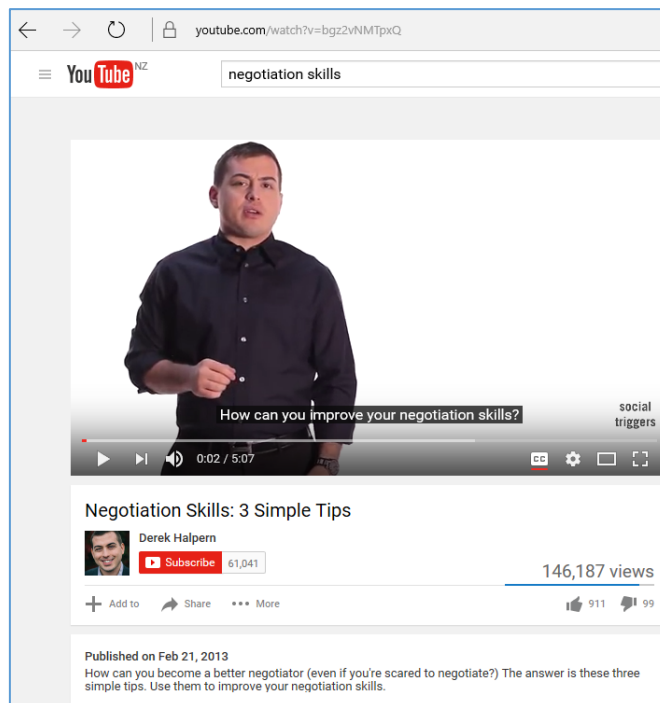
Ratings

Add rating

Name:

6.2 Adding videos

To add a video, find the video you want to include in your space from YouTube. You need the identifier, which is the last part of the URL shown in your browser. For example, the identifier of the video below is “bgz2vNMTpxQ”.



Enter the video identifier into the YouTube ID box, and then specify the name of the video which will be shown to your students, together with a short description.

Videos:

Add video

Youtube ID: Name: Description:

After clicking the [Add](#) button, AVW-Space confirms the addition:

Videos:

3 tips [Edit video properties](#)

Add video

• Video '3 tips' added

Youtube ID: Name: Description:

The teacher can add all videos at once. It is also possible to add other videos at a later time.

6.3 Adding aspects and ratings

Aspects and ratings can be added from the same page. Simply specify the text for the aspect/rating and click the Add button. Please note that aspects are optional – you can have a space without aspects. In that case, students will not be asked to specify aspects when writing comments. However, we strongly encourage the use of aspects: the results of our

studies show that aspects do focus students on important elements of videos, and support reflection.

Aspects

Note: 'In space-wide group' is only relevant if 'Use same aspects for all' is set above for the space

Text: In space-wide group Save

Text: In space-wide group Save

Text: In space-wide group Save

Aspects and rating can be added all at once, or at different times.

6.4 Specifying aspects for videos

The same set of aspects can be used for all videos in a space. It is also possible to specify different aspects for different videos (like it was done for the Presentation skills space, in which we have different aspects for tutorials and example videos).

6.5 Using the same aspects for all videos

To use the same aspects for all videos, set this option by selecting the “In space-wide group” box, like in the screenshot below.

Aspects

Note: 'In space-wide group' is only relevant if 'Use same aspects for all' is set above for the space

Text: In space-wide group Save

Text: In space-wide group Save

Text: In space-wide group Save

After this, specify that the same aspects are to be used for all videos in the space:

Space - Negotiation skills

Edit Properties

• Property edits saved

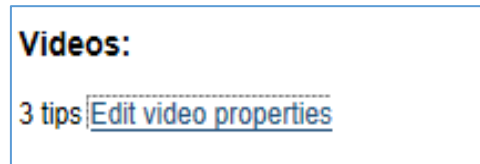
Name:

Use same aspects for all videos If this is selected, then each video will have any 'space-wide' aspects available to them

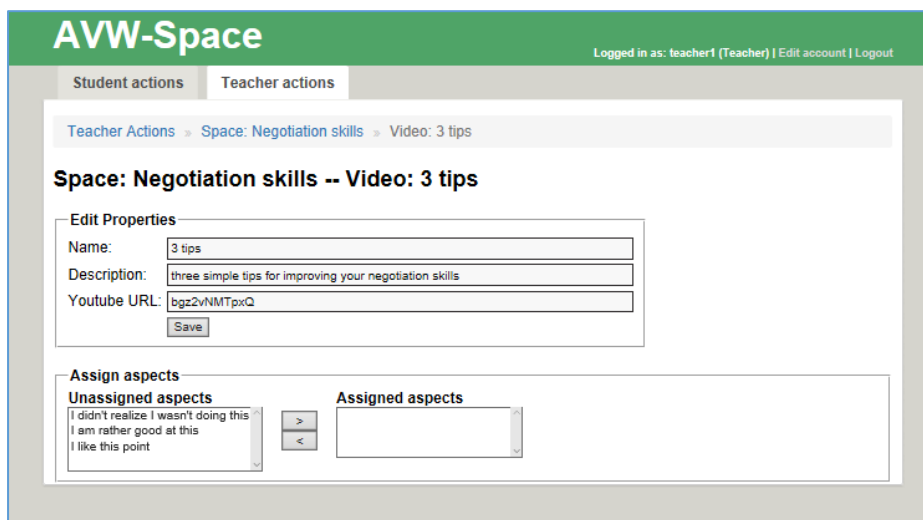
Save

6.6 Specifying aspects for a single video

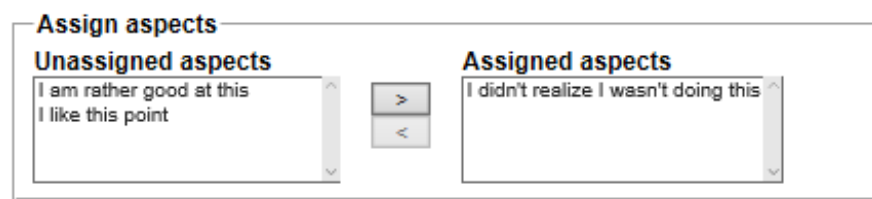
To specify aspects for a specific video only, click on [Edit video properties](#) link next to the video from the space page:



You will get the page below:



To specify the aspects for the selected video, click on the aspect and then click on the > button (use the < button to remove an aspect from the assigned aspects).



6.7 Creating an instance of a space

The teacher might want to have several instances of the same space. For example, the teacher might want to start with a fresh space for each instance of a course he/she teaches. For that reason, it is necessary to create a space instance.

To create an instance of a space, go to the home page, specify the name of the instance and click the Add button:

• **Negotiation skills** - Organisation: None

Add instance

Name:

There could be many instances of the same page. After adding the instance, AVW-Space adds its name to the list of instances:

• **Negotiation skills** - Organisation: None

Add instance

Name:

Instances for this space

- **Negotiation skills 2017** [Edit/Set Comment Availability](#) - Visible to students: **No**

Please note that that the instance is not available to students yet (the *Visible to students* parameter is set to *No*).

6.8 Cloning a space

Cloning a space is equivalent to making a duplicate of the space. The teacher can clone a space by simply specifying the name for the cloned space (which should be different to the name of the original space).

Clone Space

This will clone the current space, creating copies of the properties, videos, and aspects. Users will not be copied across. This cloned space can then be edited without affecting this copy.

Name for new cloned space:

6.9 Adding students to the space instance

Student accounts need to be created before students can be added to the space instance. Only administrators can create student accounts, so as a teacher, you need to request student accounts to be created. In order to create accounts for students, please provide the following information:

- The name of the institution (e.g. University of Canterbury)
- The name for the group; this could be a combination of the course code and the year (e.g. ENGR101 2018)
- The name of the space (and instance if relevant)
- A comma-separated file containing names and email addresses for students. Please note that the email address will be kept confidential. The only reason for adding the email address to AVW-Space is so that the student can ask for his/her password to be reset (from the Login page).

To add students to the space instance, click on the [Edit/Set Comment Availability](#).

• **Negotiation skills** - Organisation: None

Add instance

Name:

Instances for this space

- Negotiation skills 2017 [Edit/Set Comment Availability](#) - Visible to students: **No**

The following page allows the teacher to add students to the space.

AVW-Space Logged in as: teacher1 (Teacher) | [Edit account](#) | [Logout](#) | [Contact us](#)

Student actions
Teacher actions

Teacher Actions > Space Instance: Negotiation skills 2017 (Space: Negotiation skills)

Space Instance: Negotiation skills 2017 (Space: Negotiation skills)

Edit Properties

Name:

Visible to students:

Comments available for review:

Nudges (and visualisation) enabled:

(note: If "Comments available for review" is selected above, you must select the comments you want to be shown to the student for review in the table below)

Assign users

Unassigned users

Q: All Fields

<input type="checkbox"/> ID	Username	Member of groups

Q: All Fields

<input type="checkbox"/> ID	Username	Member of groups
<input type="checkbox"/> 28	UCstudyID531	
<input type="checkbox"/> 29	UCstudyID564	
<input type="checkbox"/> 16	UCstudyID578	

1-3 of 3

Please note that the *Unassigned users* list will initially contain the list of all student accounts belonging to a specific group (i.e. class).

To add a student, click on the student's name in the *Unassigned users* list, and then click on the > button. Alternatively, if there are many students listed, enter the name of the student in the search box. It is also possible to select multiple students at once and move them across to the *Assigned users* list.

The next step is to enable the space – that is achieved by ticking the *Visible to students* box. After that, click [Save](#).

Space Instance: Negotiation skills 2017 (Space: Negotiation skills)

Edit Properties

Name:

Visible to students:

Comments available for review:

Nudges (and visualisation) enabled:

(note: If "Comments available for review" is selected above, you must select the comments you want to be shown to the student for review in the table below)

Please note that the *Nudges (and visualisation) enabled* box is meaningful only for those spaces for which previous studies have been performed, and a set of comments has been made available for visualisations and nudges. Please contact Prof. Tanja Mitrovic to get information about the requirements necessary to add interactive visualizations and nudges to a specific space.

The space is now ready, and Phase 1 (commenting on videos) commences.

6.10 Selecting comments for review

When the class is ready for Phase 2 (reviewing and rating comments), the teacher first needs to select the comments to be visible to the class. In order to do that, the teacher needs to go click the [Edit/Set Comment Availability](#) link for the particular space, and review the comments. The comments are listed under the *Set comment review availability* section of the page. The comments are organized by the video. In order to make a comment available to the class, it is necessary to tick the *Available to rate* box for the relevant comments. In the screenshot below, the first two comments for Tutorial 1 are not available to the class.

Set comment review availability							
Video - TUTORIAL 1: How to Give an Awesome (PowerPoint) Presentation							
Comment ID	View video snippet	Elapsed Time (seconds)	Aspect	Comment	Comment Date	Commenter	Available to rate
1	View from elapsed time	0	I didn't realize I wasn't doing this	test	22/07/2016 1:37:26 AM	tanja	<input type="checkbox"/>
4	View from elapsed time	0	I didn't realize I wasn't doing this	Adding a comment	22/07/2016 1:20:06 PM	tanja	<input type="checkbox"/>
144	View from elapsed time	6.2	I like this point	I like the focus on having less slides with information, and more on building the "story" of the presentation. It's good to think about what visual aids you're giving your audience	28/07/2016 9:44:48 PM	UCstudyID526	<input checked="" type="checkbox"/>
92	View from elapsed time	20.5	I like this point	Gets my attention straight away, enjoy that the "slides" are being drawn as I watch.	28/07/2016 1:04:59 PM	UCstudyID505	<input checked="" type="checkbox"/>
15	View from elapsed time	67.4	I like this point	Take the viewer on a coherent story. Beginning, middle, end like a novel or other media.	26/07/2016 9:45:53 PM	UCstudyID873	<input checked="" type="checkbox"/>
The begining middle end							

6.11 Obtaining the usage data

AVW-Space collects a lot of data about students' actions. The system collects data about each student, including when the student logs in, videos watched (including various actions on the video such as fast-forwarding), time stamp for each comment/rating made etc. Such click-stream data can be exported from the system. Please contact the administrator to get the data for your space.

7 References

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