LECTURE / SESSION[1] PLAN

Name Lecturer: Sofia Gil-Clavel	**Date session:** 2	**Expected number of students:** 20
Course title	R-Workshop	
Topic of lecture or session	Tidyverse	
Situational factors (e.g. group size, prior knowledge, expected motivation)	The class lasts 2hrs. The students are in different career stages, from PhD students to professors. The students have different backgrounds, from qualitative researchers that have never used R to quantitative researchers that want to learn new topics or move out of SPSS/STATA. The students use different Operating Systems (Windows, Mac, or Linux).	
Intended learning outcomes of this session	At the end of the session the students will be able to: 1. Install and load packages in R. 2. Understand and explain the basic logic behind using tidyverse for data handling in R. 3. Use functions from different packages. 4. Use the packages tibble, pipe, and dplyr. 5. Apply data pipelines to a real example.	
Learning material (book, chapters, ...)	The lecture is based on the book: • Wickham, Hadley, Mine Çetinkaya-Rundel, and Garrett Grolemund. R for data science. " O'Reilly Media, Inc.", 2023. Accessed May 7, 2024. https://r4ds.hadley.nz/.	

[1] A session means a teaching and learning session for university students in the bachelor or master. It can be a lecture, a seminar or a specific type of educational meeting with a group of students that is relevant for the discipline where the lecturer can demonstrate a whole range of teaching skills. It means that in one session each of the six didactic elements appears at least once. Your lesson plan should show that you are using a powerful learning environment and that students are activated.

Media, equipment, tools	The students use their own laptops. The teacher needs access to a projector and a whiteboard.
Preparation for students	The students have access to the slides and codes before the class: https://github.com/SofiaG1l/R_Course/tree/master/R4SocialScientists/Session2_Tidyverse

Time[2] (min.)	**Didactic element (goal)[3] and topic[4]**	**What the teacher does[5]** (teacher activity)	**What students do** (learner activity)	**Evaluation[6]** (feedback/assessment)

30	• Recap of the previous session.	• The teacher uses the slides to remind the students what they learned the previous session:
		  ○ Primitive data
		  ○ Operators
		  ○ Vectors
		  ○ Data frames
		• The teacher will open RStudio and together with the students create the R-script the students will be writing the code during the class.
			• Before telling each element the students learned, the teacher waits some seconds for the students to fill out the information out loud.
			• The students open and follow the steps that the teacher is explaining.
				• The students will use these concepts during the workshop. So, the teacher will detect when a student confuses them. Based on these confusions the teacher will be able to correct the student.
				• The teacher walks around the classroom to check on the students and provide feedback when something is not working on their computers. When the teacher detects a common error, then the

[2] Indicate the planned duration in minutes
[3] State the number(s) of the relevant ILO at each didactic element
[4] Only key words
[5] Specify the type of activity and write down also the questions that you prepared to ask in the session
[6] Specify the type of evaluation, i.e. the way in which you assess if the objective(s) has/have been achieved

				teacher uses the whiteboard to clarify.
10	• Understand and explain the basic logic behind using tidyverse for data handling in R.	• The teacher uses the slides to explain what tidyverse is and the advantages of using it over using the default R packages. • The teacher also explains what a data pipeline is and what its advantages are.	• The students passively digest what the teacher is explaining.	• The students will use these concepts during the workshop. So, the teacher will detect when a student confuses them. Based on these confusions the teacher will be able to correct the student.
10	• Install and load packages in R.	• The teacher shows the student how to install packages and how to load them in RStudio.	• The students follow the steps in their computers.	• The teacher walks around the classroom to check on the students and provide feedback when something is not working on their computers. When the teacher detects a common error, then the teacher performs the step again in her computer.
10	• Use functions from different packages.	• The teacher explains where to find the packages in the RStudio panes. • The teacher explains what a function is and where to look for information on how to use them.	• The students follow the steps in their computers.	• The teacher walks around the classroom to check on the students and provide feedback when something is not working on their computers. When the teacher detects a common error, then the teacher performs the step again in her computer.

20	• Use the packages tibble, pipe, and dplyr.	• The teacher used the slides to explain how to create a data pipeline using the tidyverse packages: tibble, pipe, and dplyr.	• The students perform an exercise where they explore what the different dplyr functions do. • The students share their findings with the rest of the class.	• The teacher walks around the classroom to check on the students and provide feedback when something is not working on their computers. When the teacher detects a common error, then the teacher uses the whiteboard to clarify.
40	• Apply data pipelines to a real example.	• The teacher uses the slides to explain the exercise to the students.	• The students perform an exercise where they use all the data frames and data pipelines knowledge to extract information from a database.	• The teacher walks around the classroom to check on the students and provide feedback when something is not working on their computers. When the teacher detects a common error, then the teacher uses the whiteboard to clarify.