

Data Dictionary for: Comparing Teamwork & Collaboration Competencies between a Technology in Art Education Course and an Engineering Project Management Course

Field Code	Definition
<i>Pre-Assessment Survey</i>	
Course	UTA Course Number. Allowable values include ART 4365 and IE 4340.
Semester	The semester the data was collected. Allowable values include fall and spring.
Year	The year the data was collected. Allowable values include 2019 and 2020.
Discipline	The discipline of the course. Allowable values include Art Education and Engineering.
DisciplineCoded	Discipline codes for statistical analysis purposes. Art Education is coded as 1, and Engineering is coded as 2.
Pre.Duration (in seconds)	The length of time, in seconds, that the student spent on the pre-assessment survey.
Pre.Q3	Gender, where male is coded to 1, and female is coded to 2. A third option, 3, was for “something else”, but no students selected that option. We did not collect this data in spring 2019, so those students will include a null value in this field.
Pre.MSE1.1	Prior Makerspace Experience, where 1=Before taking this course, I had never heard of a makerspace, and am pretty sure I've never worked in one, 2=Before taking this course, I had a general understanding of makerspaces, but I had never worked in one, 3=Before taking this course, I was familiar with makerspaces and had worked in a makerspace on a project at least once, and 4=Before taking this course, I was a frequent user of at least one makerspace
PrePMSE	Prior Makerspace Experience consolidated, where 1=No makerspace experience and includes values 1 and 2 from Pre.Q3, and 2=Some makerspace experience, and includes values 3 and 4 from Pre.Q3.
Pre.C9.1_Assemble Effective Teams Construct	Assemble Effective Teams construct. How well does this statement describe you? “I can assemble effective teams.” Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes

	me moderately well, 4=Describes me very well, and 5=Describes me extremely well. We use this data to calculate Cronbach alpha; if this column correlates to the PreAverage9.3Competencies column, based on Cronbach alpha score, then this construct is valid. We do not use this value for statistical analysis. Instead, we use PreAverage9.3Competencies.
Pre.C9.3.1_recognize opportunities	Assemble Effective Teams dimension 1: I can recognize opportunities to collaborate with others who provide diverse experiences and perspectives. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C9.3.2_DIYDIT	Assemble Effective Teams dimension 2: I can gauge the costs & benefits of “Doing-it-Yourself” (DIY) or “Doing-it-Together” (DIT). Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C9.3.3_RecruitSkilledTeamMembers	Assemble Effective Teams dimension 3: I can recruit team members with diverse skills appropriate for specific project requirements. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C9.3.4_JoinTeamsSkillsValues	Assemble Effective Teams dimension 4: I can join a team where my skills are sought and valued. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C9.3.5_AskExperts	Assemble Effective Teams dimension 5: I can solicit advice, knowledge and specific skills from experts. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PreAverage9.3Competencies	This value is the average of the student’s answers to Pre.C9.3.1 through Pre.C9.3.5. We use this data to calculate Cronbach alpha; if this column correlates to the Pre.C9.1 column, based on Cronbach alpha score, then this construct is valid. We also use this for statistical analysis in lieu of Pre.C9.1.

Pre.C10.1_CollaborateEffectively	Collaborate Effectively construct: How well does this statement describe you? "I can collaborate effectively with team members and stakeholders." Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well. We use this data to calculate Cronbach alpha; if this column correlates to the PreAverage10.3Competencies column, based on Cronbach alpha score, then this construct is valid. We do not use this value for statistical analysis. Instead, we use PreAverage10.3Competencies.
Pre.C10.3.1_Listen	Collaborate Effectively dimension 1: I can listen to others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C10.3.2_LearnFromOthers	Collaborate Effectively dimension 2: I can learn from and with others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C10.3.3_CommunicateEffectively	Collaborate Effectively dimension 3: I can communicate respectfully and clearly with team members and stakeholders. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C10.3.4_FollowThroughonCommitments	Collaborate Effectively dimension 4: I can follow through on team commitments and responsibilities. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C10.3.5_PracticeAccoutability	Collaborate Effectively dimension 5: I can practice accountability both personally and with team members. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre.C10.3.6_AppraiseContributions	Collaborate Effectively dimension 6: I can appraise contributions to the success of the team. Valid data include Likert scale values where 1=Does

	not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Pre10.3CompetencyAverage	This value is the average of the student's answers to Pre.C10.3.1 through Pre.C10.3.6. We use this data to calculate Cronbach alpha; if this column correlates to the Pre.C10.1 column, based on Cronbach alpha score, then this construct is valid. We also use this for statistical analysis in lieu of Pre.C10.1.
<i>Post-Assessment Survey</i>	
Post.C9.1_Assemble Effective Teams Construct	Assemble Effective Teams construct. How well does this statement describe you? "I can assemble effective teams." Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well. We use this data to calculate Cronbach alpha; if this column correlates to the PostAverage9.3Competencies column, based on Cronbach alpha score, then this construct is valid. We do not use this value for statistical analysis. Instead, we use PostAverage9.3Competencies.
PostReflection.C9.3.1._RecogonizeOppurtunites	Assemble Effective Teams dimension 1, reflection: At the beginning of the semester, I could recognize opportunities to collaborate with others who provide diverse experiences and perspectives. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C9.3.1.2_RecogonizeOppurtunites	Assemble Effective Teams dimension 1, now: Having taken this course, I can now recognize opportunities to collaborate with others who provide diverse experiences and perspectives. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Post.C9.3.2.1_ReflectionDITDIY	Assemble Effective Teams dimension 2, reflection: At the beginning of the semester, I could gauge the costs & benefits of "Doing-it-Yourself" (DIY) or "Doing-it-Together" (DIT). Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.

Post.C9.3.2.2_Now_DITDIY	Assemble Effective Teams dimension 2, now: Having taken this course, I can now gauge the costs & benefits of “Doing-it-Yourself” (DIY) or “Doing-it-Together” (DIT). Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C9.3.3.1_RecruitTeamMembers	Assemble Effective Teams dimension 3, reflection: At the beginning of the semester, I could recruit team members with diverse skills appropriate for specific project requirements. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C9.3.3.2_RecruitTeamMembers	Assemble Effective Teams dimension 3, now: Having taken this course, I can now recruit team members with diverse skills appropriate for specific project requirements. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C9.3.4.1_JoinTeamsSkillsValues	Assemble Effective Teams dimension 4, reflection: At the beginning of the semester, I could join a team where my skills are sought and valued. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C9.3.4.2__JoinTeamsSkillsValues	Assemble Effective Teams dimension 4, now: Having taken this course, I can now join a team where my skills are sought and valued. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C9.3.5.1_AskExperts	Assemble Effective Teams dimension 5, reflection: At the beginning of the semester, I could solicit advice, knowledge and specific skills from experts. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C9.3.5.2__AskExperts	Assemble Effective Teams dimension 5, now: Having taken this course, I can now solicit advice, knowledge and specific skills from experts. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me

	slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection9.3CompetencyAverage	This value is the average of the student's 'reflection' answers to Post.C9.3.1 through Pre.C9.3.5. We use this data to calculate Cronbach alpha; if this column correlates to the Post.C9.1 column, based on Cronbach alpha score, then this construct is valid. We also use this for statistical analysis in lieu of Post.C9.1.
PostNow9.3CompetencyAverage	This value is the average of the student's 'now' answers to Post.C9.3.1 through Pre.C9.3.5. We use this value for statistical analysis in lieu of Post.C9.1.
Post.C10.1_CollaborateEffectively	Collaborate Effectively construct: How well does this statement describe you? "I can collaborate effectively with team members and stakeholders." Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well. We use this data to calculate Cronbach alpha; if this column correlates to the PostAverage10.3Competencies column, based on Cronbach alpha score, then this construct is valid. We do not use this value for statistical analysis. Instead, we use PostAverage10.3Competencies.
PostReflection.C10.3.1.1_Listening	Collaborate Effectively dimension 1, reflection: At the beginning of the semester, I could listen to others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C10.3.1.2__Listening	Collaborate Effectively dimension 1, now: Having taken this course, I can now listen to others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
Reflection.C10.3.2.1_LearnFromOthers	Collaborate Effectively dimension 2, reflection: At the beginning of the semester, I could learn from and with others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.

PostNow.C10.3.2.2__LearnFromOther	Collaborate Effectively dimension 2, now: Having taken this course, I can now learn from and with others. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C10.3.3.1_CommunicateEffectively	Collaborate Effectively dimension 3, reflection: At the beginning of the semester, I could communicate respectfully and clearly with team members and stakeholders. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C10.3.3.2_CommunicateEffectively	Collaborate Effectively dimension 3, now: Having taken this course, I can now communicate respectfully and clearly with team members and stakeholders. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C10.3.4.1_FollowThruCommitments	Collaborate Effectively dimension 4, reflection: At the beginning of the semester, I could follow through on team commitments and responsibilities. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C10.3.4.2_FollowThruCommitments	Collaborate Effectively dimension 4, now: Having taken this course, I can now follow through on team commitments and responsibilities. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection.C10.3.5.1_PracticeAccountability	Collaborate Effectively dimension 5, reflection: At the beginning of the semester, I could practice accountability both personally and with team members. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
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PostReflection.C10.3.6.1_ApprasieContributions	Collaborate Effectively dimension 6, reflection: At the beginning of the semester, I could appraise contributions to the success of the team. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostNow.C10.3.6.2__ApprasieContributions	Collaborate Effectively dimension 6, now: Having taken this course, I can now appraise contributions to the success of the team. Valid data include Likert scale values where 1=Does not describe me, 2=Describes me slightly well, 3=Describes me moderately well, 4=Describes me very well, and 5=Describes me extremely well.
PostReflection10.3CompetencyAverages	This value is the average of the student's 'reflection' answers to Post.C10.3.1 through Pre.C10.3.6. We use this data to calculate Cronbach alpha; if this column correlates to the Post.C10.1 column, based on Cronbach alpha score, then this construct is valid. We also use this for statistical analysis in lieu of Post.C10.1.
PostNow10.3CompetencyAverages	This value is the average of the student's 'now' answers to Post.C10.3.1 through Pre.C10.3.6. We use this value for statistical analysis in lieu of Post.C10.1.