A ROAD TO GREATER INDEPENDENCE

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Auxin lunch session

Stellenbosch

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OUTLINE

1) Setting context
2) Problem identification
3) Possible reasons
4) Possible causes
5) Action plan
6) Results
7) Conclusion

MATHEMATICS 186 – SEMESTER 1

- All assessment opportunities are **compulsory**.

1) Online quizzes – weekly
2) Tutorials and Tutorial tests – weekly
3) Early Assessment Test (Test 1)
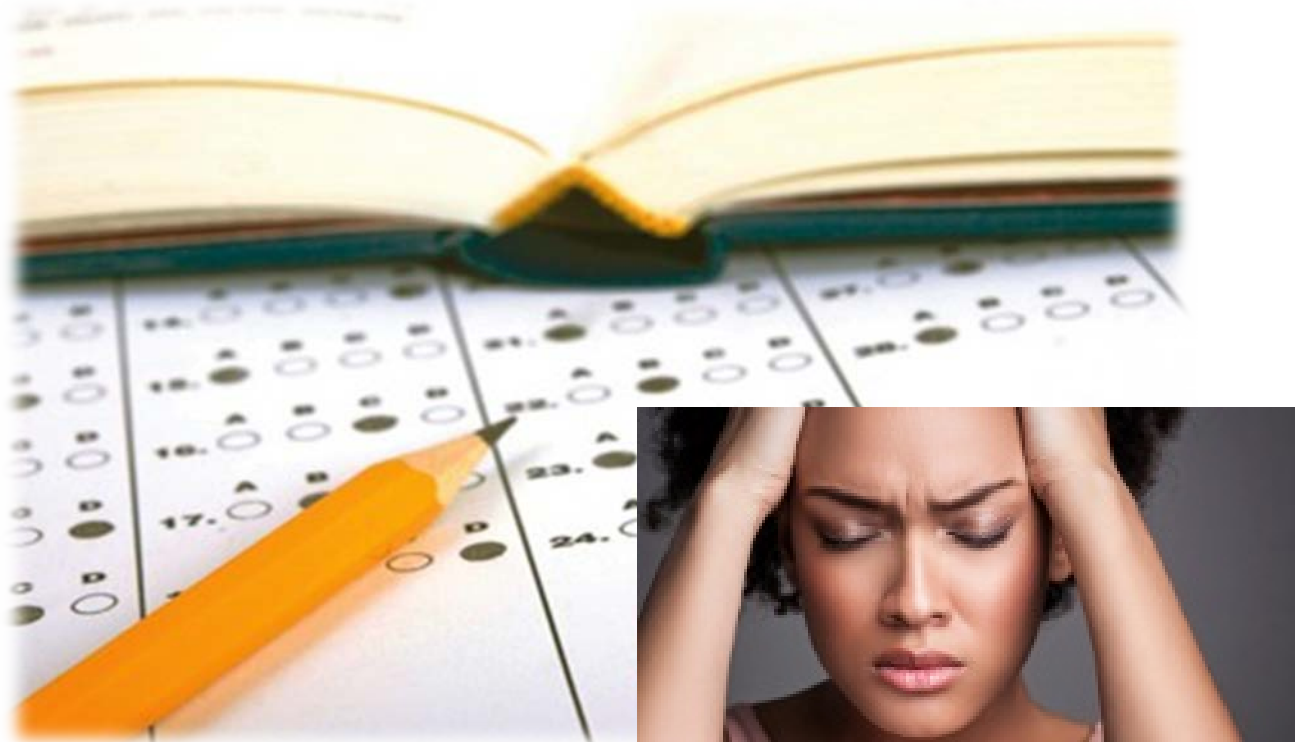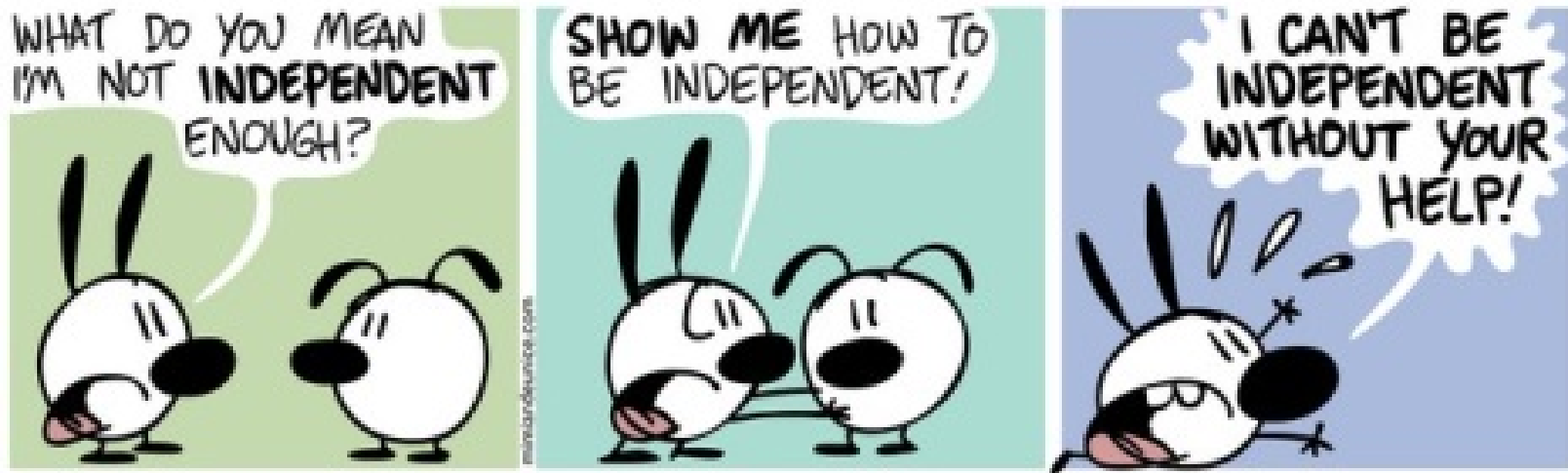4) Semester Test (Test 2)
5) Exam (Test 3)

PROBLEM IDENTIFICATION

- Lecturers have noted the weak performance of a substantial number of 2nd year students
- Dependency on memoranda

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POSSIBLE REASONS

- Students lack academic independence
- Students have superficial content knowledge

Mimi and Eunice – Becoming Independent – http://mimiandeunice.com

POSSIBLE CAUSES

- Mandatory assessment that leads to assessment-dependent learning
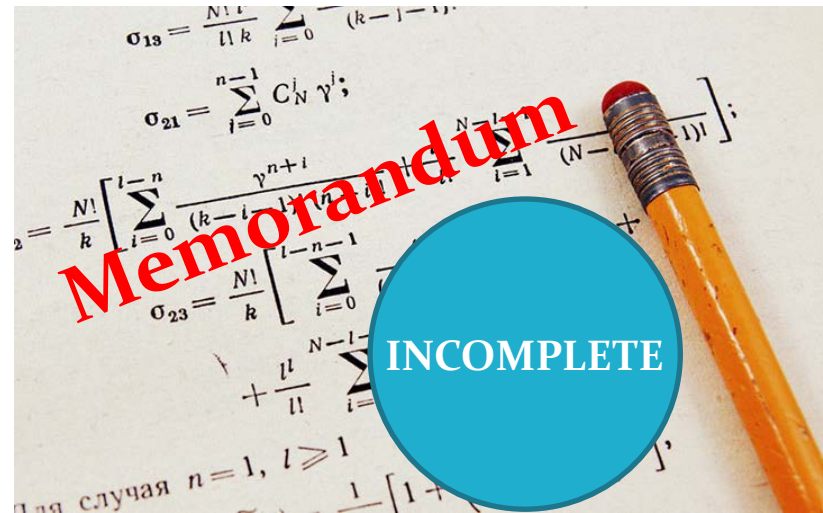- Complete memoranda have been readily available

Sumber Gambar http://www.sodahead.com-

ACTION PLAN (AP)

- Many assessment opportunities are **optional**
- Provide **incomplete** memoranda

OPTIONAL

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Memorandum

INCOMPLETE

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AP - Mathematics 186: semester 2

1) No online quizzes
2) Tutorials and Tutorial tests - optional
3) Early Assessment Test - optional
4) Semester Test (Test 4) - mandatory
5) Exam (Test 5) – mandatory

www.i-l-m.com

AP PROCESS

- Communication is vital
  - Explain the process in detail
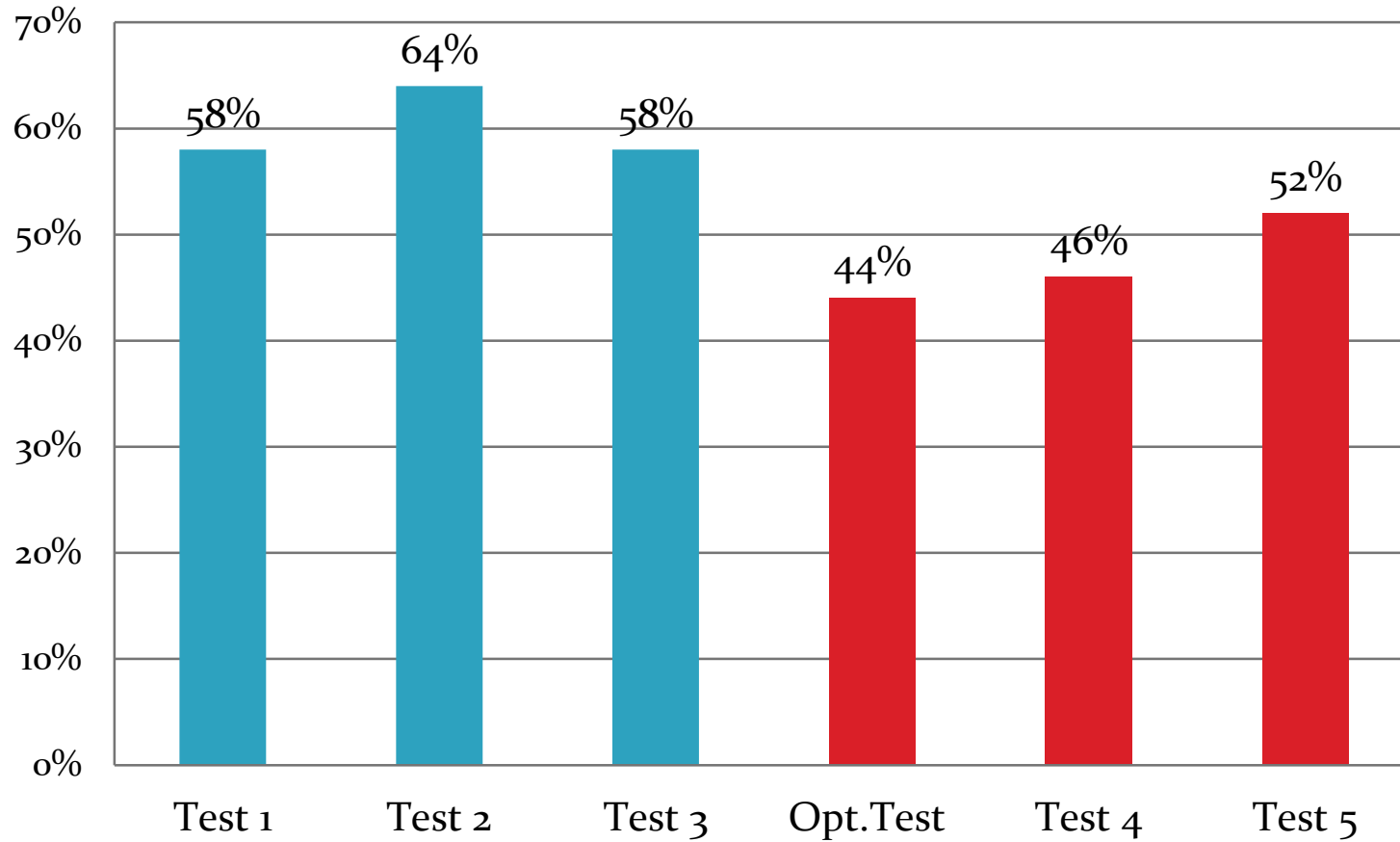 - Motivation and reasoning
  - Positives and negatives

- Motivation
  - Provide regular support
  - Ask a student from the previous year
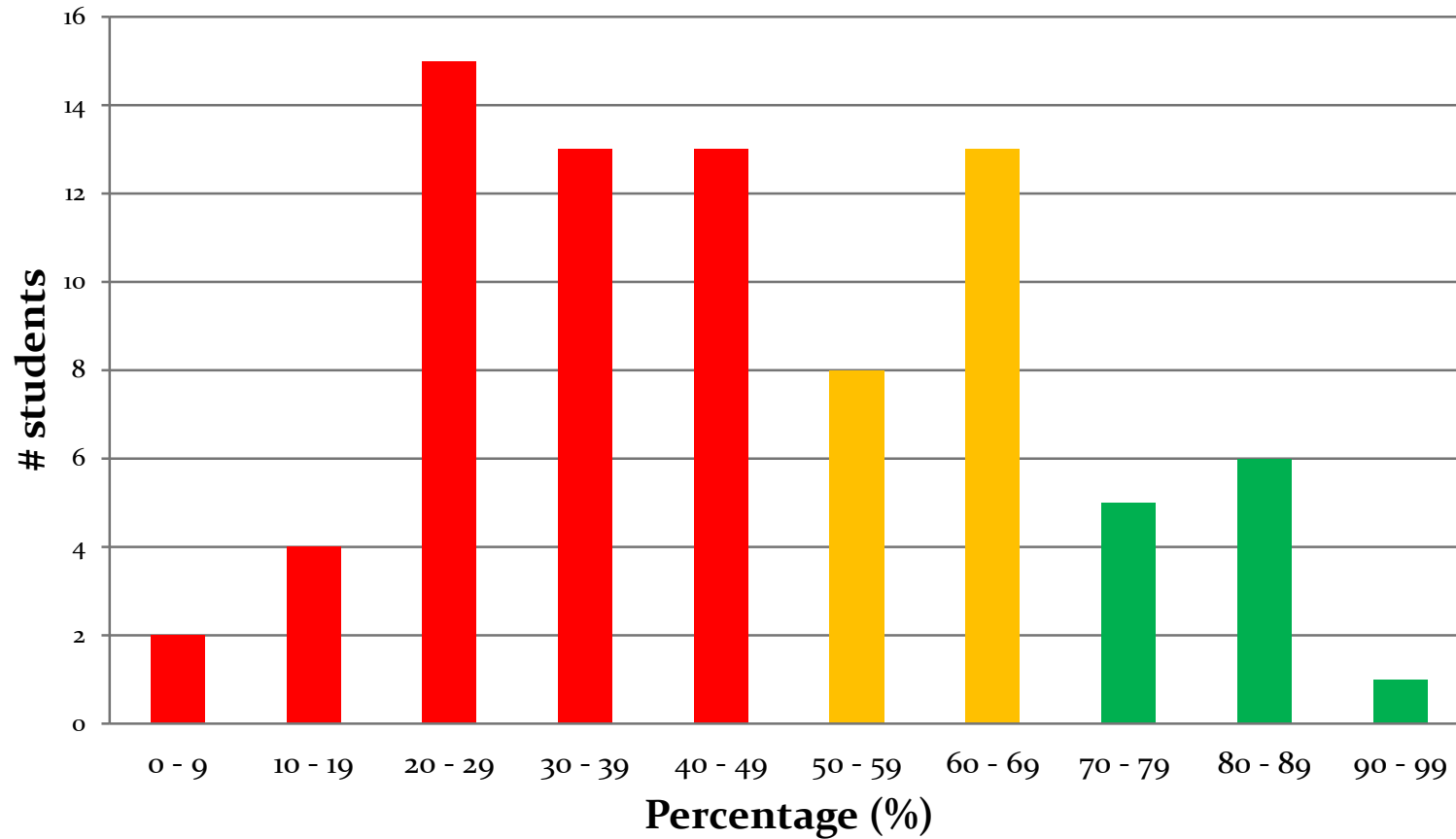 to come and talk to the current students

RESULTS

Test averages

TEST 4 (80 students)

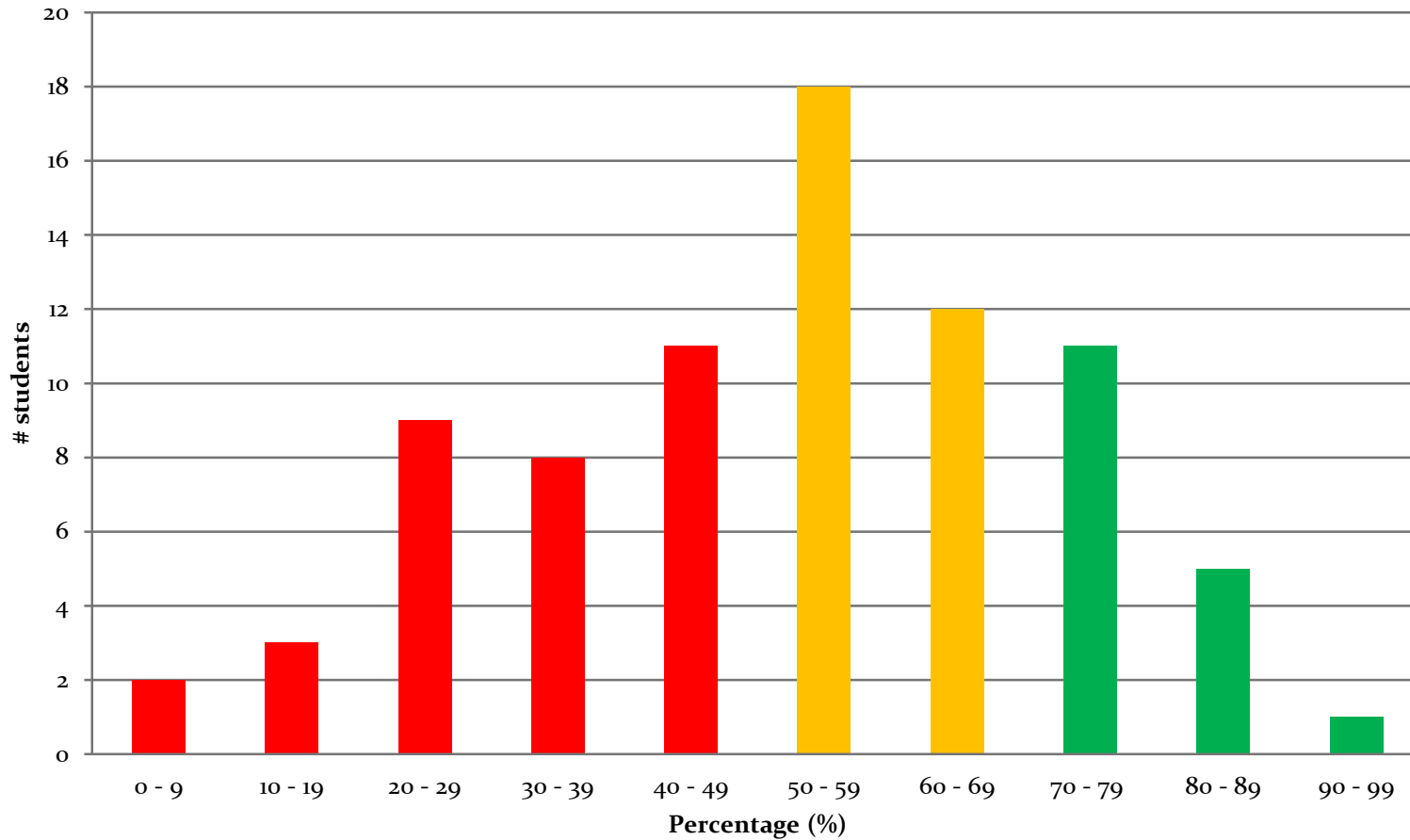Average: 45.6%   <50%: 47 students

TEST 5 (80 students)

Average: 51.8%   <50%: 33 students

SEMESTER 1 vs SEMESTER 2

	Semester 1	Semester 2
# Students	83	80
1) Average	59%	49%
≥ 50%	67 (84%)	44 (55%)
2) Increase in %		17 (21%)
≥ 50%		16 (94%)
3) At risk students	19 (23%)	
≥ 50%		6 (8%)

At risk students (1ˢᵗ semester)

Bar chart titled "At risk students (1st semester)" with y-axis labeled "Percentage" ranging from 0 to 80, and x-axis labeled "Number of students" ranging from 1 to 19.
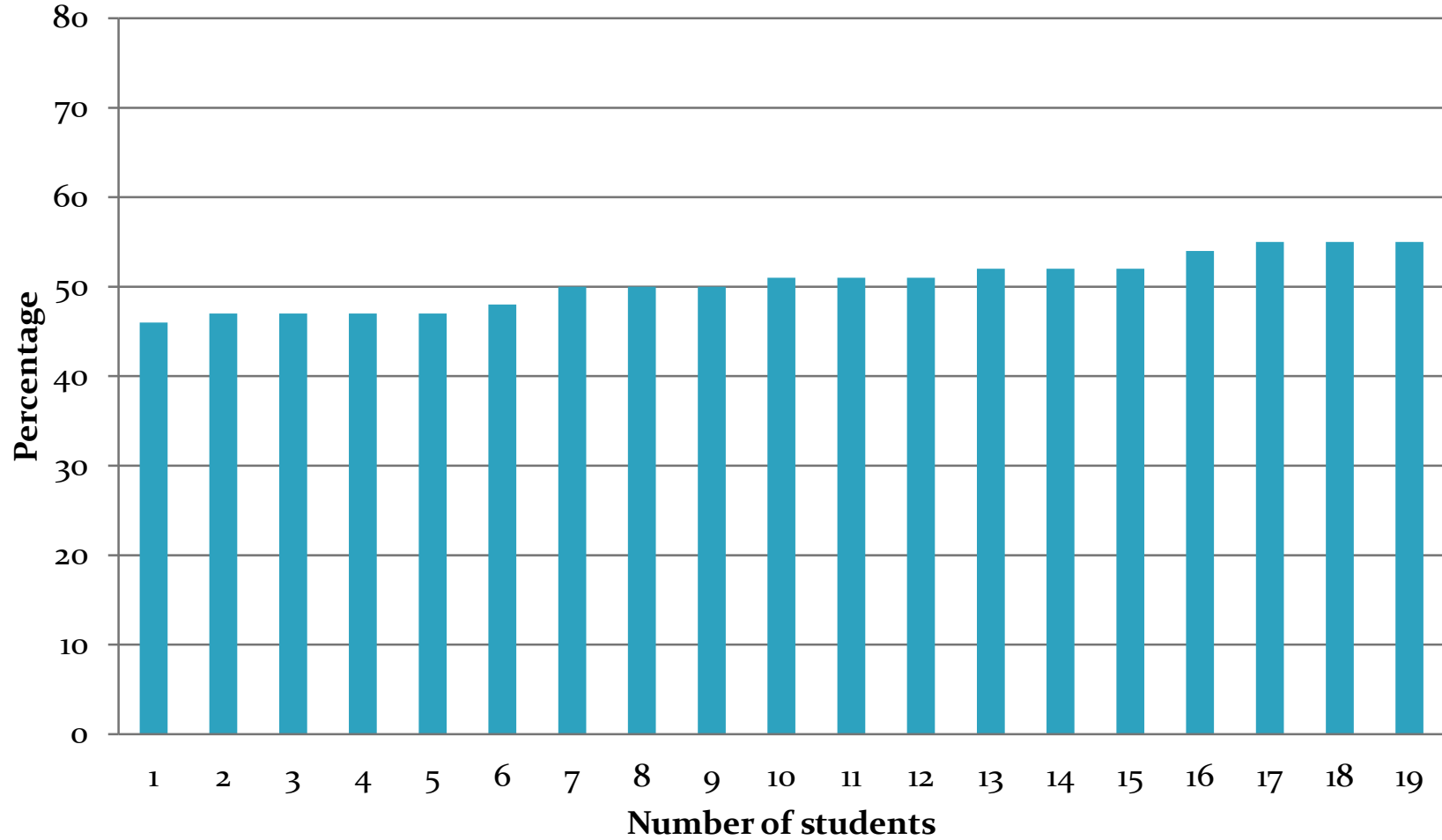
At risk students (2ⁿᵈ semester)

At risk students

Chart showing percentage of at risk students for 19 groups, with blue and red bars. X-axis: Number of students (1-19), Y-axis: Percentage (0-80).
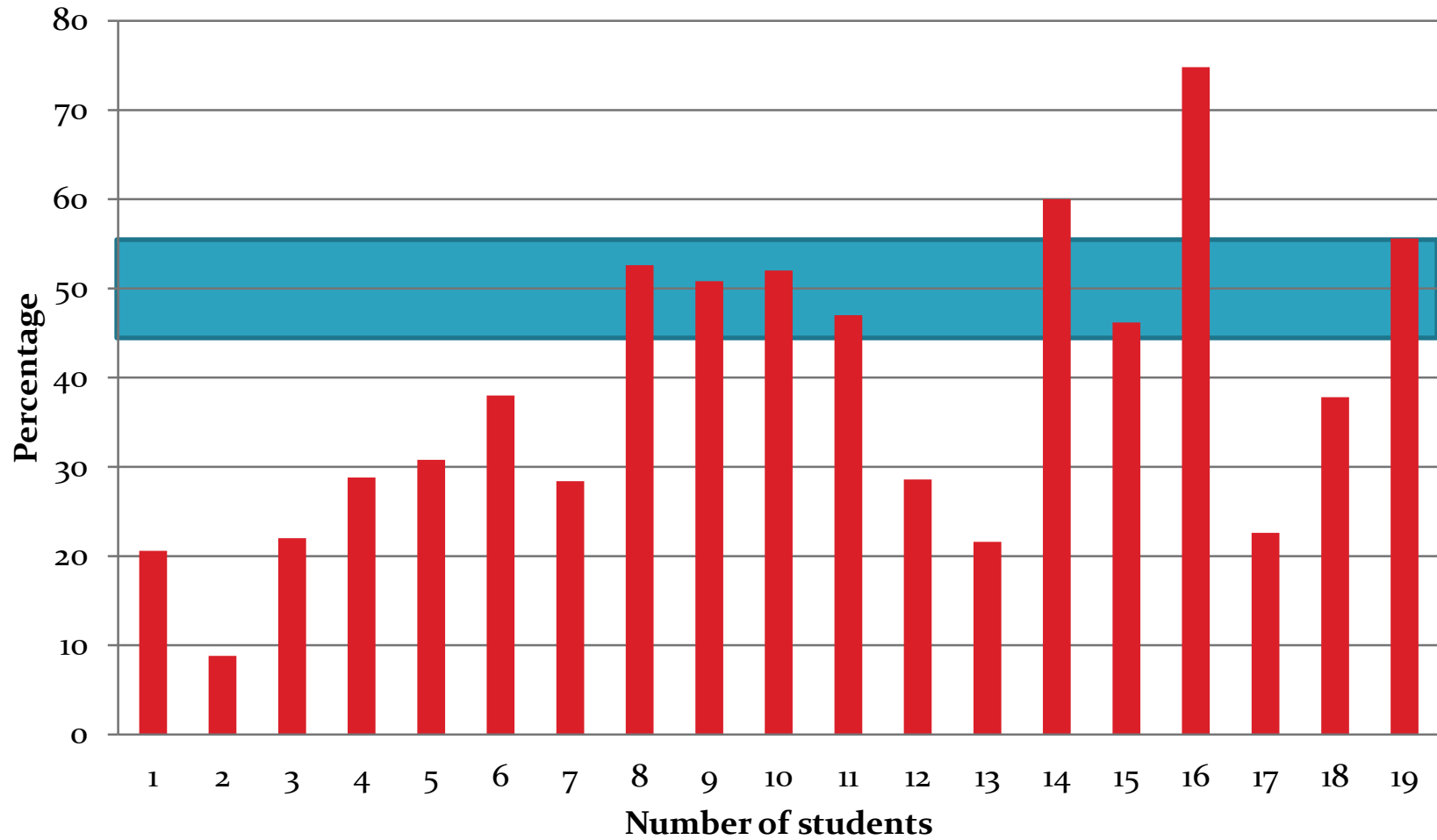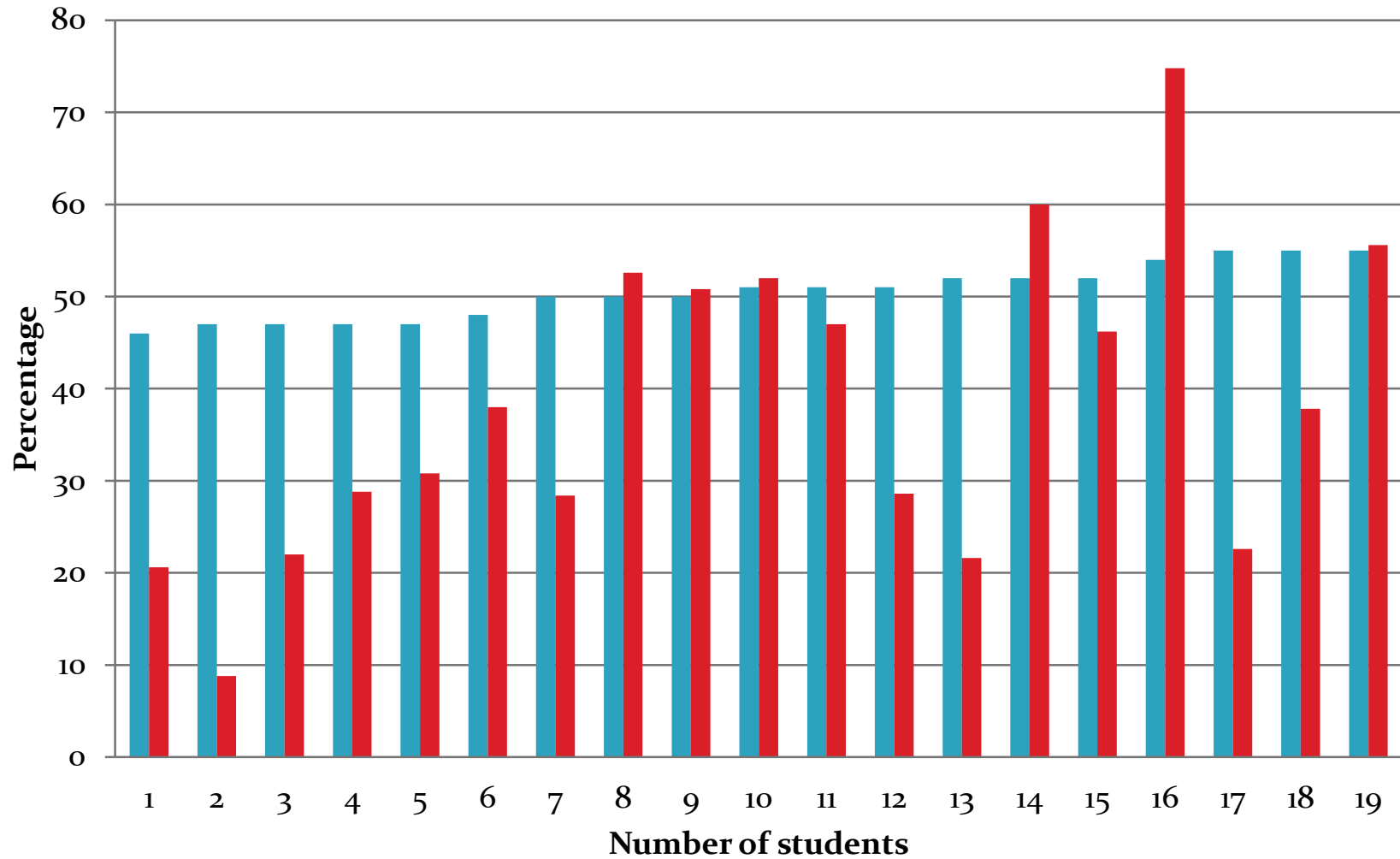
TUTORIAL TESTS (2ND SEMESTER)

# TUTORIAL TESTS	ATTENDANCE	AVERAGE	# STUDENTS	≥ 50%	PERCENTAGE
1	74 (93%)	46%	1	0	0%
2	79 (99%)	57%	1	0	0%
3	78 (98%)	55%	7	1	14%
4	68 (85%)	61%	8	3	38%
5	60 (75%)	58%	17	7	41%
6	57 (71%)	66%	19	10	53%
7	20 (25%)	65%	10	7	70%
8	30 (38%)	49%	17	16	94%

% pass rate of students who wrote Tutorial Tests

Bar chart. X-axis: # Tutorial tests (1 to 8). Y-axis: Percentage pass rate (0 to 100).
- 1: 0
- 2: 0
- 3: 14
- 4: 37
- 5: 41
- 6: 53
- 7: 70
- 8: 94
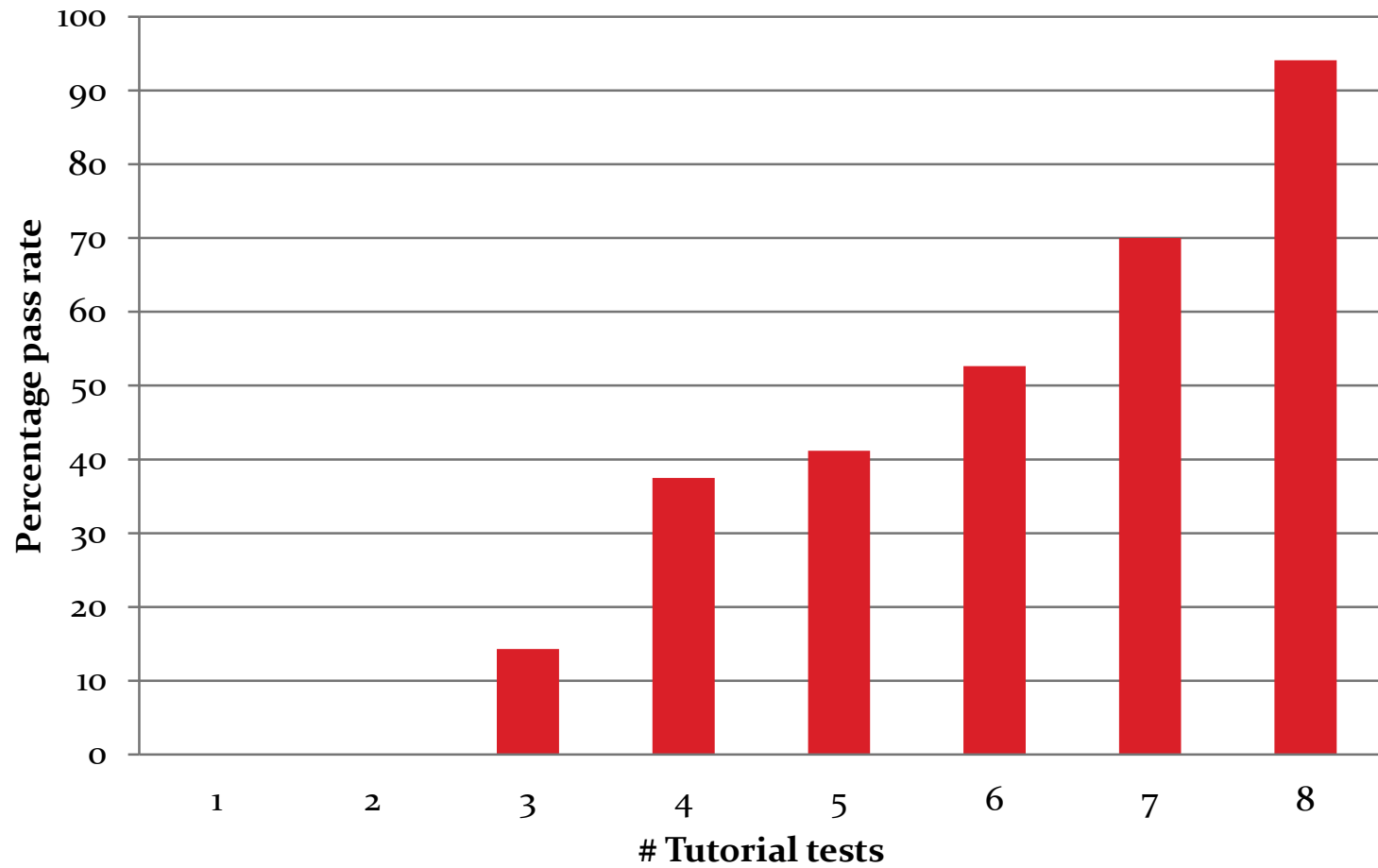
CONCLUSION

- This model requires
  - Communication
  - Motivation
  - Support

- This model seeks to provide
  - Greater academic independence
  - Deeper understanding
  - Less administration

- Room for improvement
  - Greater support for the at-risk students

The End