

***Survey Results:
Student Attitudes on Sustainability
Spring 2012***

***Presented at:
Faculty Staff Conference
Peace with Creation Focus Group
May 3, 2012***



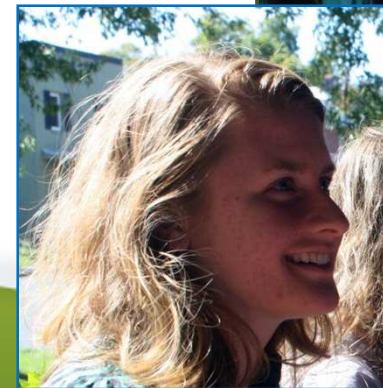
Overview

- Description of survey
- Survey results
 - Demographics and representativeness
 - Item means
 - Group differences

Student-Written and Inspired Sustainability Survey (ValRoNi)

Interested in student opinions about EMU sustainability efforts

- General attitudes about sustainability
- Previous knowledge about sustainability
- Response to EMU implementation
- Adjective ratings (e.g., inspiring-fatiguing)
- Psychological reactance
- Demographics
 - Class level, gender, political affiliation, religion, varsity athlete



Electronic Survey

- 836 undergraduate students
- 249 complete responses
(30% response rate)
- Invitation to participate was sent from the three senior students
- Prizes were offered!

Representativeness of Sample

Over-represented

- FYS
- Seniors
- Females
- Residential

Under-represented

- Sophomores
- Males
- Non-residential

Initial Survey Questions: Do students know our definition of sustainability?

	Yes
I value environmental sustainability over economic/social sustainability.	35%
Social sustainability is more important than other forms of sustainability.	43%
Sustainability includes interconnected social, economic and environmental factors.	98%

Other Survey Questions

- General attitudes
 - Knowledge and opinions
 - EMU implementation
 - Adjective pair ratings (e.g., inspiring-fatiguing)
 - Psychological reactance
- 6-point
agreement
scale
(no mid-point)

General Attitudes

- Item means ranged from 3.0 to 5.1
- Strongest *agreement* with
 - I value conservation and sustainability efforts. (M = 5.1)
 - I can make a difference in caring for the earth. (M = 4.9)
- Strongest *disagreement* with
 - I am more likely to participate in sustainable efforts if they were started by my professors and administrators, rather than by my peers. (M = 3.0)

Knowledge & Opinions

- Item means ranged from 2.9 to 5.0
- Strongest *agreement* with
 - I am encouraged when I see environmentally sustainable practices being implemented at EMU. (M = 5.0)
 - I think that EMU's sustainability practices can make a difference in the broader community. (M = 4.8)
 - I have been more informed of environmental issues since coming to EMU. (M = 4.8)
- Strongest *disagreement* with
 - I have seen few changes related to sustainability on campus. (M = 2.9)

EMU Implementation

- Item means ranged from 1.9 to 4.4
- Strongest *agreement* with
 - EMU's message of sustainability is consistent with its practices. (M = 4.4)
 - I have noticed an emphasis on sustainability in my classes. (M = 4.3)
 - I feel it is a university's responsibility to promote awareness of sustainability. (M = 4.3)
- Strongest *disagreement* with
 - I am embarrassed by EMU's efforts to be a more sustainable campus. (M = 1.9)

Adjective Pairs

Highest endorsement of

- *long-lasting, gratifying, necessary, motivating, familiar, clear, important, student-led*

Greatest variability for

- *fatiguing-inspiring, superficial-authentic, gratifying-annoying, familiar-unfamiliar, faith-related descriptions*

Group Mean Differences

Class level (FYS → Seniors)

- No significant differences between classes on average response to items
 - General knowledge
 - Previous knowledge
 - Implementation

Gender Differences

Females significantly more likely to agree

- Sustainability efforts (their own and EMU's) will make a difference
- They are encouraged by EMU's efforts
- They have become more informed

Males significantly more likely to agree

- They will participate in efforts started by profs and admin rather than students

Political Differences

Only a subset responded to the optional political affiliation item ($n = 129$)

- Democrat: $n = 65$ (50.4%)
- Republican: $n = 29$ (22.5%)
- Independent: $n = 35$ (27.1%)

Political Differences

Republicans *more* likely to *agree*

- I am embarrassed by EMU's efforts to be a more sustainable campus.
- I think it is annoying when students suggest how I can change my behavior to help the environment.
- I am tired of EMU telling me what I can do to save the earth. (different from Democrat only)

Political Differences

Republicans *less* likely to *agree*

- I value conservation and sustainability efforts.
- I continuously make changes to my lifestyle in order to better the natural world.
- I think that EMU's sustainability practices can make a difference in the broader community.
- I feel it is a university's responsibility to promote awareness of sustainability.
- I hope to integrate EMU's values of environmental sustainability into my everyday life after graduation.

Religious Affiliation

Survey included multiple checkboxes to describe religious affiliation, including “Anabaptist”

- Checked “Anabaptist” ($n = 106$, 45%)
- Did not check “Anabaptist” ($n = 130$, 55%)

Religious Group Differences

Anabaptists *more* likely to *agree*

- Value conservation and sustainability
- Make changes to lifestyle
- Can make a difference
- Discouraged by others not being sustainable
- Encouraged by sustainability at EMU

Anabaptists *less* likely to *agree*

- Frustrated by sustainability in the curriculum

Hong Reactance Scale

(1 = strongly disagree → 5 = strongly agree)

Reactance to Compliance (RTC)

- “I find contradicting others stimulating.”

Emotional Response Toward Restricted Choice (ERC)

- “I become angry when my freedom of choice is restricted.”

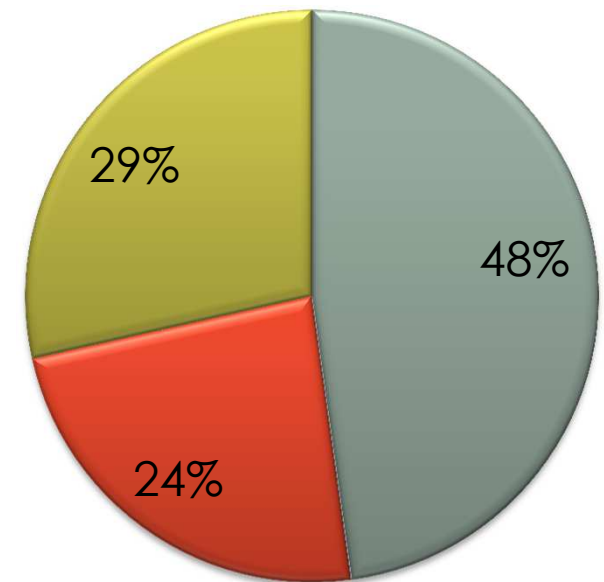
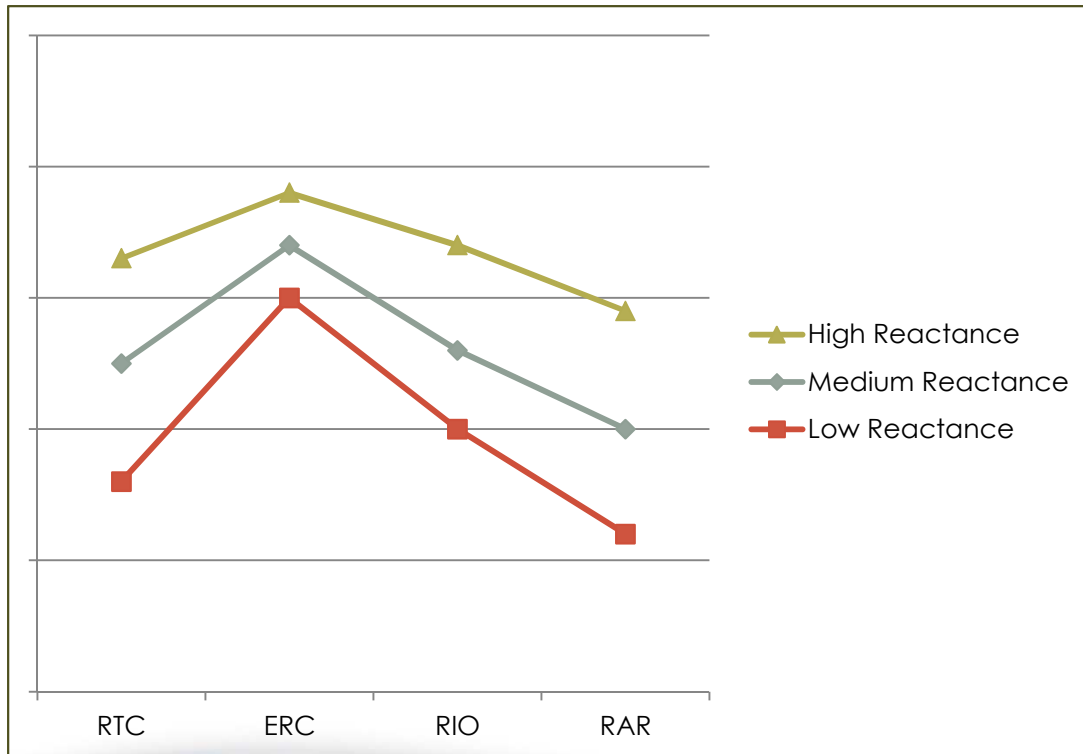
Resisting Influence from Others (RIO)

- “I resist the attempts of others to influence me.”

Reactance Toward Advice and Recommendations (RAR)

- “I consider advice from others to be an intrusion.”

Cluster Analysis: Reactance Subscales



Cluster Analysis

Low

- more juniors, more Anabaptist, more residential, more Democrat (and more likely to report political affiliation)

Medium

- more seniors, less Anabaptist, less residential, more Republican, more athletes

High

- more sophomores, less Anabaptist, more Democrat (and less likely to report political affiliation)

Cluster Differences

High-Reactance cluster *more* likely to *agree*

- Participate in efforts by profs and admin rather than peers
- Frustrated by sustainability in the curriculum
- Annoyed when students suggest how to change
- Embarrassed by EMU's efforts
- Tired of EMU telling me what I can do to save the earth

High-Reactance Cluster *less* likely to *agree*

- Value conservation and sustainability efforts
- EMU's message is consistent with its practices
- Integrate EMU's values of environmental sustainability into my everyday life after graduation

Cluster Differences

High-Reactance Cluster significantly *less* likely to rate sustainability at EMU as

- Gratifying
- Motivating
- Emphasizing of faith
- Inspiring
- Clear
- Authentic
- Faith-related
- Necessary
- Familiar

Appendices

Representativeness of Sample

CLASS	EMU Undergraduates		Survey Sample	
	Frequency	Percent	Frequency	Percent
First-Year	188	22.49%	68	27.30%
Sophomore	191	22.85%	40	16.10%
Junior	214	25.60%	63	25.30%
Senior	243	29.07%	78	31.30%
Total	836	100.00%	249	100.00%

Seniors and first-year students were slightly over-represented.
Sophomores were slightly under-represented.

Representativeness of Sample

	EMU Undergraduates		Survey Sample	
GENDER	Frequency	Percent	Frequency	Percent
Female	508	60.77%	168	67.50%
Male	328	39.23%	81	32.50%
Total	836	100.00%	249	100.00%

Females were slightly over-represented, and vice versa for males.

	EMU Undergraduates		Survey Sample	
HOUSING	Frequency	Percent	Frequency	Percent
On-campus	516	61.72%	183	73.50%
Off-campus	320	38.28%	66	26.50%
Total	836	100.00%	249	100.00%

On-campus students were over-represented, and vice versa for off-campus students.

General Attitudes

Scale = 1 (strongly disagree) to 6 (strongly agree)	Min	Max	Mean	SD
I value conservation and sustainability efforts.	2	6	5.1	0.88
I can make a difference in caring for the earth.	1	6	4.9	0.957
I am not doing as much as I should to support sustainable practices.	2	6	4.5	0.946
I have a clear understanding of how I could live sustainably.	2	6	4.3	0.885
I am overwhelmed by the amount of work that needs to be done to live sustainably.	1	6	4.2	1.116
I am discouraged when others refuse to participate in a sustainable lifestyle.	1	6	4.1	1.117
I continuously make changes to my lifestyle in order to better the natural world.	1	6	3.8	1.006
I am more likely to participate in sustainable efforts if they were started by my professors and administrators, rather than by my peers.	1	6	3.0	1.078

Note: There was no midpoint on the scale.

Knowledge & Opinions

Scale = 1 (strongly disagree) to 6 (strongly agree)	Min	Max	Mean	SD
I am encouraged when I see environmentally sustainable practices being implemented at EMU.	2	6	5.0	0.962
I think that EMU's sustainability practices can make a difference in the broader community.	2	6	4.8	0.88
I have been more informed of environmental issues since coming to EMU.	1	6	4.8	1.037
EMU is doing an excellent job of educating students about environmental issues.	1	6	4.4	0.911
Events with a focus on sustainability are easily accessible for all students.	1	6	4.2	0.907
My environmental attitude would change if I were more informed about environmental issues.	1	6	3.7	1.055
Before coming to EMU I was not well-informed of environmentally sustainable practices.	1	6	3.5	1.402
I have seen few changes related to sustainability on campus.	1	6	2.9	1.187

Note: There was no midpoint on the scale.

EMU Implementation

Scale = 1 (strongly disagree) to 6 (strongly agree)	Min	Max	Mean	SD
EMU's message of sustainability is consistent with its practices.	1	6	4.4	0.88
I have noticed an emphasis on sustainability in my classes.	1	6	4.3	1.088
I feel it is a university's responsibility to promote awareness of sustainability.	1	6	4.3	1.146
I think it is annoying when students suggest how I can change my behavior to help the environment.	1	6	3.0	1.324
It frustrates me when professors include sustainability in the curriculum.	1	6	3.0	1.327
I am tired of EMU telling me what I can do to save the earth.	1	6	3.0	1.4
I am embarrassed by EMU's efforts to be a more sustainable campus.	1	6	1.9	1.098

Note: There was no midpoint on the scale.

Adjective Rating Scales

	1	2	3	4	5	6	
Long-Lasting 94%	13.3%	54.2%	26.1%	3.6%	1.6%	1.2%	Short-Lived 6%
Gratifying 85%	12.0%	45.8%	26.9%	8.4%	3.2%	3.6%	Annoying 15%
Demotivating 16%	1.2%	5.2%	9.2%	39%	34.9%	10.4%	Motivating 84%
Fatiguing 35%	2.8%	8.4%	24.1%	37.3%	20.5%	6.8%	Inspiring 65%
Superficial 29%	3.6%	8.4%	16.9%	36.1%	25.3%	9.6%	Authentic 71%
Overemphasized 76%	10.4%	20.1%	45.4%	21.7%	2.4%	0.0%	Underemphasized 24%
Institution-Led 60%	5.2%	14.9%	39.8%	31.7%	7.6%	0.8%	Grass Roots 40%
Necessary 94%	37.3%	39.8%	16.9%	2.8%	2.0%	1.2%	Unnecessary 6%



Strong support for: long-lasting, gratifying, necessary, motivating
 Greater spread for: fatiguing-inspiring, superficial-authentic, over-
 underemphasized, institution-grass roots.

n = 249

Adjective Rating Scales

	1	2	3	4	5	6	
EMU does not emphasize the faith aspect of sustainability. 38%	4.8%	16.9%	16.5%	24.9%	23.7%	13.3%	EMU does emphasize the faith aspect of sustainability. 62%
Strongly related to my faith 74%	14.5%	28.9%	30.9%	11.6%	9.2%	4.8%	Unrelated to my faith 26%
Unfamiliar 18%	1.2%	4.8%	12.0%	32.1%	39.0%	10.8%	Familiar 82%
Clear 90%	13.3%	43.8%	32.5%	7.2%	2.4%	0.8%	Far-Fetched 10%
Student-Led 83%	4.0%	31.3%	47.4%	14.5%	2.0%	0.8%	Professor-Led 17%
Important 91%	33.3%	44.6%	13.3%	4.8%	3.6%	0.4%	Unimportant 9%



Strong support for: familiar, clear, important
 Greater spread for: faith-related descriptions, student-led/professor-led

n = 249

Gender Differences

	Female		Male	
	Mean	SD	Mean	SD
Scale = 1 (strongly disagree) to 6 (strongly agree)				
I am more likely to participate in sustainable efforts if they were started by my professors and administrators, rather than by my peers.	2.88	1.037	3.25	1.124
I can make a difference in caring for the earth.	4.96	0.915	4.65	1.014
I have been more informed of environmental issues since coming to EMU.	4.86	1.009	4.52	1.062
My environmental attitude would change if I were more informed about environmental issues.	3.78	1.058	3.48	1.026
I am encouraged when I see environmentally sustainable practices being implemented at EMU.	5.05	0.937	4.74	0.985
I think that EMU's sustainability practices can make a difference in the broader community.	4.93	0.856	4.65	0.854
Female n = 168; Male n = 81				

Political Differences

Significant differences among all three groups

- I am encouraged when I see environmentally sustainable practices being implemented at EMU.
 - Democrats = 5.46
 - Independents = 5.06
 - Republicans = 4.34
- Note, however, that all three means are relatively high (scale = 1-6)

Political Differences

Democrats and Independents more strongly agreed to _____ than Republicans

- I value conservation and sustainability efforts.
- I continuously make changes to my lifestyle in order to better the natural world.
- I think that EMU's sustainability practices can make a difference in the broader community.
- I feel it is a university's responsibility to promote awareness of sustainability.
- I hope to integrate EMU's values of environmental sustainability into my everyday life after graduation.

Political Differences

Republicans more strongly agreed to _____ than Democrats and Independents

- I am embarrassed by EMU's efforts to be a more sustainable campus.
- I think it is annoying when students suggest how I can change my behavior to help the environment.

Democrats more strongly agreed to _____ than Republicans and Independents

- I am discouraged when others refuse to participate in a sustainable lifestyle.

Political Differences

Democrats and Republicans significantly differed in their responses to the statement “I am tired of EMU telling me what I can do to save the earth.”

- Democrat $n = 2.43$
- Republican $n = 3.59$
- Independent $n = 3.00$

Political: Mean Differences

	Democratic		Republican		Independent	
	Mean	SD	Mean	SD	Mean	SD
I value conservation and sustainability efforts. (Republican differed from Democrat/Indep)	5.45	0.83	4.48	1.022	5.03	0.785
I continuously make changes to my lifestyle in order to better the natural world. (Republican differed from Democrat)	4.09	0.98	3.52	1.184	3.91	0.919
I am discouraged when others refuse to participate in a sustainable lifestyle. (Democrat differed from Republican/Indep)	4.71	0.98	3.69	1.257	4.14	0.974
I am encouraged when I see environmentally sustainable practices being implemented at EMU. (Difference among each group)	5.46	0.663	4.34	1.143	5.06	0.684
I think that EMU's sustainability practices can make a difference in the broader community. (Republican differed from Democrat/Indep)	5.06	0.747	4.45	0.783	4.94	0.725
It frustrates me when professors include sustainability in the curriculum. (Republican differed from Democrat/Indep)	2.38	1.155	3.76	1.327	2.89	1.105
Democratic n = 65; Republican n = 29; Independent n = 35; Total n = 129						

Political: Mean Differences

	Democratic		Republican		Independent	
	Mean	SD	Mean	SD	Mean	SD
I think it is annoying when students suggest how I can change my behavior to help the environment. (Republicans differed from Democrats/Indep)	2.48	1.264	3.9	1.235	2.71	1.1
I am embarrassed by EMU's efforts to be a more sustainable campus. (Republicans differed from Democrats/Indep)	1.54	0.849	2.59	1.24	1.57	0.655
I feel it is a university's responsibility to promote awareness of sustainability. (Republicans differed from Democrats/Indep)	4.78	0.875	3.62	1.399	4.31	1.078
I am tired of EMU telling me what I can do to save the earth. (Democrats and Republicans differed signif.)	2.43	1.159	3.59	1.5	3.0	1.26
I hope to integrate EMU's values of environmental sustainability into my everyday life after graduation. (Republicans differed from Democrats/Indep)	5.22	0.649	3.9	1.175	4.83	0.785
Democratic n = 65; Republican n = 29; Independent n = 35; Total n = 129						

Anabaptists: Group Differences

	Checked "Anabaptist"		Did not Check "Anabaptist"	
	Mean	SD	Mean	SD
I value conservation and sustainability efforts.	5.19	0.77	4.95	0.94
I continuously make changes to my lifestyle in order to better the natural world.	4.02	0.926	3.70	1.041
I can make a difference in caring for the earth.	5.01	0.878	4.75	1.005
I am discouraged when others refuse to participate in a sustainable lifestyle.	4.24	1.074	3.95	1.166
I am encouraged when I see environmentally sustainable practices being implemented at EMU.	5.09	0.879	4.84	1.004
It frustrates me when professors include sustainability in the curriculum.	2.75	1.196	3.16	1.413

Reactance Group Means

No significant differences on reactance subscale scores for

- Males/females
- Year in school
- Political affiliation
- Whether identified self as “Anabaptist” or not

Sustainability and Reactance

Low to moderate correlations with:

	RTC	ERC	RIO	RAR
I value conservation and sustainability efforts.	-.202**	-0.111	-.202**	-.197**
I am more likely to participate in sustainable efforts if they were started by my professors and administrators, rather than by my peers.	.135*	0.014	0.109	.169**
I continuously make changes to my lifestyle in order to better the natural world.	-0.094	-.159*	-.179**	-.128*
I am overwhelmed by the amount of work that needs to be done to live sustainably.	0.118	0.123	0.107	.228**
I can make a difference in caring for the earth.	-.250**	-0.06	-.234**	-.224**
I have been more informed of environmental issues since coming to EMU.	-0.049	-0.021	-.153*	-.132*

RTC = Reactance to Compliance

ERC = Emotional Response Toward Restricted Choice

RIO = Resisting Influence from Others

RAR = Reactance Toward Advice and Recommendations

Sustainability and Reactance

Low to moderate correlations with:

	RTC	ERC	RIO	RAR
Events with a focus on sustainability are easily accessible for all students.	-.159*	-.145*	-.163**	-0.049
I am encouraged when I see environmentally sustainable practices being implemented at EMU.	-.234**	-0.11	-.260**	-.215**
I think that EMU's sustainability practices can make a difference in the broader community.	-.324**	-0.10	-.377**	-.335**
It frustrates me when professors include sustainability in the curriculum.	.312**	.199**	.348**	.309**
EMU's message of sustainability is consistent with its practices.	-.279**	-0.086	-.257**	-.132*

RTC = Reactance to Compliance

ERC = Emotional Response Toward Restricted Choice

RIO = Resisting Influence from Others

RAR = Reactance Toward Advice and Recommendations

Sustainability and Reactance

Low to moderate correlations with:

	RTC	ERC	RIO	RAR
I think it is annoying when students suggest how I can change my behavior to help the environment.	.294**	.177**	.366**	.301**
I am embarrassed by EMU's efforts to be a more sustainable campus.	.227**	0.035	.203**	.237**
I feel it is a university's responsibility to promote awareness of sustainability.	-.127*	0.009	-0.12	-0.103
I am tired of EMU telling me what I can do to save the earth.	.278**	.147*	.286**	.235**
I hope to integrate EMU's values of environmental sustainability into my everyday life after graduation.	-.258**	-0.095	-.264**	-.214**

RTC = Reactance to Compliance

ERC = Emotional Response Toward Restricted Choice

RIO = Resisting Influence from Others

RAR = Reactance Toward Advice and Recommendations

Preview

- Student-initiated survey
 - General attitudes about sustainability
 - Prior knowledge
 - Sustainability at EMU
- Most students have positive attitudes and are supportive of EMU efforts
- Small but significant group of students express less positive attitudes and some level of fatigue or frustration