

AN INTRODUCTION TO TEAM-BASED LEARNING (TBL)

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ISSUES WITH GROUP AND TEAM PROJECTS

- What problems do you face when setting group or team tasks?
- What do you find yourself spending most of the time doing?
- What issues do your students raise / complain about?



PROBLEMS WITH LEARNING GROUPS

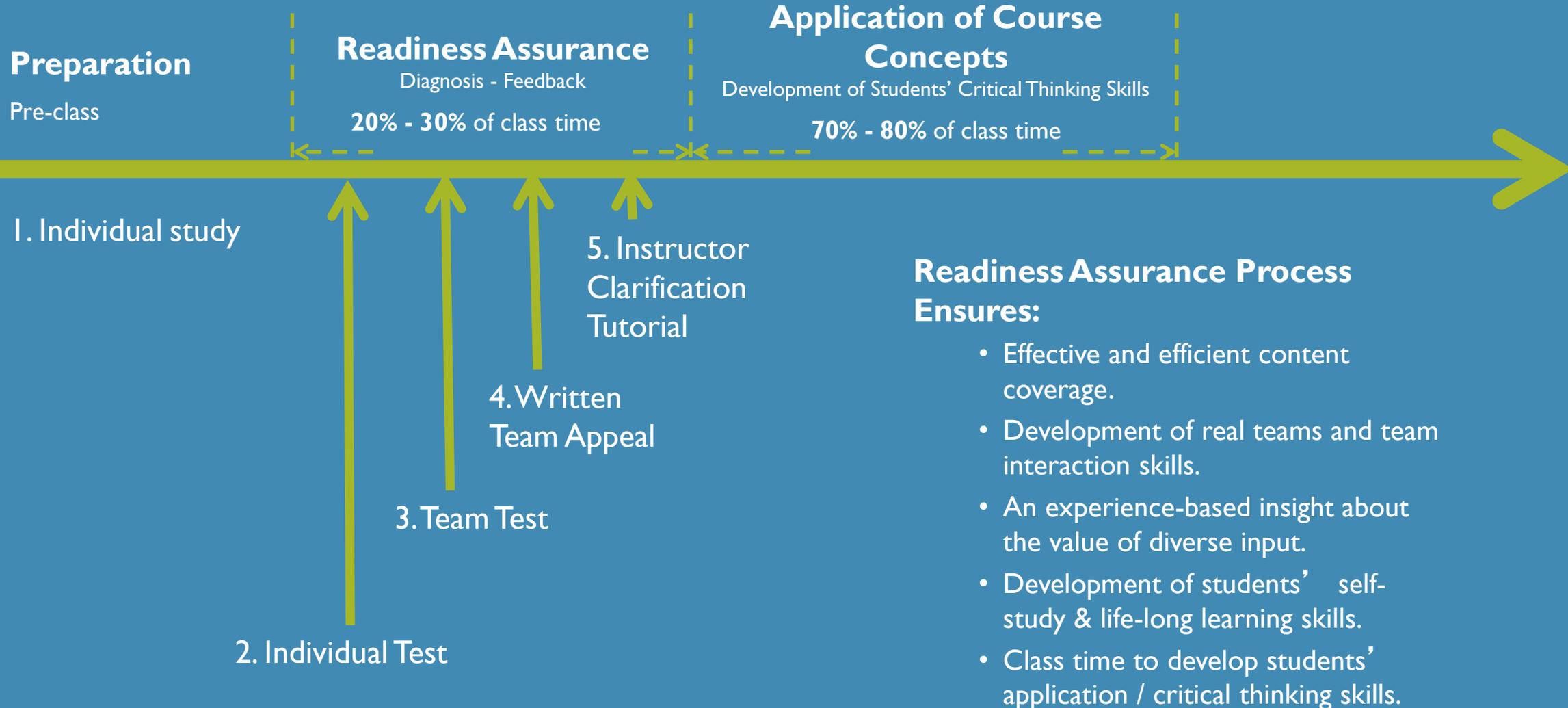
- Using class time for group work limits content coverage.
- Grading group work results in:
 - Better students doing most of the work.
 - Less motivated and/or less able students becoming 'free-riders.'
- Using group assignments requires the instructor to:
 - Spend time resolving conflicts in groups.
 - Teach students how to work in groups.

TEAM-BASED LEARNING™ (TBL)

- A comprehensive strategy for using learning groups in a way that:
- Harnesses the power of teams.
- Avoids potential problems.
- Is effective in any course in which:
 - Content coverage is important.
 - The instructor is at least as committed to developing students' ability to apply content as he or she is to covering it.

Team-Based Learning Sequence

This sequence will be repeated for each major instructional unit



WHICH OF THE FOLLOWING OUTCOMES
IS LEAST IMPORTANT?

1. Effective and efficient content coverage.
2. Development of real teams and students' interpersonal and teamwork skills.
3. Students gaining an experience-based insight about the value of diverse input.
4. Development of students' self-study and life-long learning skills.
5. Class time for developing students' application/critical thinking skills.

KEYS TO DESIGNING EFFECTIVE GROUP ASSIGNMENTS:

1. Make sure the assignments focus on the skills you REALLY want your students to develop.
2. Ask for the right deliverables.
3. Use processes that support the achievement of your objectives.

WRITTEN GROUP ASSIGNMENT STAGES:

1. Discussion on dividing up the research work.
2. Individuals researching their part of the work.
3. Discussion after research/before write-up.
4. Writing-up the document to be turned in.
5. Feedback on the finished product's quality.

Which stage has the greatest potential for enriching students' understanding of the concepts related to the project?

WRITTEN GROUP ASSIGNMENT STAGES:

1. Discussion on dividing up the research work.
2. Individuals researching their part of the work.
3. Discussion after research/before write-up.
4. Creation of finished product to be turned in.
5. Feedback on the finished product's quality.

Would the learning in stage 3 be better if the document that is submitted is:
1-page or 25-pages in length?

DESIGNING ASSIGNMENTS FOR YOUR COURSE: WHERE TO START?

'BACKWARDS DESIGN' QUESTIONS:

1. What do I want students to be able to DO at the end of this activity (unit, course, etc.)?
 - Defines desired Performance Outcomes.
2. How will I be able to tell if students can DO what I want them to do (i.e., #1)?
 - Guides development of activities, projects, exams, etc. to test students' application skills.
3. What must students know to do #2?
 - Defines Content to be covered.
4. How can I assess students' mastery of key concepts?
 - Guides development of Readiness Assurance Test (RAT) questions.

INTERMEDIATE SPANISH COURSE
OBJECTIVE:

Ensure that students can correctly use the verbs *ser* versus *estar* in a wide range of contexts and settings.

OBJECTIVE: ENSURE THAT STUDENTS CAN CORRECTLY USE THE VERBS *SER* VERSUS *ESTAR* IN A WIDE RANGE OF CONTEXTS AND SETTINGS.

1. 'Identify the rules that should be used to guide decisions about the correct day-to-day use of the verbs *ser* vs. *estar*.'
2. 'Read the following passage and identify: a) a correct use of *ser* vs. *estar*, and b) an incorrect use of *ser* vs. *estar*.'
3. 'Read the following passage and identify the sentence that shows the greatest proficiency in using *ser* vs. *estar*.'

MARKETING COURSE OBJECTIVE

Ensure that students can coherently weigh the factors that affect the desirability of specific sites as locations for different types of business ventures.

OBJECTIVE: ENSURE THAT STUDENTS CAN COHERENTLY WEIGH THE FACTORS THAT AFFECT THE DESIRABILITY OF SPECIFIC SITES AS LOCATIONS FOR DIFFERENT TYPES OF BUSINESS VENTURES.

1. 'Identify the factors that would affect the desirability of locating a new business in a particular area.'

Make a list!

'Identify the factors that would affect the desirability of locating where to locate a new business in a particular area. Which is important.'

2. 'Select what you think would be the ideal site for a new dry cleaning business in the area. Explain your decision.'

Make a specific choice!

'Select what you think would be the ideal site for a new dry cleaning business in the area. Explain your decision. Which is the best reason for your selection.'

3. 'Identify the factors that would affect the desirability of locating a new business in a particular area. Explain your rationale for your selection.'

Make a choice!

'Identify the factors that would affect the desirability of locating potential sites for a new business in a particular area. Explain your rationale for your selection. Which is the best reason to explain the selection.'

THE IMPACT OF 'SPECIFIC CHOICE' ASSIGNMENTS ISN'T ALWAYS THE SAME. HOW EFFECTIVE THEY ARE DEPENDS ON:

- ❑ What you ask students to 'produce.'
- ❑ How you have students 'report' their choices:
 - To other teams in the class.
 - To you (the teacher).

OBJECTIVE: ENSURE THAT STUDENTS CAN COHERENTLY WEIGH THE FACTORS THAT AFFECT THE DESIRABILITY OF SPECIFIC SITES AS LOCATIONS FOR DIFFERENT TYPES OF BUSINESS VENTURES.

In 70-minute class with 5 teams:

1. Paper (2,500 words) – Class discussion (70 min.)

2. Power-point:

- 10 minutes/5 teams (50 min.)
- 20-minute class discussion

3. Push-pin:

- 6 Pins on map & 6 ‘most compelling’ reasons for location (anonymous–i.e., labeled A-F and one of which is from the instructor)
- identify questions on other choices (15 min.)
- Class discussion (55 min.)

OBJECTIVE: ENSURE THAT STUDENTS CAN COHERENTLY WEIGH THE FACTORS THAT AFFECT THE DESIRABILITY OF SPECIFIC SITES AS LOCATIONS FOR DIFFERENT TYPES OF BUSINESS VENTURES.

Holding Push-Pin constant, would it be better if the pins/reasons represented:

1. 5 groups/one business (all 5 pins represent a location for the same business (e.g. dry cleaning))
5. 5 groups/5 businesses - each pin represents a location for a different type of business (e.g. dry cleaning, day care center, pet grooming, hair salon, Subway sandwich)

GROUPS' WILLINGNESS TO CHALLENGE EACH
OTHER REQUIRES:

1. Confidence
2. Motivation

HOW DOES WORKING ON DIFFERENT PROBLEMS AFFECT TEAMS' :

1. Confidence?

- ✓ They don't want to look 'dumb' - thus, they won't challenge another team's position if they think the other team might have 'inside information.'

2. Motivation?

- ✓ Groups won't challenge unless they have a 'stake' in the outcome.

DILEMMA: HOW TO EXPOSE STUDENTS TO MULTIPLE ISSUES
WITHOUT HAVING GROUPS WORK ON DIFFERENT QUESTIONS
AND/OR PROBLEMS?

Recycle the Question!

OBJECTIVE: ENSURE THAT STUDENTS CAN COHERENTLY WEIGH THE FACTORS THAT AFFECT THE DESIRABILITY OF SPECIFIC SITES AS LOCATIONS FOR DIFFERENT TYPES OF BUSINESS VENTURES.

- ❑ ‘Select what you think would be the ideal site for a new dry cleaning business in Northampton, identify the single most compelling reason for your decision, and be prepared to explain the rationale for your selection.’

- ❑ Which of the following businesses would be the: a) best and, b) the worst choice for the shop on the corner the High Street and Commercial Road?
 1. A dry cleaning business
 2. A day-care center
 3. A pet grooming shop
 4. A hair salon
 5. A Subway sandwich shop

GROUP ASSIGNMENT STAGES:

1. Discussion on dividing up the research work.
2. Individuals researching their part of the work.
3. Discussion after research/before write-up.
4. Writing-up the document to be turned in.
5. Feedback on the finished product's quality.

When students are:

- Push-pin reporting of an ideal site?
- Selecting the best and worst businesses for a given site?

At which stage are they spending MOST in-class time?

CONCLUSION – WITH WELL-DESIGNED ASSIGNMENTS, THE LEARNING POTENTIAL IS GREATEST IN STAGE 5 (WHEN TEAMS RECEIVE FEEDBACK ON THEIR WORK) BECAUSE THE FEEDBACK:

- Is immediate and clear (based on inter-team comparisons)
- Fosters self & peer critique and inter-team discussions.
- Enables timely (usually confirmatory) feedback from the instructor.

**DESIGNING ASSIGNMENTS FOR
YOUR COURSE:
READINESS ASSURANCE?**

READINESS ASSURANCE TEST ACTIVITY SEQUENCE

Answer Sheet for Hand Scoring					
Name	John Smith			Team	3
Q. #	A	B	C	D	pts.
1	4				
2			2	2	
3			3	1	
4	1	1	1	1	
5	2	1	1		
6				4	
Total Points					

Readiness Assurance Test

Individual Score Sheet

Name: _____ Team: _____

Instructions: Each question is worth 4 points. You should assign a total of 4 points on each line. If you are uncertain about the correct answer you may assign points to more than one box.

	A	B	C	D	Indiv Score	Team Score
Q1						
Q2						
Q3						
Q4						
Q5						
Q6						
Q7						
Q8						

CONCEPT APPLICATION SKILLS:

Traditional Teaching

- Class discussion?
- Individual papers and/or projects
- Group papers and/or projects (outside of class)

Team-Based Learning

- IN-CLASS Team Work
- Specific choice tasks—to create discussion:
 - Within teams
 - Between teams
 - With/from instructor (to confirm/challenge & add to points made by students)

INTERPERSONAL AND TEAM SKILLS:

Traditional Teaching

- “Sink or Swim” at best.
- Mostly individual (not group) work—done by “divide & conquer”
- Promotes negative attitudes about group work (especially with top students.)

Team-Based Learning

- In-class, decision-based tasks which promote discussion & provide *immediate* feedback to:
 - Ensure individual & team accountability.
 - Develop *real* teams.
 - Enhance students’ teamwork skills.

EFFECTIVE TEAM ASSIGNMENTS

Individual
Work

x

Within
Teams

x

Between
Teams

=

Impact on
Learning

Maximum learning occurs when assignments at each stage are characterized by "4 S's":

- **Significant Problem**. Problem involves issues that are significant to *students*.
- **Same Problem**. Individuals/groups are working on the same problem, case or question.
- **Specific Choice**. Individuals/groups are required to use course concepts to make a specific choice.
- **Simultaneous Report**. Individuals/groups report their choices simultaneously.

PROBLEMS WITH LEARNING GROUPS

Using class time for group work limits content coverage.

Grading group work results in:

- Better students doing most of the work.
- Less motivated and/or less able students becoming “free-riders.”

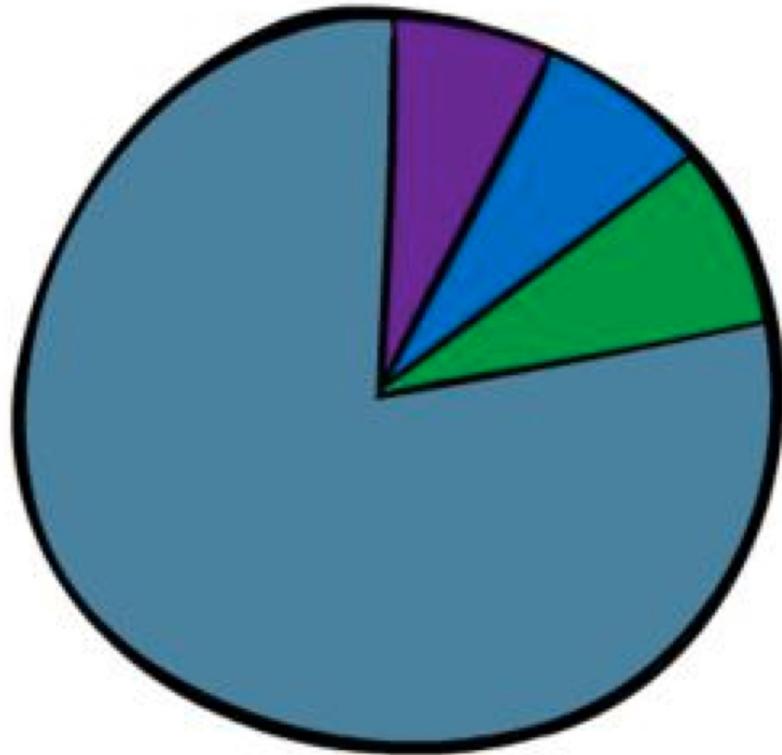
Using group assignments requires the instructor to:

- Spend time resolving conflicts in groups.
- Teach students how to work in groups.

PROBLEMS GUARANTEED IF:

- Individuals not accountable for being prepared for group work.
- Groups create the deliverables to be graded outside of the class.
- The form of the deliverables:
 - Requires students to create complex and professional-looking “products.”
 - Prevents students from receiving timely and unequivocal feedback on the thinking that went into their creation.

WHAT GROUP PROJECTS ARE SUPPOSED TO TEACH YOU



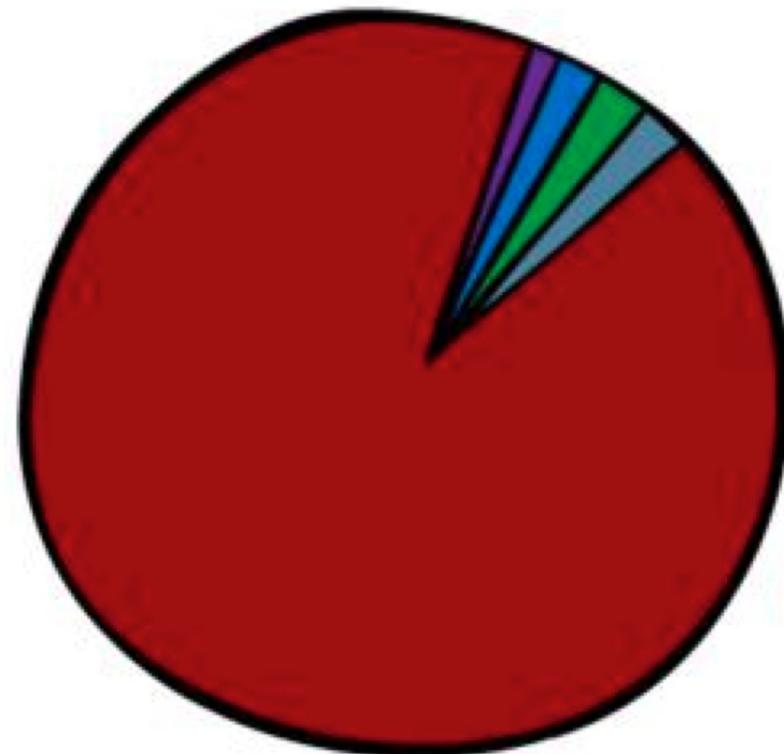
- COMMUNICATION
- RESPONSIBILITY
- COLLABORATION
- TEAMWORK

WHAT GROUP PROJECTS ARE SUPPOSED TO TEACH YOU



- COMMUNICATION
- RESPONSIBILITY
- COLLABORATION
- TEAMWORK

WHAT GROUP PROJECTS TAUGHT ME



- COMMUNICATION
- RESPONSIBILITY
- COLLABORATION
- TEAMWORK
- TRUST NO ONE

THE PROBLEM OF COMPLEX DELIVERABLES

Requiring a complex deliverable such as lengthy documents (or group presentations) is at the heart of most of the really bad problems because:

- The sensible approach is to divide-up the task of creating the final “product.” (Thus, it won’t actually be a **group** assignment).
- Better students are forced to choose between doing more than their fair share of the work or facing the very real risk getting a bad grade.

WHAT GROUP PROJECTS ARE SUPPOSED TO TEACH YOU



IT DOESN'T HAVE TO WORK THAT WAY!

- COMMUNICATION
- RESPONSIBILITY
- COLLABORATION
- TEAMWORK

WHAT GROUP PROJECTS TAUGHT ME



- COMMUNICATION
- RESPONSIBILITY
- COLLABORATION
- TEAMWORK
- TRUST NO ONE

EFFECTIVE TEAM ASSIGNMENTS

Individual
Work

x

Within
Teams

x

Between
Teams

=

Impact on
Learning

Maximum learning occurs when assignments at each stage are characterized by "4 S's":

- **Significant Problem**. Problem involves issues that are significant to *students*.
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PROBLEMS WITH LEARNING GROUPS

Using class time for

Grading group

- Better student
- Less

Using group

- Spend time re
- Teach student

These
problems are
nearly 100%
avoidable if ...

structor to:

ing "free-riders."

PROBLEMS AVOIDABLE BY:

- Individual accountability for PRE-class preparation for group work (Readiness Assurance Process).
- Groups create the final product to be graded *during class time*.
- Using 4 S's group assignments:
 - **Significant Problem**. Problem involves issues that are significant to *students*.
 - **Same Problem**. Individuals/groups work on the same problem, case or question.
 - **Specific Choice**. Individuals/groups must use course concepts to make a specific choice.
 - **Simultaneous Report**. Individuals/groups report their choices simultaneously.

QUESTION:

TOP STUDENTS ARE TREATED UNFAIRLY
IF THEIR GRADES ARE HEAVILY
INFLUENCED BY GROUP WORK.

True or False?

SPRING 2014
(8 TEAMS)

Are Top Students Held Back by Teams?

	Individual Scores			Team Score	Gain or Loss	%Gain or Loss
Team	Low	Avg	High			

↑
Gain (or loss) based on comparing the score of each team to the score of its own BEST member.

SPRING 2014 (8 TEAMS)

Are top students held back by their team?

Team	Individual Totals			Team Total	Gain	% Gain
	Low	Avg.	High			
1	171	193.4	220	308.3	88.3	40.1%
2	144	175.9	219	294.0	75.0	34.2%
3	140	176.9	204	299.3	95.3	46.7%
4	114	205.3	264	300.8	36.8	13.9%
5	173	199.8	223	304.5	81.5	36.5%
6	132	169.1	213	294.8	81.8	38.4%
7	189	216.3	251	324.8	73.8	29.4%
8	170	213.0	290	323.3	33.3	11.5%
Avg.	154.1	193.7	235.5	306.2	70.7	30.0%

Every team score is higher than its own highest scoring member.
Average gain = 30%

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3	140	176.9	204	299.3	95.3	46.7%
4	114	205.3	264	300.8	36.8	13.9%
5	173	199.8	223	304.5	81.5	36.5%
6	132	169.1	213	294.8	81.8	38.4%
7	189	216.3	251	324.8	73.8	29.4%
8	170	213.0	290	323.3	33.3	11.5%
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Average gain = 30%

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Gain (or loss) based on comparing the score of each team to the score of its own BEST member.

WHICH OF THE FOLLOWING IS THE MOST COMMON OUTCOME FOR AN ENTIRE CLASS?

1. The lowest team score is higher than the highest individual.
2. One individual scores higher than the lowest team.
3. More than one individual scores higher than the lowest team.

Are top students held back by their team?

Team	Individual Totals			Team Total	Gain	% Gain
	Low	Avg.	High			
1	128	192.1	245	314.3	69.3	28.3%
2	150	210.3	263	304.5	41.5	15.8%
3	172	215.8	256	321.0	65.0	25.4%
4	172	229.8	259	330.8	71.8	27.7%
5	150	192.9	249	313.5	64.5	25.9%
6	150	192.2	247	296.3	46.3	19.9%
7	159	212.7	273	309.0	36.0	13.2%
8	167	198.3	252	303.8	51.8	20.5%
9	184	195.1	211	308.3	97.3	46.1%
10	158	208.8	266	314.3	48.3	18.1%
11	143	172.2	209	295.5	86.5	41.4%
12	161	213.0	273	318.8	45.8	16.8%
Avg.	157.8	202.8	250.3	310.8	60.6	24.9%

AUTUMN 2013
(12 TEAMS)

The *lowest* team scored 22.5 points higher than the *highest individuals in the entire class*

Gain (or loss) based on comparing the score of each team to the score of its own BEST member.

Are top students held back by their team?

Team	Individual Totals			Team Total	Gain	% Gain
	Low	Avg.	High			
1	142	181.5	244	302.3	58.3	23.9%
2	196	238.5	277	331.5	54.5	19.7%
3	175	195.8	212	318.8	106.8	50.4%
4	200	234.5	294	329.8	35.8	12.2%
5	168	215.5	269	321.8	52.8	19.6%
6	194	231.3	280	324.8	44.8	16.0%
7	180	203.6	244	323.3	79.3	32.5%
8	148	193.2	227	308.5	81.5	35.9%
9	165	207.5	264	307.3	43.3	16.4%
10	174	216.4	241	321.0	80.0	33.2%
11	177	213.2	275	316.5	41.5	15.1%
12	181	235.2	297	339.3	42.3	14.2%
13	137	200.5	264	310.5	46.5	17.6%
14	187	230.8	277	324.0	47.0	17.0%
15	149	207.2	255	308.3	53.3	20.9%
Avg.	171.5	213.6	261.3	319.2	57.8	23.0%

SPRING 2013
(15 TEAMS)

The *lowest* team 5 points higher than the *highest* individuals in the *entire class*

Gain (or loss) based on comparing the score of each team to the score of its own BEST member.

IBE AT UCM (10_{1/2} YEARS):

- 1,246 students in 193 teams.
- 23 individuals higher than the lowest of 193 teams (2%).
- Only 3 (of 22) classes had any individual score higher than the lowest team in the class.

Since 1986 — 6,738 students in 1,210 teams:

- 1,209 teams scored higher than their own BEST member (99.9+% of teams).
- 1 individual outscored his team (<.1% of teams).

QUESTION:

TOP STUDENTS ARE TREATED UNFAIRLY
IF THEIR GRADES ARE HEAVILY
INFLUENCED BY GROUP WORK.

False