



Gender Diversity in Business Schools: Examining the Learning Differences Between Traditional Undergraduate Male and Female Students

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Problem Statement

- Females are not proportionally represented in business schools.

	Bachelor's Degrees Conferred - Females		Female Student Population
	2003-04	2013-14	
Universities – All programs	57.5%	57.1%	Steady; dominant %
All Business Schools	50.3%	47.4%	Decline; minority %
AACSB Business Schools	46.5%	42.6%	Decline; minority %

– Selection of major may be influenced by learning styles, experiences, and environment.

	Female Faculty Population		Female Faculty Population
	2003-04	2013-14	
Universities – All programs	43.4%	48.8%	Growing; minority %
AACSB Business Schools	27.1%	30.7%	Growing; minority %



Purpose Statement

The purpose of the current study was to investigate differences in the learning styles and learning experiences between male and female traditional undergraduate business students in order to recommend strategies for business schools that address the unique learning needs of female students.



Literature Review

- **History and Development of Women's Role in Higher Education**
- **History and Development of Women's Role in the Workforce**
- **Theoretical Frameworks**
 - **Gender Theory** (Hyde, 2005; Ball, Cribble, & Steele, 2013)
 - **Learning Style Theory** (Curry, 1983; Pashler, McDaniel, Rohrer, & Bjork, 2009)
 - **Experiential Learning Theory** (Kolb, 1984)

Research Questions

RQ1

What differences exist in the learning styles of traditional undergraduate male and female business students?

RQ2

What differences exist in the learning experiences of traditional undergraduate male and female business students?

RQ3

What differences exist between traditional undergraduate male and female business students' attitudes toward male professors vs. female professors?

Participants

- Traditional undergraduate junior and senior business students, Fall 2015
- Two small, private Midwestern universities
- Declared one of nine different business majors

Survey Participant Information	Current Study Participants Sample (n=176)	Business Department Populations (N=296)
Gender		
Male	61.9% (109)	63.9% (189)
Female	38.1% (67)	36.1% (107)
Major		
Accounting	15.9%	18.9%
Business Administration	39.1%	39%
Business Psychology	1.1%	1%
Economics/Finance	6.3%	6.2%
International Business	1.7%	4.1%
Management Information Systems	2.3%	3%
Marketing	11.4%	13.4%
Organizational Leadership	4%	3.4%
Sports Management	10.2%	11%
Unspecified primary business major	8%	---

Methodology

Quantitative study, with qualitative input

- **61-question survey instrument (Quantitative)**
 - Comprised of 3 previously used instruments, 11 newly created questions, demographics
 - 176 student respondents
- **3 open-ended questions (Qualitative)**
 - 1 per research question
- **4 gender-specific focus groups (Qualitative)**
 - 1 all-male & 1 all-female at each University
 - 22 students: 10 females; 12 males

Data Analysis Plan: RQ1- Learning Styles (LS)

Survey:

- Kolb Learning Styles Inventory, Version 3.1, paper-based (KLSI 3.1)
 - 12 sentence stems, 4 possible endings (ranked 1-4)

Analyses:

- Data: categorical (gender & LS) and numerical (LS subscales)
- Statistics: Chi-square analysis; 6 independent samples *t*-tests; thematic analysis

Findings: RQ1- Learning Styles (LS)

- Survey

No significant difference between genders and learning styles

No significant difference between genders in any of the LS subscale scores

- Open-ended question: “How do you learn most effectively?”

Most students preferred multiple learning methods (70.6% males, 82.1% females)

- Focus groups

Most indicated a variety of learning style preferences

All students preferred real-world, applied learning experiences

Data Analysis Plan: RQ2- Learning Experiences

Survey:

- Learning Experiences Survey (LES), Likert-type scales
 - Four subscale scores:
 - 1) Satisfaction (4 questions)
 - 2) Business Department Environment (3 questions)
 - 3) Student Assertiveness (7 questions)
 - 4) Group Experiences (15 questions)

Analyses:

- Data: categorical (gender & LS) and numerical (4 subscale scores)
- Statistics: Four 2 X 4 Factorial ANOVAs (w/Simple Effects Analysis post hoc & follow-up independent samples *t*-tests); thematic analysis

Findings: RQ2- Learning Experiences

▪ Survey:

– Business Department Environment Subscale (Competition/Stress)

Learning style (LS) effect on business dept. environment	Not significant	$p = .06$
Gender effect on business dept. environment	Not significant	$p = .32$
LS & Gender interaction effect on business dept. environment	Not significant	$p = .74$

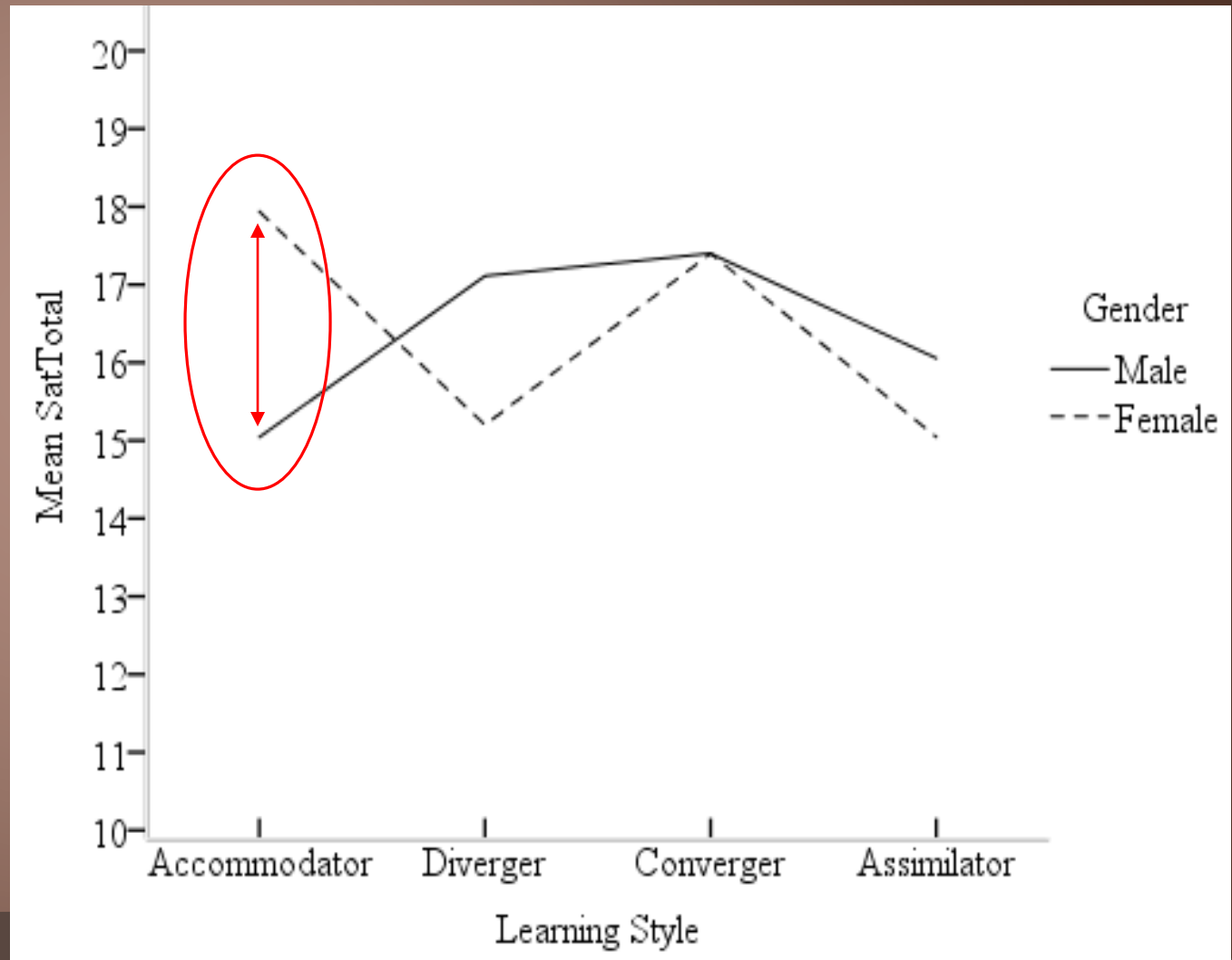
– Satisfaction Subscale (Quality/Preparation)

Learning style (LS) effect on satisfaction	Not significant	$p = .14$
Gender effect on satisfaction	Not significant	$p = .99$
LS & Gender interaction effect on satisfaction	Significant	$p = .01$

Satisfaction – Gender/LS Interaction Effects

Simple Effects Analysis post hoc:

- Female Accommodators ($M = 17.94$, $SD = 1.61$) were significantly more satisfied than Male Accommodators ($M = 15.04$, $SD = 4.96$); $p = .02$



Findings: RQ2- Learning Experiences

▪ Survey:

– Assertiveness Subscale (Speak out/Ask questions)

Learning style (LS) effect on assertiveness	Not significant	$p = .10$
Gender effect on assertiveness	Not significant	$p = .57$
LS & Gender interaction effect on assertiveness	Not significant	$p = .11$

– Group Experiences Subscale (Group projects)

Learning style (LS) effect on group experiences	Not significant	$p = .07$
Gender effect on group experiences	Significant	$p = .001$
LS & Gender interaction effect on group experiences	Not significant	$p = .27$

Group Experiences – Gender Differences (Follow-up *t*-tests)

- Out of 15 group experiences survey questions, 6 questions revealed significant differences between the genders (Focus Groups corroborated survey findings)

Subscale Question	Gender		<i>t</i>	df	<i>p</i>
	Male	Female			
I have been taken advantage of by other group members.	2.28 (1.09)	2.97 (1.00)	-4.14***	169	.001
I do a lot of the organizing and getting people together to work on group projects.	3.36 (.83)	3.75 (1.03)	-2.75**	169	.01
I often end up being the group secretary and do much of the writing and finalizing of the project.	2.79 (.98)	3.60 (1.03)	-5.13***	169	.001
I turn in poor evaluations for group members with poor performance.	3.35 (1.20)	3.83 (1.10)	-2.63**	169	.01
All group members usually pitch in and do equal amounts of work on group projects.	3.25 (.92)	2.69 (1.12)	3.51***	169	.001
I end up doing more than my fair share on group projects.	3.10 (.86)	3.54 (.92)	-3.12**	169	.002

Note. ** = $p \leq .01$, *** = $p \leq .001$.

Data Analysis Plan: RQ3- Attitudes Toward Male vs. Female Profs

Survey:

- 3 questions from LES; 11 newly developed questions using Schein's Descriptive Index (SDI)
 - Overall subscale score (14 questions)
 - Two subscale scores: 1) positive statements about male professors, 2) positive statements about female professors

Analyses:

- Data: categorical (gender & LS) and numerical (subscale scores)
- Statistics: 2 X 4 Factorial ANOVA (w/ follow-up independent samples *t*-tests); thematic analysis

Findings: RQ3 – Attitudes Toward Male vs. Female Profs

▪ Survey:

Learning style (LS) effect on attitudes toward profs	Not significant	$p = .56$
Gender effect on attitudes toward profs	Significant	$p = .01$
LS & Gender interaction effect on attitudes toward profs	Not significant	$p = .54$

Findings: RQ3 – Attitudes Toward Male vs. Female Profs (Follow-up *t*-tests)

- Male students' positive ratings about male professors were significantly higher than female students' ratings.

Subscale Question	Gender		<i>t</i>	df	<i>p</i>
	Male	Female			
Positive statements about male professors	13.17 (3.40)	11.82 (3.97)	2.39*	174	.02
Positive statements about female professors	20.10 (4.54)	19.21 (5.68)	1.15	174	.25

Note. * = $p \leq .05$

Findings: RQ3 – Attitudes Toward Male vs. Female Profs

- Open-ended question:

“How does the gender of the professor affect your learning in the business classroom?”

No effect: 86% males, 75% females

Positive about male profs: .03% males, .03% females

Positive about female profs: **6.4% males, 21% females** (* $p < .05$)

- Focus groups:

Female students expressed need for female role models

Female students expressed greater comfort levels w/female professors (outside classroom)

Limitations



- Limited generalizability
- Limited population: traditional undergraduate students only
- Reliability & validity (new questions), Type I error (multiple *t*-tests)

Conclusions, Implications, Recommendations

- RQ1: Learning Styles
 - Recognize that all types of learners are present in the business classroom
 - Use multiple methods/teaching strategies (including intro courses)
 - Incorporate more applied learning experiences
- RQ2: Learning Experiences
 - Identifying combination of gender and learning style; may impact satisfaction
 - Examine faculty management/oversight of group projects
- RQ3: Attitudes Toward Male Professors vs. Female Professors
 - Strive to maintain a gender-balanced business faculty;
business leadership place an emphasis on hiring female faculty members



Significance of the Study

- Regulatory issues: Gender diversity
- Recruiting/Retention: Appealing learning environments for women
- Responsibility: Christian impact

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QUESTIONS