Detailed Psychological Constructs v6.0 and v6.1 (ABC)

	Construct	Subconstruct (if applicable)			question_type	response_options	pre	pulse checks				mid1	pulse checks					mid2	pulse checks				post
								ch1	ch2	ch3	ch4		ch5	ch6	ch7	ch8	ch9		ch10	ch11	ch12	ch13	
	Expectancy	(pulse check)	1	I am confident in what I have learned in the previous chapter	single-choice	(1) Strongly disagree (2) Disagree (3) Slightly disagree (4) Slightly agree (5) Agree (6) Strongly agree			exp_pulse2	exp_pulse3	exp_pulse4		exp_pulse5	exp_pulse6	exp_pulse7	exp_pulse8	exp_pulse9		exp_pulse10	exp_pulse11	exp_pulse12	exp_pulse13	
	Intrinsic Value		2	I think the previous chapter was interesting	single-choice				iv_pulse2	iv_pulse3	iv_pulse4		iv_pulse5	iv_pulse6	iv_pulse7	iv_pulse8	iv_pulse9		iv_pulse10	iv_pulse11	iv_pulse12	iv_pulse13	
	Utility Value		3	I think what I have learned in the previous chapter is useful	single-choice				uv_pulse2	uv_pulse3	uv_pulse4		uv_pulse5	uv_pulse6	uv_pulse7	uv_pulse8	uv_pulse9		uv_pulse10	uv_pulse11	uv_pulse12	uv_pulse13	
	Cost		4	I was unable to put in the time needed to do well in the previous chapter	single-choice				cost_pulse2	cost_pulse3	cost_pulse4		cost_pulse5	cost_pulse6	cost_pulse7	cost_pulse8	cost_pulse9		cost_pulse10	cost_pulse11	cost_pulse12	cost_pulse13	
	Cost		5	The previous chapter was stressful for me.	single-choice				cost_pulse2_2	cost_pulse2_3	cost_pulse2_4		cost_pulse2_5	cost_pulse2_6	cost_pulse2_7	cost_pulse2_8	cost_pulse2_9		cost_pulse2_10	cost_pulse2_11	cost_pulse2_12	cost_pulse4	
	Programming Sentiment	Positive Sentiment towards R	1	In this course, you will use r (a programming language) to analyze data. how do you feel about this? (t1) / In this class, you are using R to analyze data. How do you feel about this? (t2/t3); In this class, you used R to analyze data. How do you feel about this now? (t4)	single-choice	(1) Strongly negative (2) Negative (3) Somewhat negative (4) Somewhat positive (5) Positive (6) Strongly positiv	sent_pro_1					sent_pro_2						sent_pro_3					sent_pro_4
	Confidence	Confidence in R	1	How confident are you in your R skills?	single-choice	(1) Not at all confident (2) Only a little confident (3) Somewhat confident (4) Mostly confident (5) Completely confident	conf_1					conf_2						conf_3					conf_4
	Programming Anxiety Scale	R Enjoyment	1	I think that learning R programming will be enjoyable (t1); I think that learning R programming is enjoyable (t4).	single-choice		r_joy_1																r_joy_4
		R Job Prospect	2	I welcome the possibility of having a job in the future that involves R programming.	single-choice	(1) Strongly disagree (2) Disagree (3) Slightly disagree (4) Slightly agree (5) Agree (6) Strongly agree	r_job_1																r_job_4
		R Anxiety	3	I am anxious/nervous about learning R programming.	single-choice		r_anx_1																r_anx_4
		Perceived R Difficulty	4	I believe that learning R programming will be difficult (t1): I believe that learning R programming is difficult (t4)	single-choice		r_difficult_1																r_difficult_4
	Course Challenges		1	What, if anything, made it hard to succeed in this class?	open-ended	-																	obst_4
	Behavioral Intention	Future interest	1	I look forward to learning more about math, statistics, or data science.	single-choice	(1) Strongly disagree (2) Disagree (3) Slightly disagree (4) Slightly agree (5) Agree (6) Strongly agree	f1_1					f1_2						f1_3					f1_4
			2	I want to take more math, statistics, or data science classes in the future.	single-choice		f2_1					f2_2						f2_3					f2_4
			3	I would be interested in having a job someday that involves things like math, science, statistics, or data science.	single-choice		f3_1					f3_2						f3_3					f3_4
	Course advice		1	What advice would you give to future students who want to do well in this course?	open-ended	-						adv_2											
	Student Mindset Beliefs	Student Statistics fixed mindset belief	1	You can learn new things, but you can't really change your statistics ability	single-choice	(1) Strongly disagree (2) Disagree (3) Slightly	ms1_1																ms1_4
	Class Learning & Interest	Class Learning	1	Was there an activity, lesson, or data set from your class thus far that helped you learn? If so, tell us about it.	open-ended	-						learning_open_t2											learning_open_t4
		Class Interest	2	We'd like to incorporate your interests and ideas into future class activities. Is there a topic you'd like to explore further using data?	open-ended	-						interest_open_t2											interest_open_t4
	Value of Repeated Data Frames		1	Why do you think the thumb length variable from Fingers is being used repeatedly?	open-ended	-						fingers1_t2											
			2	How do you feel seeing the Fingers data set repeatedly throughout the book?	open-ended	-						fingers2_t2											
new v6.1	Algebra/Math/ Stats Value & Confidence	Math/Stats Confidence	1	Given enough time, I feel confident that I could learn more advanced math/statistics.	single-choice	(1) Strongly disagree (2) Disagree (3) Slightly disagree (4) Slightly agree (5) Agree (6) Strongly agree	conf_adv_stats_1											conf_adv_stats_3					
new v6.1		Statistics Utility Value	2	I can see how statistics would be useful for solving real-world problems.	single-choice		useful_stats_1											useful_stats_3					
new v6.1		Algebra Utility Value	3	I can see how algebra would be useful for solving real-world problems.	single-choice		useful_alg _1											useful_alg _3					
new v6.1		Math Value through Data	4	Using data helped me see why we learn math in the first place.	single-choice		ata_value_math_											ata_value_math_					
	Metacognitive Confidence Ratings	[Pre Survey] In this section, you'll be asked how well you think you could do certain tasks related to data, R programming, and statistical thinking. Some of the statements might include terms or ideas you haven't seen yet, and that's okay. These may not be introduced until later in this class. We want to measure what you know at the beginning of this class so we can better see later what you have learned by the end of the class. There are no right or wrong answers—this is just to help us understand where everyone is starting from. Using your best judgment, could you do each of the following right now? [Mid1 Survey] In this section, you'll be asked again how well you think you could do certain tasks related to data, R programming, and statistical thinking. Some tasks might still feel challenging, and that's okay! Take this time to reflect on your skills and knowledge at this point in the course. Thanks for sharing your judgments with us! Using your best judgment, could you do each of the following right now?																						
	Metacognitive Confidence Ratings	Variable Listing	1	Write R code to find out what variables are included in the data set.	single-choice	(1) I definitely could not do it (2) I probably could not do it (3) I probably could do it (4) I definitely could do it	rating1_1											rating1_3					
		Variable Roles	2	Explain the difference between an outcome variable and an explanatory variable.	single-choice		rating2_1											rating2_3					
		Variable vs. Value	3	Explain the difference between a variable and a value in a data set.	single-choice		rating3_1											rating3_3					
		Variable Types	4	Explain the difference between a quantitative and categorical variable.	single-choice		rating4_1											rating4_3					
		Histogram Creation	5	Create a histogram of a distribution of a quantitative variable using R.	single-choice		rating5_1											rating5_3					
		Histogram Analysis	6	Examine a histogram and describe its shape, center, spread, and any unusual patterns.	single-choice		rating6_1											rating6_3					
		Word Equation	7	Write a word equation to represent a hypothesis about the relationship between an explanatory and outcome variable.	single-choice		rating7_1											rating7_3					
		Visualization	8	Choose an appropriate visualization to represent the relationship between a quantitative outcome variable and a categorical explanatory variable.	single-choice		rating8_1											rating8_3					
		Scatter Plot	9	Use R to create a scatter plot to visualize a relationship between two quantitative variables.	single-choice		rating9_1											rating9_3					
		Scatter Plot Interpretation	10	Explain whether a scatterplot supports a hypothesized relationship between two quantitative variables.	single-choice		rating10_1											rating10_3					
		Save Empty Model	11	Write R code to fit and save an empty model.	single-choice		rating11_1											rating11_3					
		Save Two Group Model	12	Write R code to fit and save a two-group model.	single-choice		rating12_1											rating12_3					
		Model Fitting	13	Explain what it means to fit a model (i.e., find the best-fitting model).	single-choice		rating13_1											rating13_3					
		Empty Model	14	Draw the best-fitting empty model on top of a scatter plot (either by hand or using R).	single-choice		rating14_1											rating14_3					
		Two Group Model	15	Draw the best-fitting regression model on top of a scatter plot (either by hand or using R).	single-choice		rating15_1											rating15_3					
		Error Model Comparison	16	Visually compare the amount of error around the empty model versus a regression model on a scatter plot	single-choice		rating16_1											rating16_3					
		Parameter Interpretation	17	Interpret the parameter estimates that result from fitting a regression model.	single-choice		rating17_1											rating17_3					
		GLM Notation	18	Write a regression model using GLM notation.	single-choice		rating18_1											rating18_3					
		Model Fit Metrics	19	Name three quantitative measures that indicate how well a model fits the data.	single-choice		rating19_1											rating19_3					
		Model Evaluation	20	Use R to find out how well a model fits the data.	single-choice		rating20_1											rating20_3					
		PRE Statistics	21	Explain what the PRE statistic means for a model.	single-choice		rating21_1											rating21_3					
		Hypothesis Support	22	Explain how the results of a data analysis might support a hypothesis (or not).	single-choice		rating22_1											rating22_3					
		Real Word Implications	23	Discuss the implications of the results of a data analysis for a real-world contexts	single-choice		rating23_1											rating23_3					
		Context Importance	24	Explain why understanding the context of a dataset is important for interpreting the parameter estimates.	single-choice		rating24_1											rating24_3					