

Utilizing the CATME.ORG Teamwork Support Tool



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What is CATME?

CATME SMARTER Teamwork (Comprehensive Assessment of Team Member Effectiveness) is a system of secure, web-based tools created by a nonprofit that enable instructors to implement best practices in managing student teams. In other words, it is a system for building & facilitating group work in a more quantitative fashion. [Learn more about CATME at info.catme.org.](http://info.catme.org)



Class Editor

Class: GEOL 171 **Institution:** University of Kansas
Term: Spring 2016 **Time Zone:** US Central (GMT-6:00)
Type: Lecture **Rater Calibration:** No Calibration
 Enable extra messages in students' results

Class	Activity (Section)	Start	End
GEOL 171	Group Maker	2016-01-21	2016-01-24

CATME Tools

The program has several different sets of “tools” but they are all based on initially setting up your class (see above) and having students input data about themselves to build initial groups. The important tools include:

- [CATME Team-Maker](#)
 - [CATME Rater Calibration](#)
 - [CATME Peer Evaluation](#)
 - [CATME Meeting Support](#)
- <http://info.catme.org/catme-tools/>

The “Team-Maker” is developed when the instructor inputs all students and their emails addresses into CATME, and invitation emails are sent out. Students then set up a free account, and answer an instructor-built series of questions (see below) to construct the database for group building.

Activity Editor

Prof: Baker **Class:** GEOL 171 **Term:** Spring 2016 **Format:** Lecture **School:** University of Kansas

Activity Name: Group Maker

Start Date: Jan 21 2016
End Date: Jan 24 2016

Software Pkg: Blackboard, PowerPoint, Excel

Categories: Gender, Race, Age, Major, Class Year, Commitment Level, Writing Skills, English Skills, Weekend Meetings, Commute, Credits, On-Campus Job, Off-Campus Job, CNE Submission, Discipline (Business), Software Skills, GPA, Schedule, Hands-On Skills, Shop Skills, Leadership Role, Previous Course Grade, Leadership Preference, Big Picture/Detail-Oriented, Fraternity/Sorority, Discipline (STEM), Sports

Once the database has been filled by student replies, the instructor is able to set up weighted criteria (with positive or negative correlations) to construct the students groups. For instance, groups may be selected to optimize gender/race diversity but to also weight “commitment level” to match group members.

Application in Geol 121, Geol 177

Dr. Alison Olcott-Marshall, Dept. of Geology

Why did you decide to use CATME for your class?

I wanted to assign students into permanent working groups, but had too many variables that I wanted to consider, and doing it “by hand” was time consuming.

Which CATME tool(s) did you use for your courses?

I created teams and I used the team evaluation capabilities

What criteria and weighting did you use when assigning teams?

- Blocks of time out of class
- No gender/ethnicity left alone on a team
- No two geology majors on a team
- I asked students to identify anyone in the class that they knew and made sure they were on different teams

How effective do you think the tool worked?

It was extremely effective. It did very extensive combinatorics (see below) for me and made teams that have worked very successfully!

Application in Geol 171

Dr. Gregory S. Baker, Dept. of Geology

Why did you decide to use CATME for your class?

I’ve had students groups in the past for other courses, but this course was challenging as it was 100% online. This made it difficult to “know the students” for group building and to more actively assess the effectiveness of groups.

Which CATME tool(s) did you use for your courses?

I created teams and I used the team evaluation capabilities

What criteria and weighting did you use when assigning teams?

- No gender/ethnicity left alone on a team
- Set one Google Earth “expert” per group
- Diversified class year, writing skills, and GPA

How effective do you think the tool worked?

It was extremely effective overall, and seemed to generate groups that worked together well.

Were there any challenges?

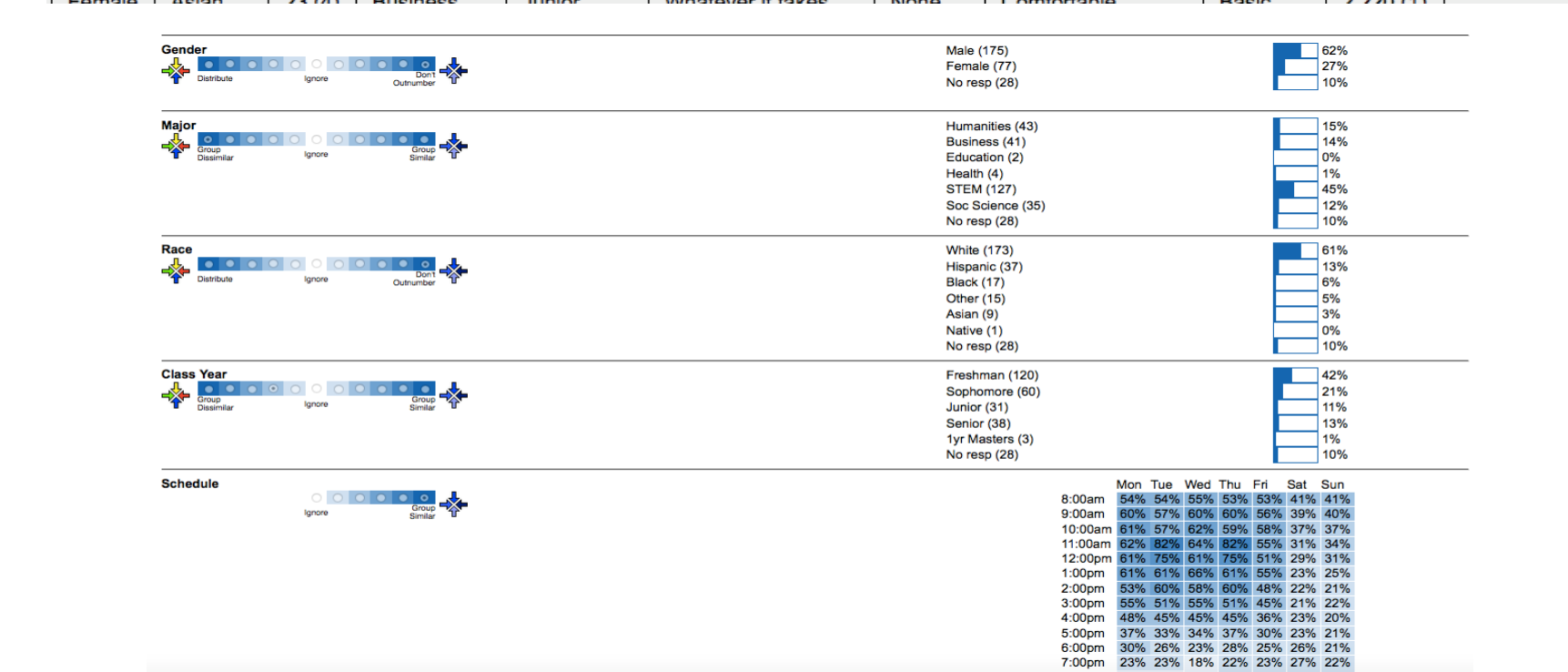
With students adding/dropping the course, it was difficult to set groups within the first several weeks of class, even though that would be desired.

Building Teams in CATME

Once student data criteria are selected and students enter their information, then group building process can begin. As a first step, a simple series of weighting can be used on the students’ data to generate initial groups (right).

Next, a graphical construction within CATME (right) allows the instructor to visualize the distribution of factors in the groups, and GUI sliders can be used to refine the group construction criteria specific to the distribution of information within the student database.

Sex	Race	Age	Major	Year	Commitment Lvl	Writing	English	Software	GPA	Tot (Max 90)
Female	Hispanic	23 (4)	Business	Senior	5-7 hours per week	None	Comfortable	Basic	2.8 (2)	
Female	White	20 (1)	STEM	Junior	5-7 hours per week	Good	Very Comfortable	Good	3.43 (4)	
Female	White	24 (4)	Soc. Science	Senior	Whatever it takes	Good	Very Comfortable	Expert	2.9 (1)	
-5.00	5.00	1.87	5.00	1.87	1.87	1.87	1.87	5.00	5.00	23.33
Female	White	22 (3)	STEM	Senior	Whatever it takes	Good	Very Comfortable	Expert	3.58 (4)	
Female	Other	25 (4)	Humanities	Senior	5-7 hours per week	Good	Very Comfortable	Expert	3.6 (4)	
Average										
Female	White	19 (1)	Soc. Science	Freshman	5-7 hours per week	Good	Comfortable	Basic	2.0 (1)	
-5.00	5.00	5.00	5.00	1.87	1.87	1.87	1.87	5.00	1.87	23.33
Male	White	19 (1)	STEM	Freshman	5-7 hours per week	Good	Comfortable	Basic	3.2 (3)	
Female	Hispanic	20 (1)	Soc. Science	Junior	5-7 hours per week	Average	Very Comfortable	Good	2.4 (1)	
Female	White	22 (9)	STEM	Senior	Whatever it takes	Good	Very Comfortable	Expert	3.87 (4)	
-5.00	5.00	1.87	1.87	5.00	1.87	1.87	1.87	5.00	5.00	23.33
Male	Hispanic	22 (3)	Business	Sophomore	5-7 hours per week	Good	Very Comfortable	Expert	3.18 (3)	
Female	Hispanic	35 (4)	Soc. Science	Senior	Whatever it takes	Average	Very Comfortable	Good	3.75 (4)	
Male	Other	21 (2)	STEM	Senior	5-7 hours per week	Good	Very Comfortable	Expert	2.9 (2)	
5.00	3.75	5.00	2.50	5.00	5.00	5.00	5.00	5.00	5.00	23.75
Female	Hispanic	18 (1)	STEM	Freshman	5-7 hours per week	Good	Comfortable	Basic	3.5 (3)	
Female	Black	33 (4)	Health	Junior	8-10 hours per week	Good	Very Comfortable	Basic	3.23 (3)	
Male	White	22 (3)	Soc. Science	Senior	Whatever it takes	Average	Very Comfortable	Good	3.8 (4)	
Female	White	20 (1)	Soc. Science	Senior	Whatever it takes	Good	Very Comfortable	Expert	2.6 (1)	
5.00	3.75	2.50	5.00	5.00	2.50	-5.00	5.00	5.00	5.00	26.25
Female	White	21 (2)	STEM	Senior	Whatever it takes	Good	Very Comfortable	Expert	3.87 (4)	
Female	Asian	24 (4)	Bi. Science	Junior	Whatever it takes	None	Comfortable	Basic	3.99 (4)	



Peer assessment in CATME

In addition to the group-building tool within CATME, the peer-assessment tool is also valuable. It allows for students to “rate” each other as well as to rate themselves (right).

One advantage of this process is the ability in CATME to identify students who overestimate or underestimate their contributions to the group. This allows for useful information in feedback for students group effort.

Team ID	Contrib to Team	Interact w/ Team	Keeping on Track	Expect Quality	Having KSAs	Adj Factor (w/ Self)	Adj Factor (w/o Self)	Note
Badlands	4.2	4.4	4.0	4.0	4.2	1.00	1.00	
Badlands	4.0	4.2	3.6	4.0	4.0	1.00	0.94	
Badlands	4.8	4.4	4.4	4.4	4.8	1.05	1.05	High
Badlands	4.0	4.2	3.8	4.0	3.8	1.00	0.90	
Badlands	4.4	4.0	3.8	3.8	4.6	1.00	1.04	Under
Rushmore	4.5	4.8	4.2	4.5	4.5	1.04	1.01	
Rushmore	5.0	5.0	4.8	4.8	5.0	1.05	1.05	High
Rushmore	4.5	4.8	4.5	4.8	5.0	1.05	1.05	
Rushmore	3.8	4.2	3.5	4.2	4.5	0.94	0.94	
Rushmore	2.8	3.8	3.2	4.0	3.5	0.80	0.78	
Teton	4.4	4.6	4.2	5.0	5.0	1.05	1.05	High
Teton	4.8	4.6	4.4	4.4	5.0	1.05	1.05	High
Teton	3.4	3.2	3.2	3.2	4.2	0.85	0.79	
Teton	2.6	3.0	3.0	3.2	4.2	0.79	0.72	Over
Yellowstone	4.8	4.5	4.5	4.5				
Yellowstone	3.8	4.5	4.5	4.0				
Yellowstone	3.5	3.8	3.8	4.0				
Yellowstone	4.5	4.5	4.5	4.5				
Yellowstone	3.5	4.0	3.5	4.0				

Overconfident:
The team's average rating for this student is less than 3, and the student has rated themselves more than one point higher on average than this rating.

Application in Geol 101 and HNRS 301

Dr. Jennifer Roberts, Department of Geology

Why did you decide to use CATME for your class?

We used another group maker in Spring 2014 that required the groups to meet outside of class. That platform did not allow us to take into consideration student schedules and our groups had a very hard time meeting as we requested. CATME does that, which is critical for the engineers in particular who have very proscribed schedules and make up ~30% of the class. We’ve used CATME since Fall 2014 and scheduling outside group work has not been a problem.

What CATME tool(s) did you use for your courses?

- Team Maker
- Peer Evaluation
 - Used peer evaluation to assign participation grades
 - Identified “weak links” to intervene with one-on-one

What criteria and weighting did you use when assigning teams?

- No gender/ethnicity left alone on a team
- Diversified majors, gender, race, and year
- Grouped students with like schedules for out-of-class meetings
- One person in each group had a laptop for in-class Google Earth investigations

How effective do you think the tool worked?

I’m very happy with it but have had some push back from students on answering the questions. I try to give the students a primer on the benefit to them and tell them that we will only be using the information for the purpose of creating groups and that diverse groups are shown to be the most successful for student learning. Because the tool allows us to get comments from students I encourage them to give me additional information as needed about their situations and we always look at those comments when making final groups.

Application in ME 320

Dr. Carl Luchies, Department of Mechanical Engineering

Why did you decide to use CATME for your class?

One of my colleagues, Tomas DeAgostino, introduced me to CATME, which has proven to be the missing tool to improve the method of forming teams.

Which CATME tool(s) did you use for your course?

I used the Team Maker Survey for Group formation and the Peer Review Survey for peer evaluation.

What criteria and weighting did you use when assigning teams?

- Gender, Race, GPA, Grade in prerequisite course, English skills, writing skills, commitment level, leadership role, leadership preference, Big Picture/Detail-Oriented.
- Some criteria were used to distribute students across the teams (e.g. GPA, grade in prerequisite course, commitment level, leadership preference) while others were used to group the students across the teams (gender and race).

What criteria and weighting did you use when creating the peer review surveys?

Contributing to work, interacting with teammates, keeping team on track, expecting quality, team conflict, team satisfaction, team interdependence, and team cohesiveness.

How effective do you think the tool worked?

- My GTAs and UGFs and I agree that the teams formed using CATME resulted in the best teams to date. The teams have performed at a very high level and I’ve experienced few team related issues.
- I have, for the first time, allocated some class time (~5 min) to “team formation” throughout this semester (SPR2016). 100% of the students strongly agreed that the group formation activities helped the groups develop into high performing teams.

- 100% of the students agreed or strongly agreed that CATME is a good system to use for team formation and peer evaluation.
- 100% of the students agreed or strongly agreed that the teams formed using CATME performed at a very high level by the end of the semester.

Memorable student comments:

“I was very happy with my teammates. They equally contributed valuable voices and opinions that served to better our group as a whole, and I would be happy to work with them in future classes.”
 “I loved working with my team this semester. They made participating in class very enjoyable. We connected from the very beginning and were able to work well throughout the semester.”