Diverse Learners in a Success Course: A Canadian Case Study

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Overview

This session explores the process of building and rebuilding a Success Course to engage and respond to the needs of diverse learners. As we discuss measures for developing and improving transitional supports, we will examine:

- characteristics of the “non-traditional” student
- revising a Success Course for diverse learners
- longitudinal measures of efficacy:
  - the Learning and Study Strategies Inventory or LASSI-2 (Weinstein, Palmer & Shute, 2002), persistence rates, and academic performance outcomes


Bering Sea
Bering Strait
Chukchi Sea
ARCTIC OCEAN
Beaufort Sea
Axel Heiberg Island
Ellesmere Island
Patrick Island
Sverdrup Islands
Queen Elizabeth Islands
Melville Island
Banks Island
Devon Island
Prince of Wales Island
Victoria Island
Boothia Pen.
Baffin Island
Melville Pen.
Baffin Bay
Davis Strait
Greenland Sea
Norwegian Sea
Torshavn
GREENLAND
Denmark Strait
ICELAND
Reykjavik
Brooks Range
Mt Mckinley
YUKON TERRITORY
Mt Logan
Whitehorse
Gulf of Alaska
PACIFIC OCEAN
Juneau
NORTHWEST TERRITORIES
Yellowknife
Great Bear Lake
Great Slave Lake
Lake Athabasca
NUNAVUT
Nuuk (Godthab)
Cape Howe
Iqaluit
Hudson Strait
0 500 Miles
0 500 KM
Labrador Sea
Queen Charlotte Islands
ALBERTA
BRITISH COLUMBIA
Vancouver Island
Edmonton
Hudson Bay
MANITOBA
NEWFOUNDLAND & LABRADOR
Newfoundland
St. John's
Victoria
Vancouver
Calgary
Olympic Mts
Seattle
Olympia
Spokane
Portland
Salem
SASKATCHEWAN
Regina
Winnipeg
CANADA
ONTARIO
QUEBEC
Gulf of St. Lawrence
NEW BRUNSWICK
PRINCE EDWARD ISLAND
Charlottetown
Quebec
Fredericton
Halifax
Helena
Bismarck
Boise
Montreal
Ottawa
Augusta
NOVA SCOTIA
Montpelier
Minneapolis
St. Paul
Toronto
Concord
Boston
Albany
Cape Cod
Hartford
Sacramento
San Francisco
Oakland
Carson City
Salt Lake City
Cheyenne
Milwaukee
Madison
Chicago
Lansing
Detroit
Buffalo
Cleveland
Harrisburg
New York
Trenton
Omaha
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Des Moines
Denver
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ATLANTIC OCEAN

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Non-traditional learners

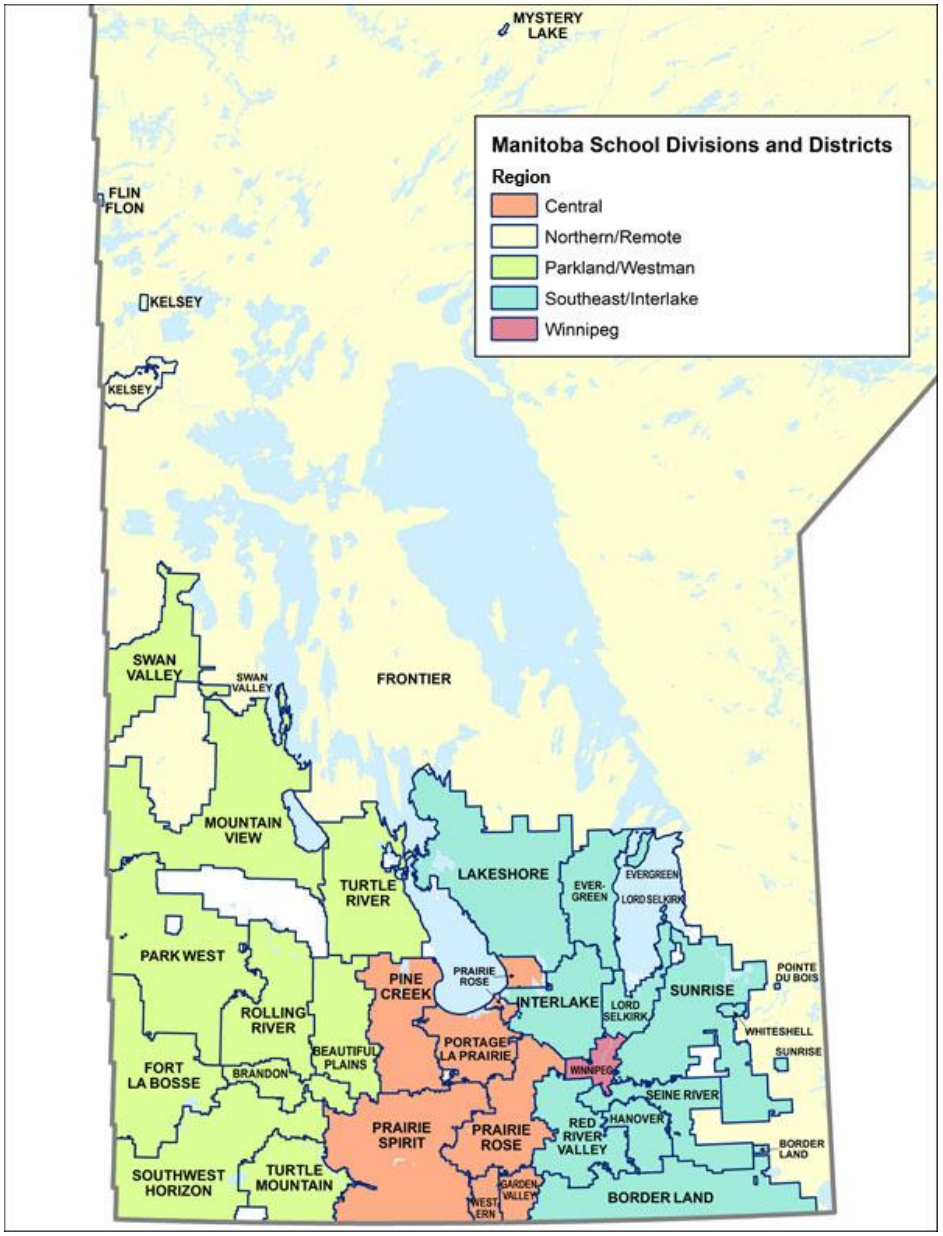
Many of our students could be characterized as non-traditional, with circumstances or backgrounds that would have made them unlikely to attempt or be successful at other tertiary institutions

What measures are used to characterize “non-traditional” or diverse learners?

According to the National Center for Education Statistics (2010) in the U.S., characteristics or factors that identify non-traditional learners include:

- Non-sequential learner
- Part-time studies
- Works 35 hours a week or more
- Has dependents
- Single parent
- Has a completion certificate rather than a high school diploma
- Is financially independent

Northern and Remote School Division



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Building a Success Course

- Fundamentals of Inquiry was approved by Senate as a credit-bearing course for 2005 to address issues of academic preparation as well as integration into the greater academic community
  - Not an extended orientation program
- An interdisciplinary course designed to emphasize skills that transfer broadly across disciplines

  - team taught
- Incoming students referred (through counsellor or self) are *encouraged* to take this critical thinking and learning skills "Success Course"
- High standards including a major Research Paper

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Control Group

- Students in Introductory Psychology participated in the Research Board approved study for additional research credit in their course
- Tracked since their enrolment in 2005 or 2006
- Institutional records accessed included high school grades, age, prior GPA (if any), and geographical catchment area
- Students completed the LASSI-2 in the first and last weeks of the semester

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Demographics

Control Group (Psychology Class)

- n =78, 2005-2007
- 19.2% male
- 29% (n=23) with at least one “risk factor”

Success Course (Inquiry Class)

- n = 172, 2005-2011
- 24.4% male
- 64% (n=110) with at least one “risk factor”

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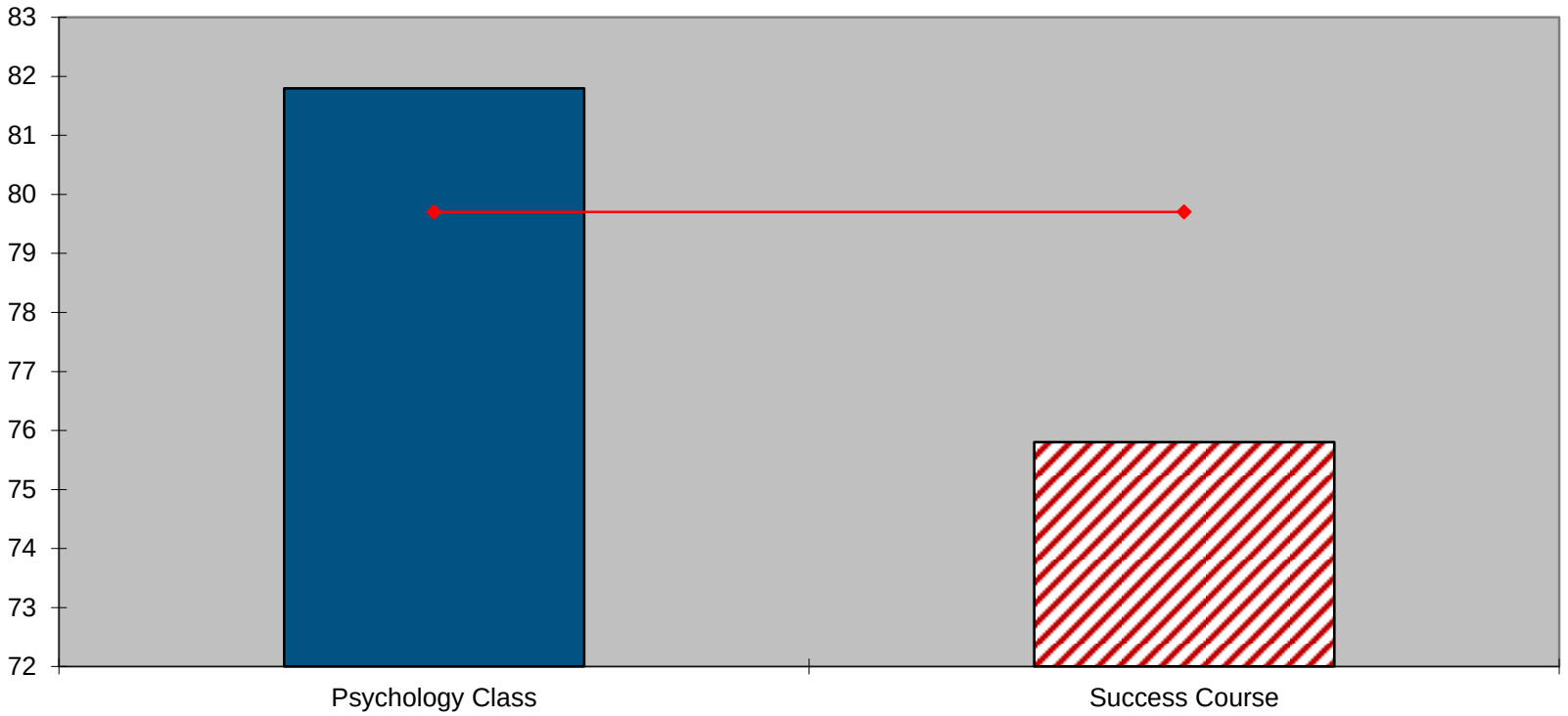
High School Grades



Potential Risk Factors – comparison issues

	Psychology Class	Success Course
Health Issues	n/a	19.2% (n=33)
International or EAL Student	6.4% (n=5)	2.9% (n=5)
College Transfer	2.6% (n=2)	7.6% (n=13)
No High School	1.3% (n=1)	8.1% (n=14)
Northern or Remote School Division	7.7% (n=6)	15.1% (n=26)

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Potential Risk Factors – significant differences

	Psychology Class	Success Course	Chi-Square
Prior GPA (on a 4.0 scale)	2.60 2.6% ≤ 2.0	1.88 18.6% ≤ 2.0	χ^2 (df 1) = 11.751, p = .001
Low high school average	8.3%	28.9%	χ^2 (df 1) = 11.797, p = .001
Mature	6.4%	25.6%	χ^2 (df 1) = 12.516, p = .000
Self-declared Aboriginal ancestry	8.9%	15.1%	χ^2 (df 1) = 5.386, p = .02

Rebuilding the Success Course

- Moved from team-taught to central instructor with guest lectures
- Revised curricula:
  - theories of attributions and motivation
  - weekly writing tasks
  - peer review in small groups
- Added a one hour a week lab or small group tutorial led by a peer mentor

Fundamentals of Inquiry labs

- ✓ Peer cooperative learning program
- ✓ Allow for more informal interaction
- ✓ Emphasize learning as a process
- ✓ Practice specific skills discussed in class
- ✓ Encourage the discussion of affective components of learning

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LASSI-2 Overview

Provides standardized scores and norms for a 10-scale assessment of students' awareness about and reported use of learning and study strategies:

- Freedom from anxiety, attitude, concentration, information processing, motivation, self-testing, selecting main ideas, use of support services, time management or test taking.

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Weinstein, Palmer & Schulte (2002)

- WILL components
  - attitude, motivation, concentration
- SKILL components
  - selecting main ideas, information processing, test strategies
- SELF REGULATION components
  - anxiety, time management, use of study aids, self-testing

Percentiles	ANX	ATT	CON	INP	MOT	SFT	SMI	STA	TMT	TST
95										
90										
85										
80										
75										
70										
60										
55										
50										
45										
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35										
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25										
20										
15										
10										
5										

Percentiles	ANX	ATT	CON	INP	MOT	SFT	SMI	STA	TMT	TST
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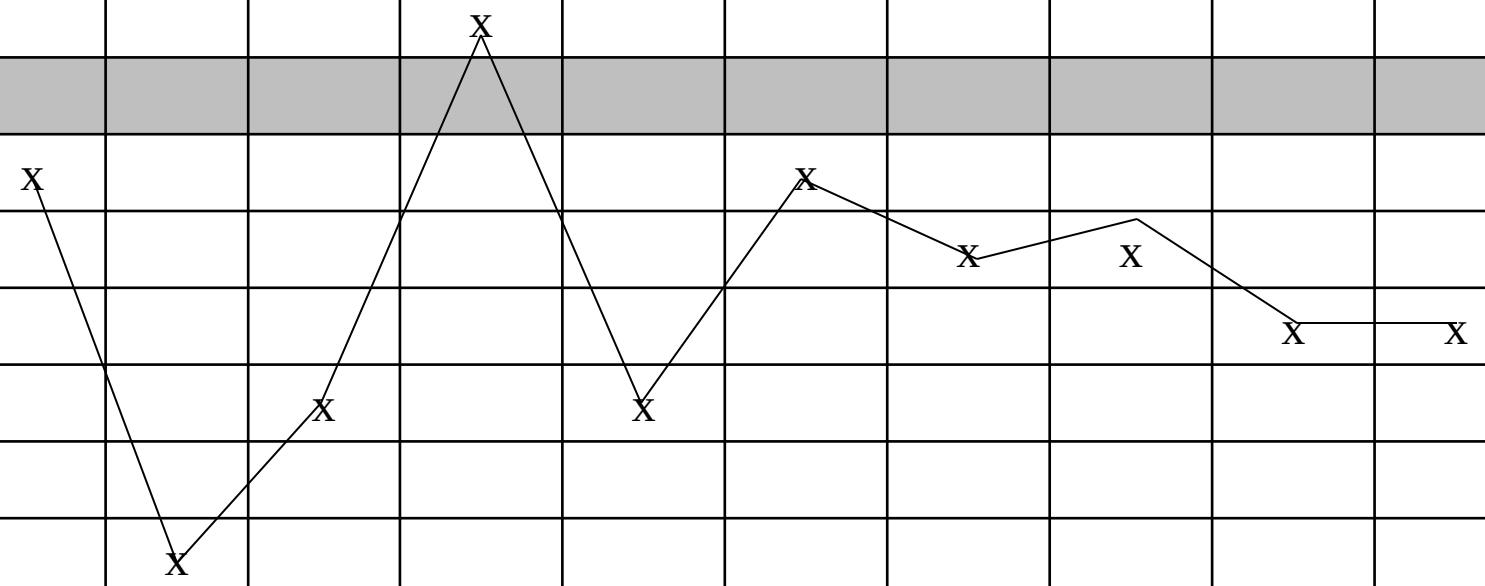
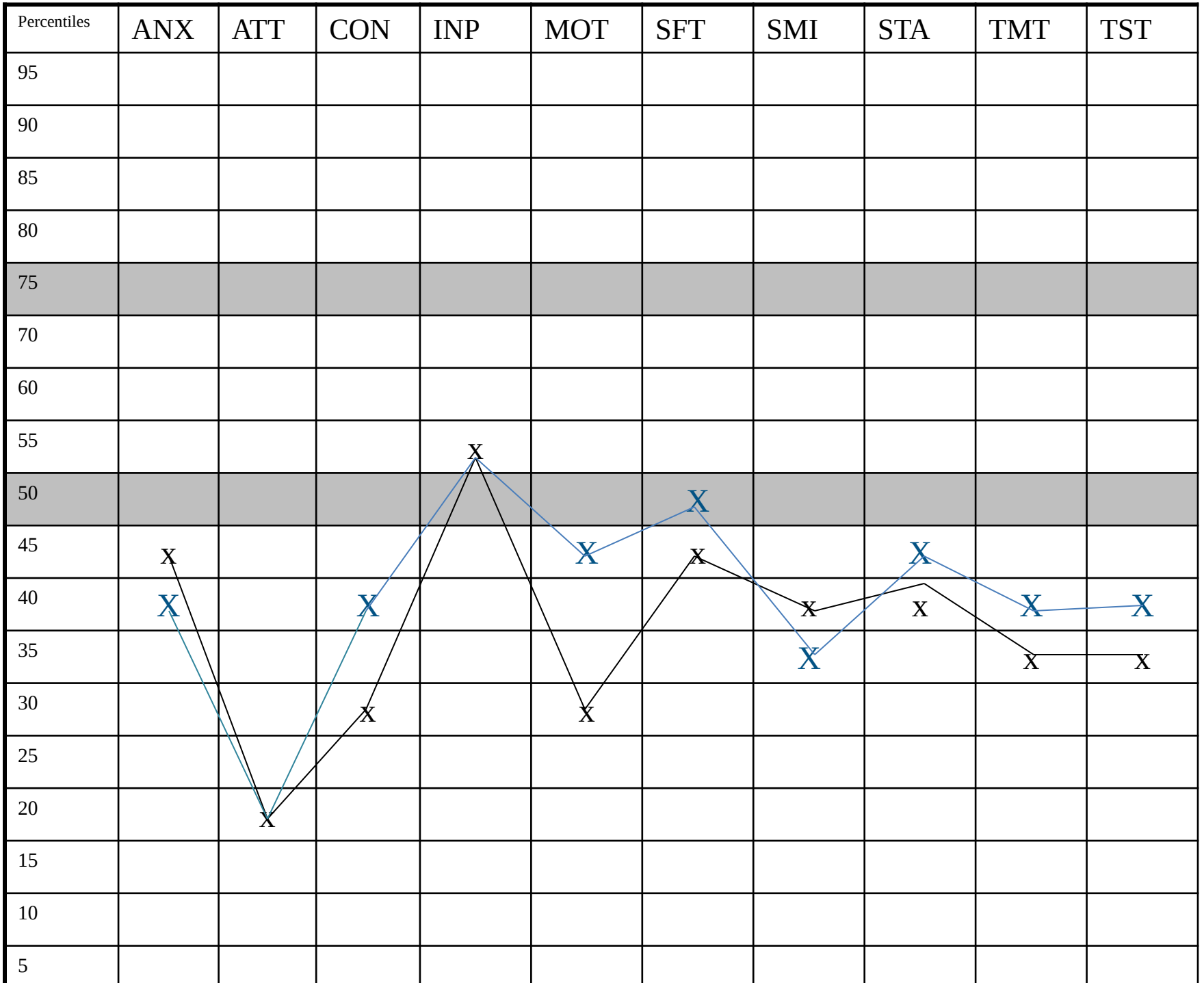


Marland, Dearlove & Carpenter (2015)

- LASSI concentrates “on cognitive, behavioural and attitudinal approaches to learning in isolation from individual, national or disciplinary educational contexts” (p. A-42).
- Raises issues about the use of the LASSI with mature students who are relying on their recollection of behaviour during high school
- Examines the latent constructs which underlie the grouping of the ten subscales


Percentiles
ANX
ATT
CON
INP
MOT
SFT
SMI
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TST
95
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75
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50
45
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30
25
20
15
10
5

Percentiles	ANX	ATT	CON	INP	MOT	SFT	SMI	STA	TMT	TST
95										
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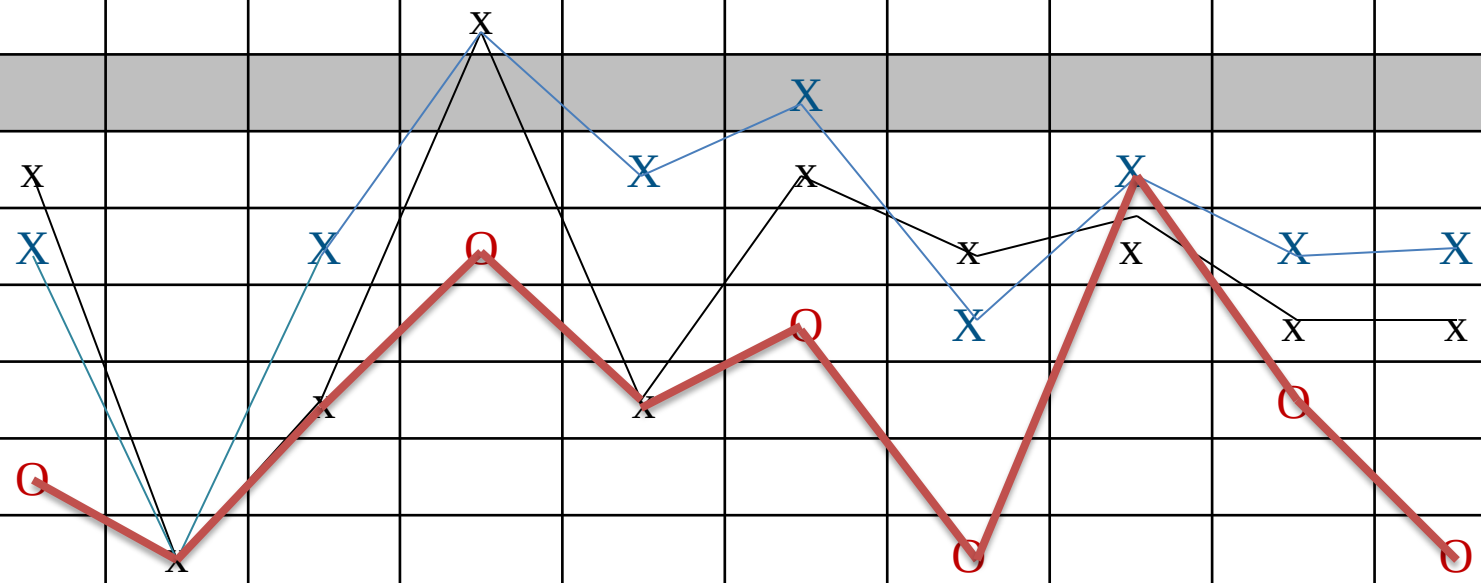
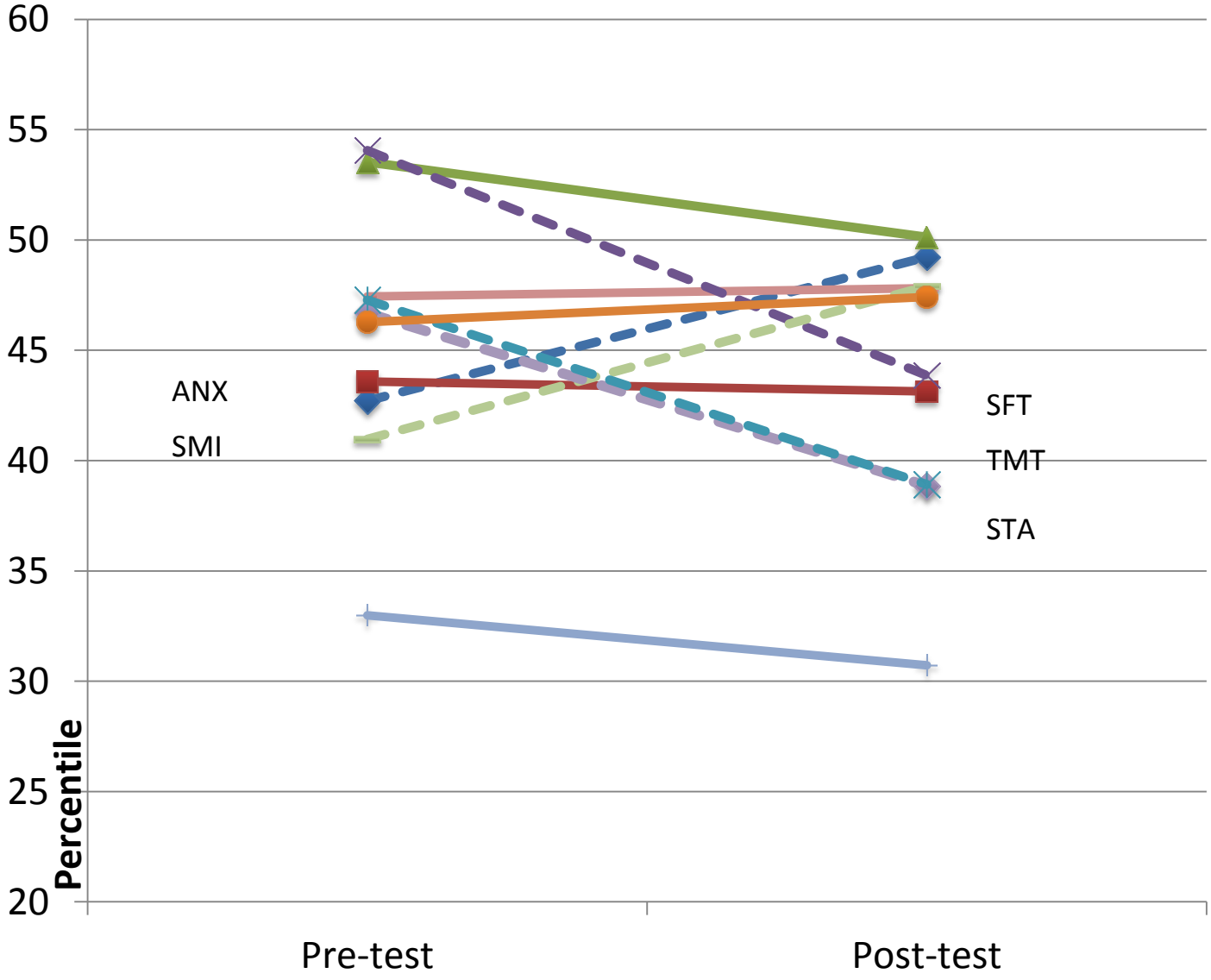
5										



Control

Scale	Pre-Test Mean	Post-Test Mean	Significance
ANX	24.12	25.62	$p < .05$
ATT	31.50	30.82	
CON	26.15	26.15	
INP	28.13	27.85	
MOT	31.10	31.13	
SFT	25.51	23.73	$p < .01$
SMI	26.50	28.12	$p < .01$
STA	25.12	23.56	$p < .01$
TMT	25.82	24.05	$p < .01$
TST	28.87	28.97	

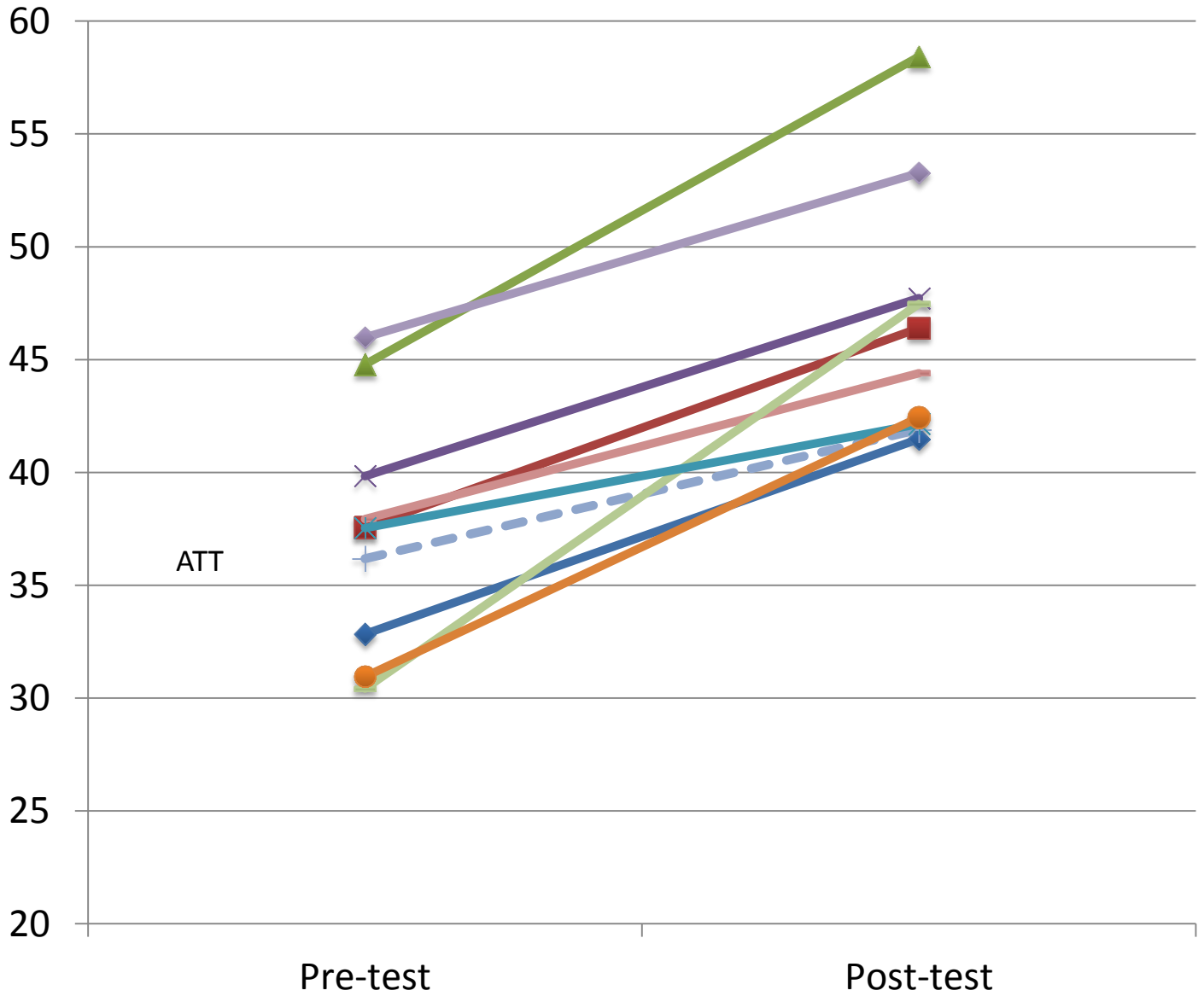
Figure 1. Comparison of Pre-Post LASSI Percentiles for Students in Control Group



Success Course

Scale	Pre-Test Mean	Post-Test Mean	Significance
ANX	21.30	23.65	$p < .001$
ATT	31.91	32.37	$p > .05$
CON	24.76	26.79	$p < .001$
INP	26.56	28.98	$p < .001$
MOT	29.06	30.55	$p < .001$
SFT	22.82	24.44	$p < .001$
SMI	23.91	27.90	$p < .001$
STA	25.09	26.45	$p < .01$
TMT	23.65	24.84	$p < .01$
TST	25.66	27.95	$p < .001$

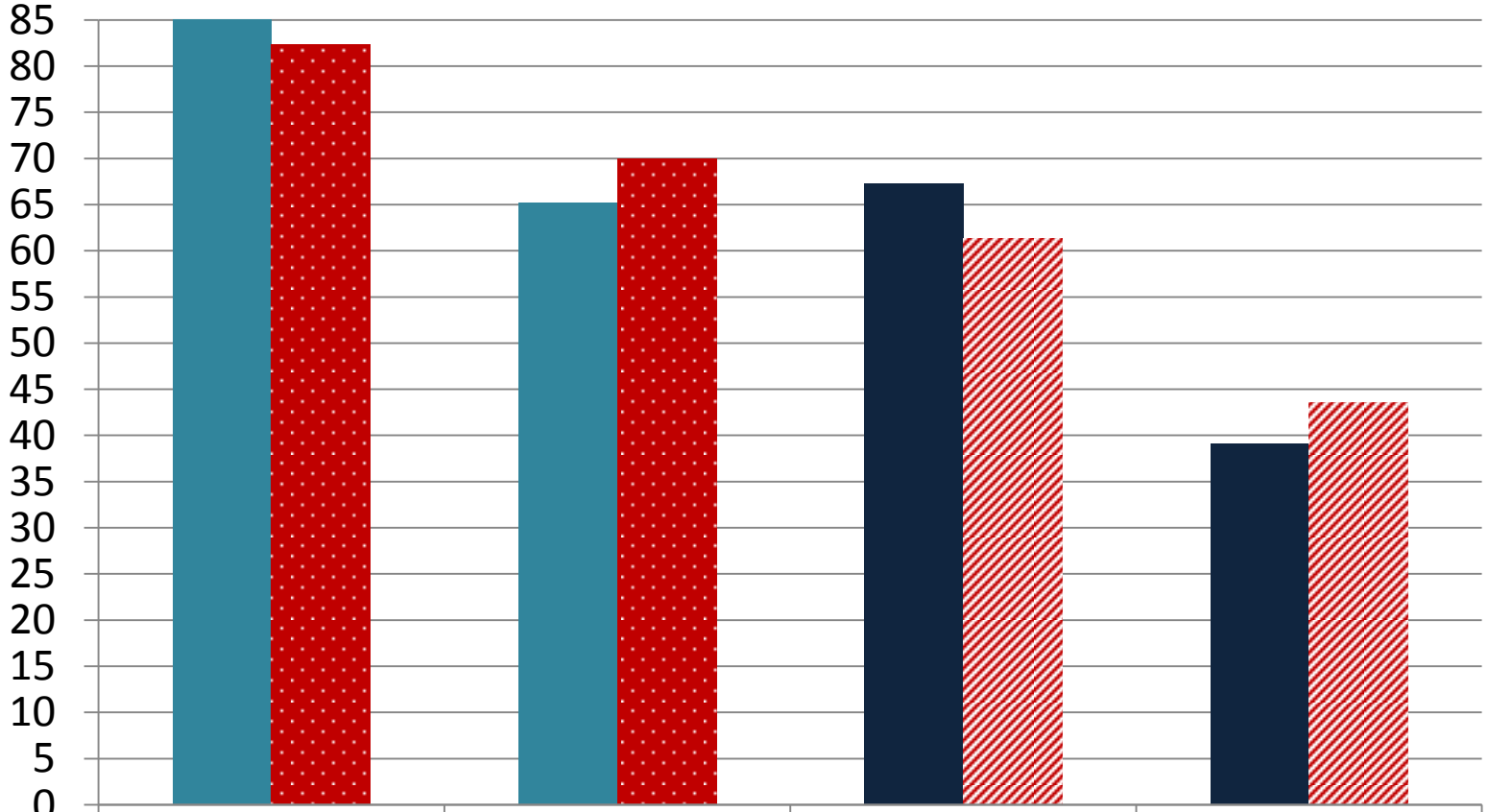
Figure 2. Comparison of Pre-Post LASSI Percentiles for Success Course



Latent Constructs: 3-factor agreement

- Comprehension:
  - Information Processing (with Self-Testing and perhaps Use of Study Aids)
- Goals:
  - Freedom from Anxiety (with Selecting Main Ideas and Test Strategies)
- Self-Regulation:
  - Affect: Attitude + Motivation
  - Effort: Time Management + Concentration

Persistence Rates (%)



	Retention for Traditional Learners	Retention for Nontraditional Learners	Graduation for Traditional Learners	Graduation for Nontraditional Learners
Control Group	85.5	65.2	67.3	39.1
Success Course	82.3	70	61.3	43.6

Academic Performance

For the Control Group,

- There was a significant correlation of nontraditional status and sessional GPA, r=-.25, p=.03
  - No other factor reached this level of significance

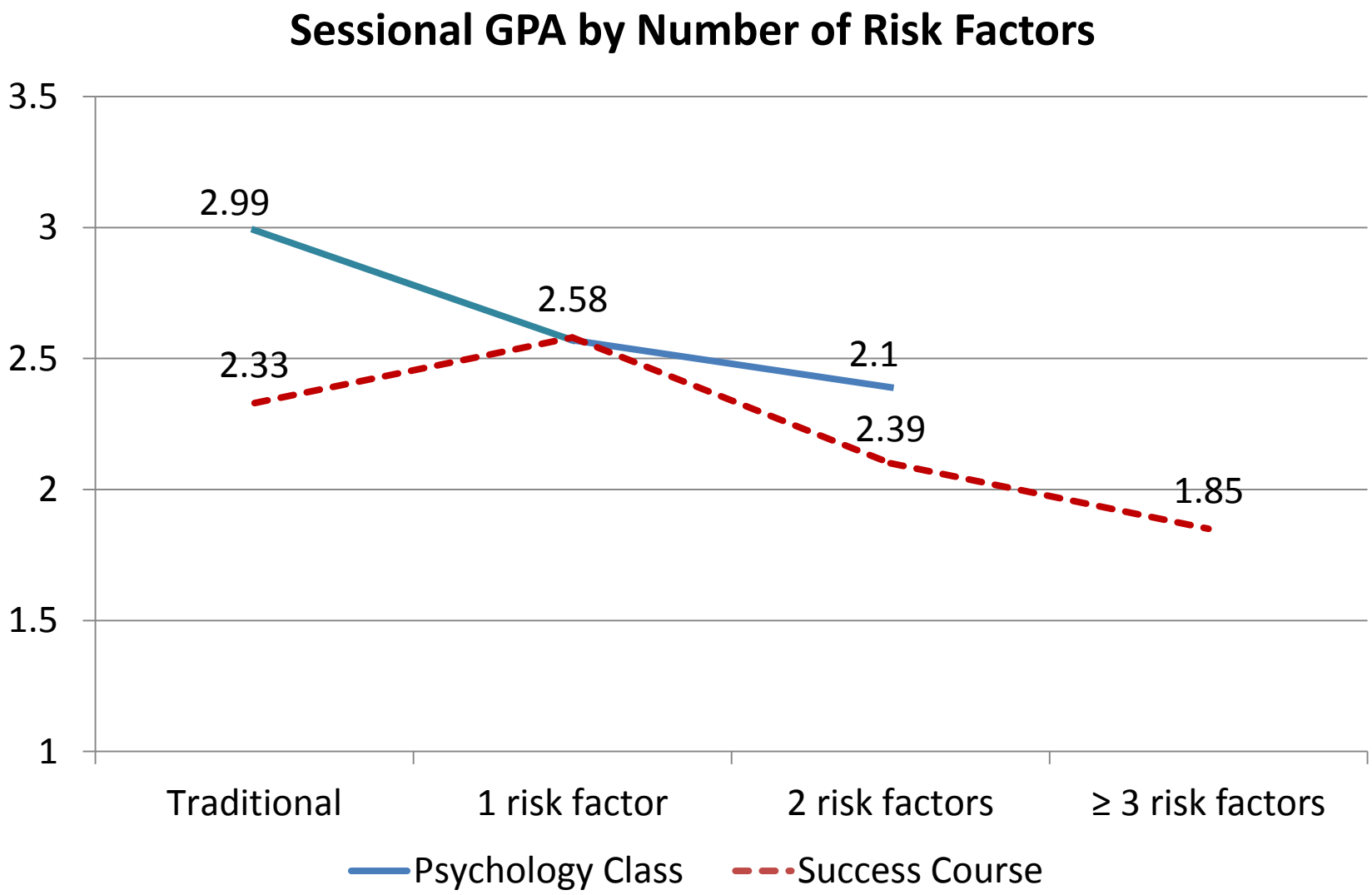
- Significant difference between sessional grades for traditional and non-traditional learners ($t_{(75)}$=2.231, p = .03)
  - Traditional students M = 2.99, SD = .78
  - Non-traditional students M = 2.54, SD = .88

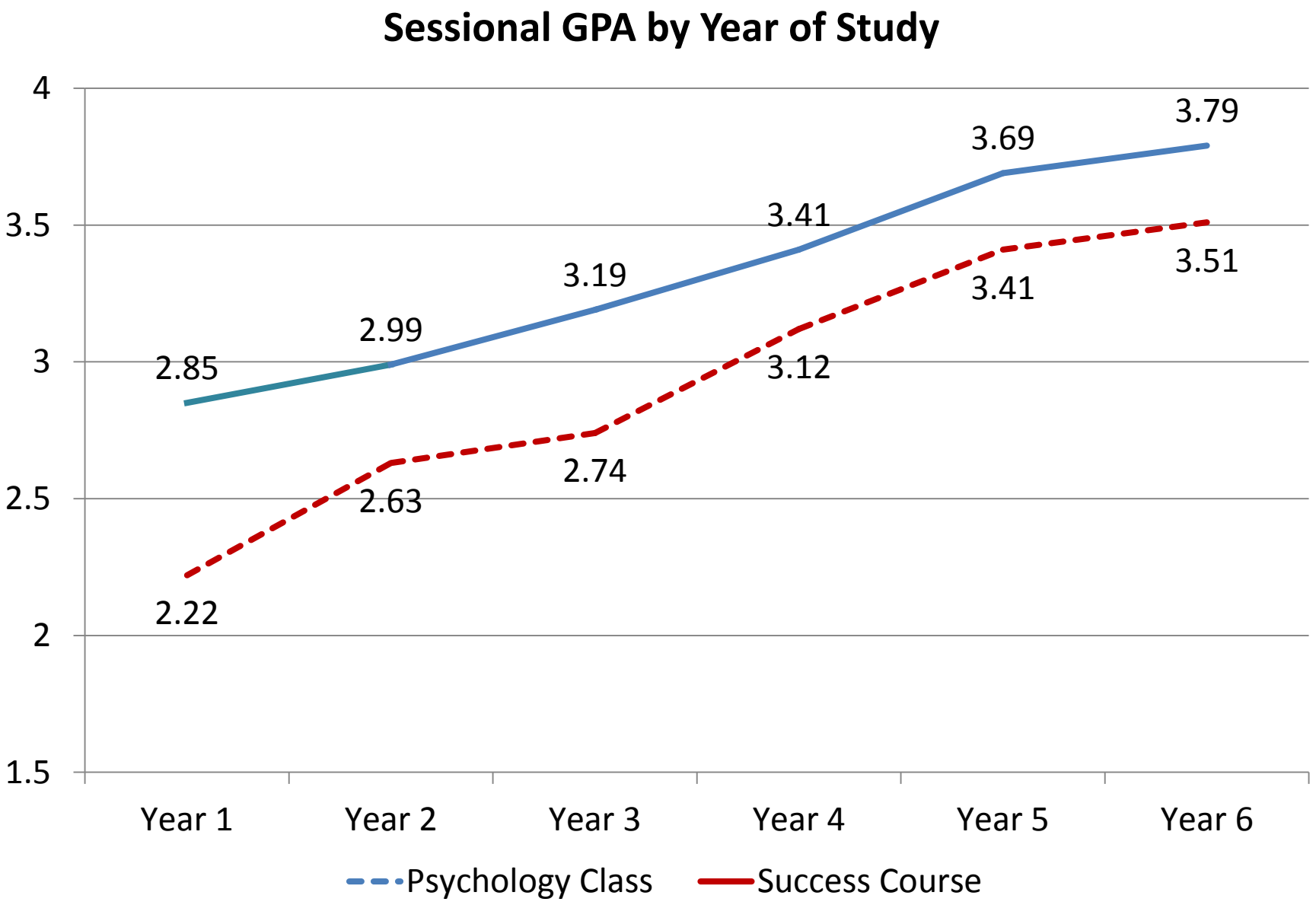
Academic Performance

For the Success course,

- No difference between sessional grades for traditional and non-traditional learners (p =.29)
  - Traditional students M = 2.33, SD = .95
  - Non-traditional students M = 2.16, SD = 1.06

- Significant correlation between **# risk factors** and sessional GPA, r=-.21, p=.006


Sessional GPA by Number of Risk Factors
3.5
3
2.5
2
1.5
1
2.99
2.58
2.1
2.33
2.39
1.85
Traditional
1 risk factor
2 risk factors
≥ 3 risk factors
Psychology Class
Success Course


Sessional GPA by Year of Study
4
3.5
3
2.5
2
1.5
2.85
2.99
3.19
3.41
3.69
3.79
2.22
2.63
2.74
3.12
3.41
3.51
Year 1
Year 2
Year 3
Year 4
Year 5
Year 6
Psychology Class
Success Course

Summary - Results

- ✓ Just being a non-traditional learner was associated with lower grades, more attrition and a lower graduation rate in the control group

- ✓ For the Success class there appears to be an additive effect of the number of risk factors

Summary - Implications

Incorporating labs into the Success Course:

- ✓ help students improve their awareness of and use of learning skills
- ✓ while keeping their self-efficacy beliefs grounded in reality
- ✓ provides practice opportunities and frequent feedback to facilitate transferability of these skills
- ✓ more informal interaction with faculty
- ✓ a peer *cooperative* learning environment
  - ✓ a safe space to discuss current challenges and problem-solve solutions

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With thanks and appreciation to the generous contribution of an International Professional Development Grant from the Learning Specialists Association of Canada


Questions?