The Impact of Bumpers College of Agricultural, Food and Life Sciences International Programs on Student Motivation for Continuing College and Student Engagement in the Classroom

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Introduction
Need for the study

❖ Students are demanding more international program (IP) experiences (Redden, 2018).

❖ Employers are demanding graduates with excellent business skills, international understanding, and leadership qualities (Gilmore et al., 2006).

Information gained from this study could help with:
- Teaching practices and student learning
- Student recruitment
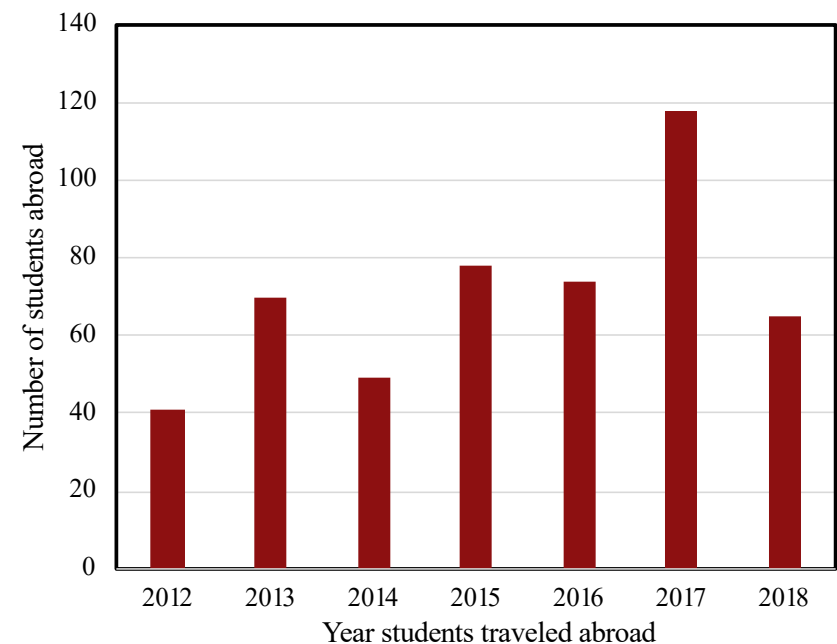- Student retention
- IP development

Figure 1. Number of Bumpers College students who have traveled abroad (University of Arkansas Office of Study Abroad, 2019).

Introduction
Objectives

1) To describe demographics of the IP survey respondents.

2) To determine the differences between student motivation for continuing college and student engagement in the classroom before-IP, two-weeks post-IP, and three-months post-IP.

Motivation: "something (such as need or desire) that causes a person to act" (Merriam-Webster, 2018).

Engagement: "to hold the attention of" (Merriam-Webster, 2018).

Introduction
Hypotheses

H_1 It is hypothesized that there will be a statistically significant difference in student motivation for continuing college before and after an IP.

H_2 It is hypothesized that there will be a statistically significant difference in student engagement in the classroom before and after an IP.
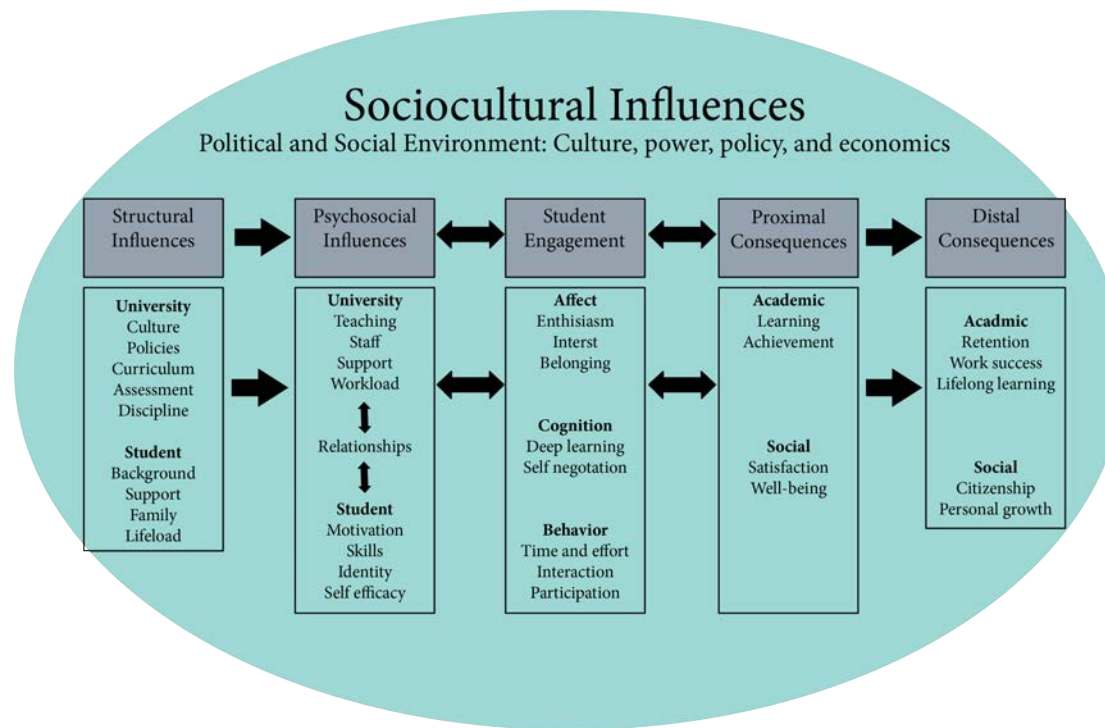
Literature Review
Theoretical framework

Figure 2. Adapted theoretical framework of engagement, antecedents, and consequences (Kahu, 2011).
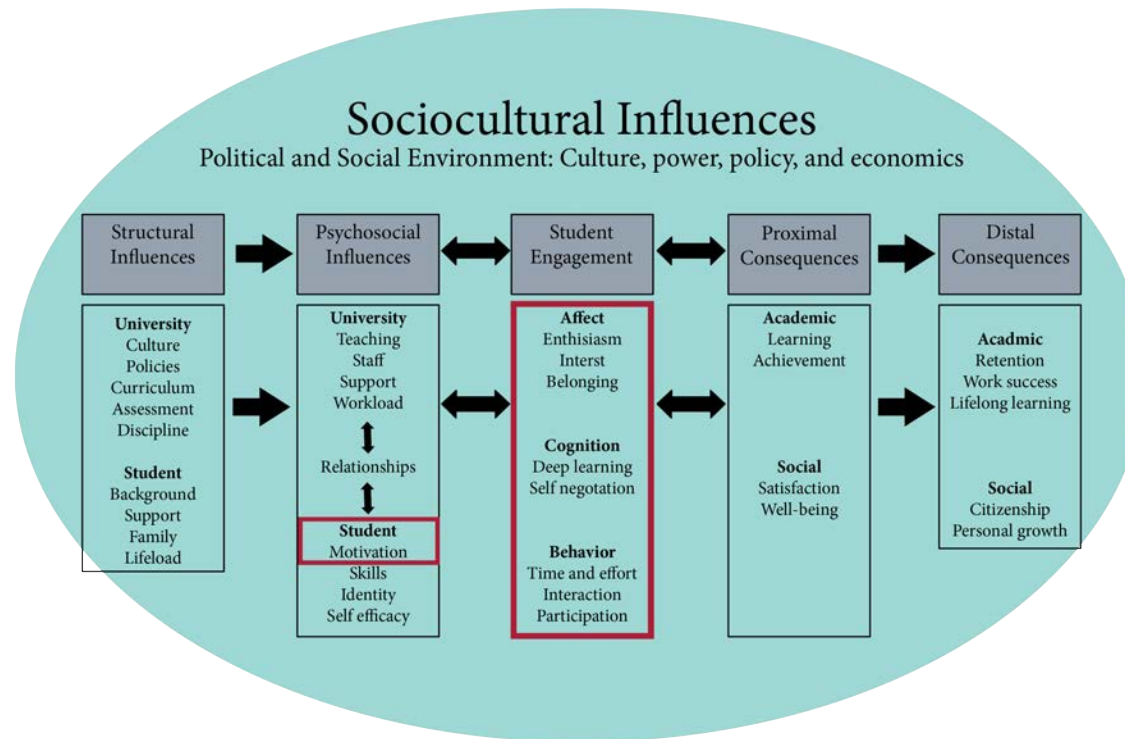
Literature Review
Conceptual framework

Figure 3. Adapted from the conceptual framework of engagement, antecedents, and consequences (Kahu, 2011).

Literature Review

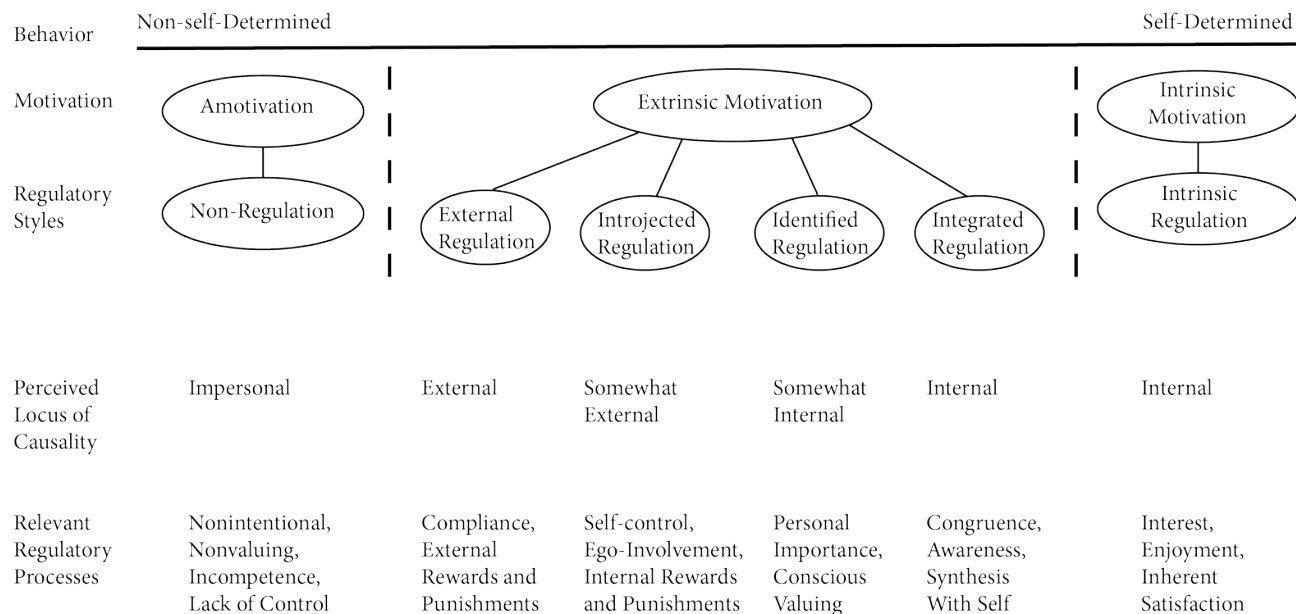|	Non-self-Determined					Self-Determined
Behavior						
Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Regulatory Styles	Non-Regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Perceived Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal
Relevant Regulatory Processes	Nonintentional, Nonvaluing, Incompetence, Lack of Control	Compliance, External Rewards and Punishments	Self-control, Ego-Involvement, Internal Rewards and Punishments	Personal Importance, Conscious Valuing	Congruence, Awareness, Synthesis With Self	Interest, Enjoyment, Inherent Satisfaction

Figure 4. Adapted Self-Determination Theory continuum showing types of motivation with their regulatory styles, loci of causality, and corresponding process (Ryan & Deci, 2000).
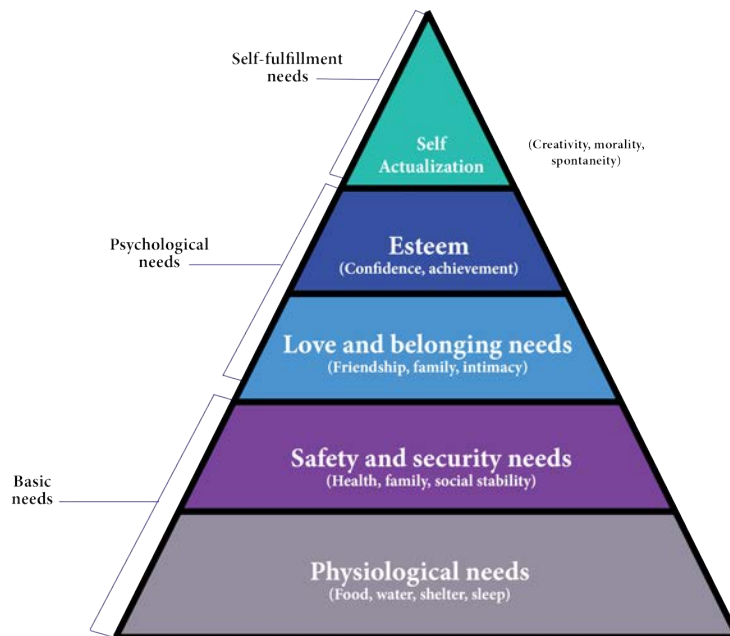
Literature Review

Figure 5. Adapted Maslow's hierarchy of needs that indicated basic needs are foundational and must in some way be met before the next level becomes relevant (Corrigan-Doyle, Escobar-Tello, & Lo, 2016).
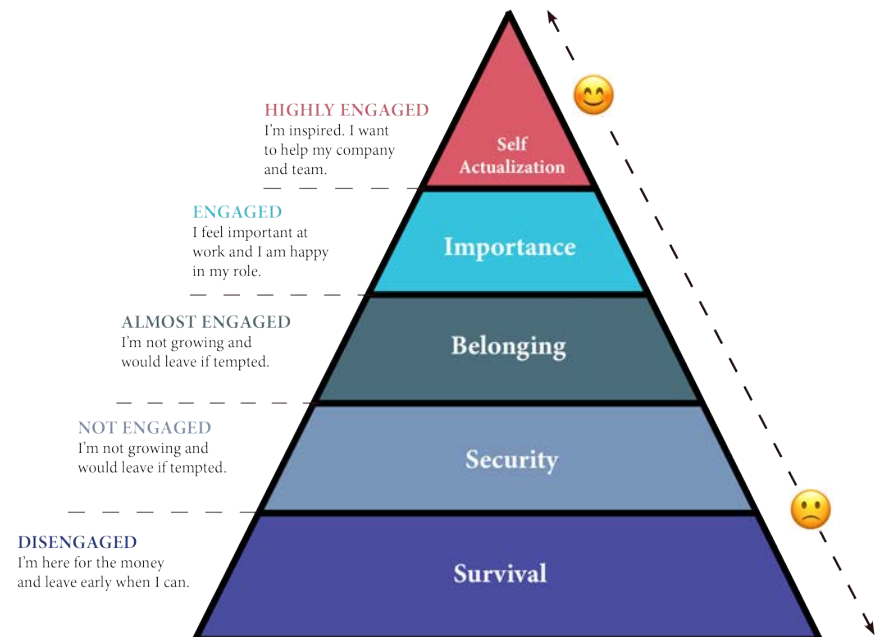

Figure 6. Adapted Maslow's hierarchy as a method to better understand a company's relationship with its employees, as well as the employee's motivation to become an advocate for the organization (Brito, 2018).

Methods

IP Participant Population

All U of A students who participated in an IPO program between January 2018-August 2019 (N = 120)

- Independent Variable: IP experience

- Dependent Variables: Results from the student motivation and engagement survey

IP Group
(before-IP)

IP Group
(two weeks post-IP)

IP Group
(three weeks post-IP)

Methods
International programs

Bumpers College IP experiences used for data collection:

May Intersession 2018 ▶ **Summer I 2018** ▶ **Summer II 2018** ▶ **August Intersession 2018**
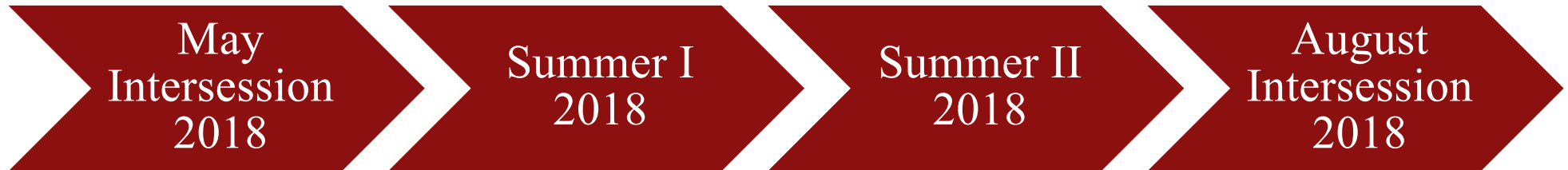
Countries:
- Australia
- Belgium
- Mozambique
- Scotland
- Swaziland

Program Types:
- Faculty-led
- Internships
- Rome Center courses
- Service learning + Faculty-led

Program Lengths:
- 10 days to three months

Methods
Instrumentation

1

Perceptions of Motivation - 28 questions (Vallerand et. al., 1992)

Academic Motivation Scale College Version (AMS-C 28)

- Intrinsic motivation – to know (M1)
- Intrinsic motivation – toward accomplishment (M2)
- Intrinsic motivation – to experience stimulation (M3)
- Extrinsic motivation – identified (M4)
- Extrinsic motivation – introjected (M5)
- Extrinsic motivation – external regulation (M6)
- Amotivation (M7)

2

Perceptions of Engagement - 23 questions (Handelsman et al., 2005)

- The Student Engagement Questionnaire (SCEQ) (23 questions, 4 constructs)
- Skills engagement (E1)
- Emotional engagement (E2)
- Participation/ interaction engagement (E3)
- Performance engagement (E4)

3

Demographics (10 questions)

Methods
Data analyses

SPSS was used to run the following analyses:

1. <u>Frequencies and Percentages</u> Obj. 1

2. <u>Mean Comparisons</u> Obj. 2

3. <u>One-way Repeated Measures Anova & Pairwise Comparison</u> Obj. 2

Results
Means and standard deviations

Table 1

Before the International Program (IP), Two-weeks Post-IP, and Three-months Post-IP (n = 24) Mean Scores of Motivation for Continuing College.

Motivation statements	Before-IP		Two-weeks post-IP		Three-months post-IP		
	M	SD	M	SD	M	SD	
1) Because with only a high-school degree I would not find a high-paying job later on.	4.79	1.89	4.71	2.09	5.04	1.88	
2) Because I experience pleasure and satisfaction while learning new things.	5.75	1.11	5.54	1.47	5.43	1.50	
3) Because I think that a college education will help me better prepare for the career I have chosen.	6.50	0.78	6.37	0.77	6.25	0.94	M4
4) Because of the intense feelings I experience when I am communicating my own ideas to others.	4.12	1.54	4.42	1.79	4.21	1.50	
5) Because honestly, I don't know; I really feel that I am wasting my time in school.	1.42	0.93	1.46	0.88	1.54	0.72	
6) Because of the pleasure I experience while surpassing myself in my studies.	4.54	1.74	4.75	1.67	4.67	1.81	
7) To prove to myself that I am capable of completing my college degree.	5.04	1.80	4.71	1.90	4.67	1.71	
8) In order to obtain a more prestigious job later on.	5.62	1.84	5.75	1.48	5.54	1.71	
9) For the pleasure I experience when I discover new things never seen before.	5.71	1.49	5.46	1.64	4.83	1.68	
10) Because eventually it will enable me to enter the job market in a field that I like.	6.29	1.34	6.42	0.77	6.29	1.00	M4
11) For the pleasure that I experience when I read interesting authors.	3.79	1.95	3.76	2.03	3.54	1.69	
12) Because I once had good reasons for going to college; however, now I wonder whether I should continue.	1.42	0.72	1.25	0.53	1.29	0.69	
13) For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	4.62	1.61	4.58	1.69	4.87	1.70	
14) Because of the fact that when I succeed in college I feel important.	5.04	1.63	4.33	1.86	4.37	1.99	

Legend:
- ☐ Corresponded the most (red outline)
- ☐ Corresponded the least
- M4 = Extrinsic motivation 'identified'
- M7 = Amotivation

Table 7 continued

15) Because I want to have "the good life" later on.	5.71	1.49	5.25	1.59	4.96	1.94	
16) For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	6.04	1.23	5.58	1.69	5.08	1.47	
17) Because this will help me make a better choice regarding my career orientation.	5.78	1.08	5.75	1.07	5.43	1.47	
18) For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	3.37	1.88	3.29	1.99	3.12	1.78	
19) Well, I can't see why I go to college and frankly, I couldn't care less.	1.12	0.45	1.12	0.45	1.08	0.28	M7
20) For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	5.04	1.76	4.67	1.78	4.67	1.63	
21) To show myself that I am an intelligent person.	4.62	1.74	4.37	2.10	4.46	1.95	
22) In order to have a better salary later on.	5.46	1.74	5.46	1.35	5.12	2.11	
23) Because my studies allow me to continue to learn about many things that interest me.	6.17	0.92	5.79	1.61	5.42	1.72	
24) Because I believe a few additional years of education will improve my competence as a worker.	5.79	1.64	6.04	1.37	5.75	1.33	
25) For the "high" feeling that I experience while reading about various interesting subjects.	3.67	1.78	3.79	2.17	3.54	2.04	
26) Because I don't know; I can't understand what I am doing in school.	1.20	0.66	1.67	0.56	1.17	0.38	
27) Because college allows me to experience a personal satisfaction in my quest for excellence in my studies.	5.17	1.40	4.54	1.98	4.67	1.73	
28) Because I want to show myself, I can succeed in my studies.	4.62	1.71	4.33	0.21	4.62	1.76	

Note. Only students with no previous IP experience were analyzed.

Results
Means and standard deviations

Table 2

Before the International Program (IP), Two-weeks Post-IP, and Three-months Post-IP (n = 24) Mean Scores for Engagement in the Classroom.

Engagement statements	Before-IP		Two-weeks post-IP		Three-months post-IP		
	M	SD	M	SD	M	SD	
1) Raising my hand in class	3.04	1.16	3.08	1.32	3.29	1.20	E3
2) Participating actively in small group discussions	3.79	1.25	3.96	1.04	3.92	0.83	
3) Asking questions when I don't understand the instructor	3.46	1.35	3.25	1.29	3.37	1.34	
4) Doing all the homework problems	4.54	0.72	4.33	0.87	4.42	0.77	
5) Coming to class every day	4.42	0.77	4.54	0.59	4.58	0.65	E1
6) Going to the professor's office hours to review assignments or tests, or to ask questions	3.42	1.25	3.58	1.21	3.37	1.34	
7) Thinking about the course between class meetings	4.42	0.83	4.04	0.75	3.87	0.85	
8) Finding ways to make the course interesting to me	3.54	1.10	3.71	0.91	3.67	0.92	
9) Taking good notes in class	4.25	1.03	4.33	0.96	4.21	0.98	
10) Looking over class notes between classes to make sure I understand the material	3.17	1.31	3.12	1.17	2.96	1.33	E1
11) Really desiring to learn the material	3.92	0.93	3.92	0.97	3.83	0.96	
12) Being confident that I can learn and do well in the class	4.29	0.91	4.25	0.90	4.00	0.88	
13) Putting forth effort	4.54	0.67	4.58	0.71	4.25	0.99	
14) Being organized	4.08	1.02	4.29	0.95	4.00	1.10	
15) Getting a good grade	4.62	0.65	4.58	0.72	4.54	4.54	E4
16) Doing well on the tests	4.25	0.85	4.33	0.96	4.17	4.17	
17) Staying up on reading assignments	3.42	1.35	3.37	1.38	3.17	3.17	
18) Having fun in class.	3.54	1.06	3.42	1.14	3.29	3.29	
19) Helping fellow students.	3.71	1.08	3.83	0.82	3.75	3.75	
20) Making sure to study on a regular basis.	3.50	0.98	3.78	1.00	3.42	3.42	
21) Finding ways to make the course material relevant to my life.	3.87	0.90	3.67	1.13	3.58	3.58	
22) Applying course material to my life.	4.00	0.93	3.83	1.05	3.54	1.10	
23) Listening carefully in class.	4.25	0.74	4.29	0.81	3.96	0.69	

Note. Only students with no previous IP experience were analyzed.

☐ Very characteristic of me
☐ Least characteristic of me

E1 = Skills engagement
E3 = Emotional engagement
E4 = Performance engagement

Results
One-way Repeated Measures Anova

Table 3

Before-IP, 2-weeks Post-IP, and Three-months Post-IP (n = 24) Statistically Significant Motivations for Continuing College.

Motivation constructs	Before-IP		Two-weeks post-IP		Three-months post-IP		F	p	η^2
	M	SD	M	SD	M	SD			
Intrinsic motivation 'to know' (M1)	23.67	4.33	22.38	6.01	20.54	5.76	549.214	0.018*	0.180
Intrinsic motivation 'toward accomplishment' (M2)	19.38	5.17	18.54	6.42	18.88	6.31	0.299	0.731	0.013
Intrinsic motivation 'to experience stimulation' (M3)	14.96	5.56	15.17	7.19	14.42	6.31	0.456	0.630	0.019
Extrinsic motivation 'identified' (M4)	24.20	4.32	24.64	3.01	22.56	5.81	2.153	0.144	0.082
Extrinsic motivation 'introjected' (M5)	19.33	5.92	17.75	6.86	18.12	6.47	1.661	0.205	0.067
Extrinsic motivation 'external regulation' (M6)	21.59	5.96	21.17	5.48	20.67	6.12	0.730	0.475	0.031
Amotivation (M7)	5.17	2.30	5.00	2.00	5.08	1.38	0.146	0.844	0.006

Note. Only students with no previous IP experience were analyzed.
*p < 0.05.

- Decrease of 3.12 before-IP and three-months post-IP
- Decrease of 1.83 two-weeks post-IP and three-months post-IP

Results
One-way Repeated Measures Anova

Table 4

The Effects of International Programs (IP) on Student Engagement in the Classroom Before-IP, 2-weeks Post-IP, and Three-months Post-IP (n = 24).

Engagement constructs	Before-IP		Two-weeks post-IP		Three-months post-IP		F	p	η^2
	M	SD	M	SD	M	SD			
Skills engagement (E1)	36.17	5.67	36.54	6.09	34.96	6.75	3.557	0.037*	0.134
Emotional engagement (E2)	19.75	3.52	19.17	3.61	18.50	3.72	4.473	0.023*	0.163
Participation/ interaction engagement (E3)	20.96	5.15	21.13	5.24	21.00	4.83	0.057	0.943	0.002
Performance engagement (E4)	13.17	2.00	13.17	2.24	12.71	2.40	1.658	0.202	0.067

Note. Only students with no previous IP experience were analyzed.
*p < 0.05.

- Decrease of 1.58 two-weeks post-IP and three-months post-IP
- Decrease of 0.67 before-IP and three-months post-IP

Conclusions

Research Hypotheses

Accepted – H_1 It is hypothesized that there will be a statistically significant difference in student motivation for continuing college before and after an IP.

Accepted – H_2 It is hypothesized that there will be a statistically significant difference in student engagement in the classroom before and after an IP.

Research Objectives

1) Described demographics of the IP survey respondents.
✓ The IP demographics were determined and described.

Conclusions

2) Determined the differences between student motivation for continuing college and student engagement in the classroom before-IP, two-weeks post-IP, and three-months post-IP.

-Decrease in the M1 construct (before-IP survey and three-months post-IP survey)
This indicated IP leaders and teachers should work to increase intrinsic motivation after students return from an IP.
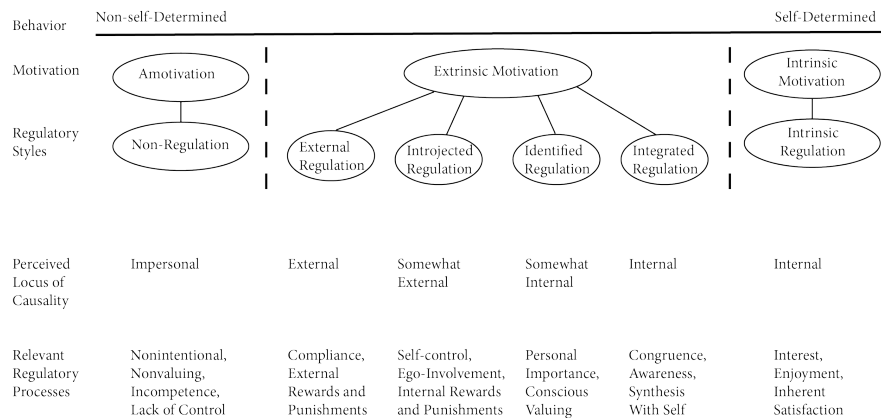

Figure 7. The Self-Determination Theory continuum showing types of motivation with their regulatory styles, loci of causality, and corresponding process (Ryan & Deci, 2000).
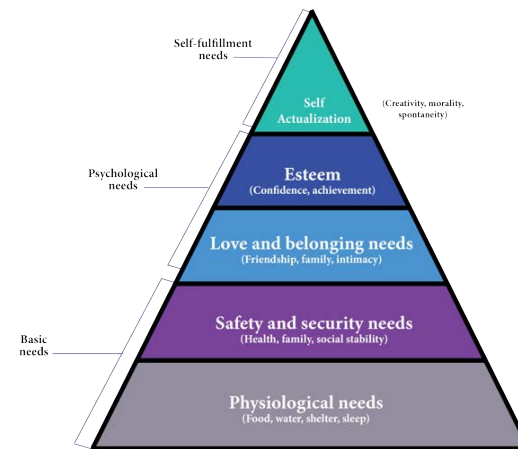

Figure 8. Maslow's hierarchy of needs that indicated basic needs are foundational and must in some way be met before the next level becomes relevant (Corrigan-Doyle, Escobar-Tello, & Lo, 2016).

Conclusions

2) Determined the differences between student motivation for continuing college and student engagement in the classroom before-IP, two-weeks post-IP, and three-months post-IP.

Skills Engagement (E1)
Decrease in the E1 construct (two-weeks to three-months post-IP)

This indicated that students need more opportunities for intrinsic and extrinsic rewards or that the academic learning environment is not challenging enough (Handelsman et al., 2005).

Emotional Engagement (E2)
Decrease in the E2 construct (two-weeks to three months post-IP)

This indicated students need required assignments that relate course concepts to their lives (Handelsman et al., 2005).
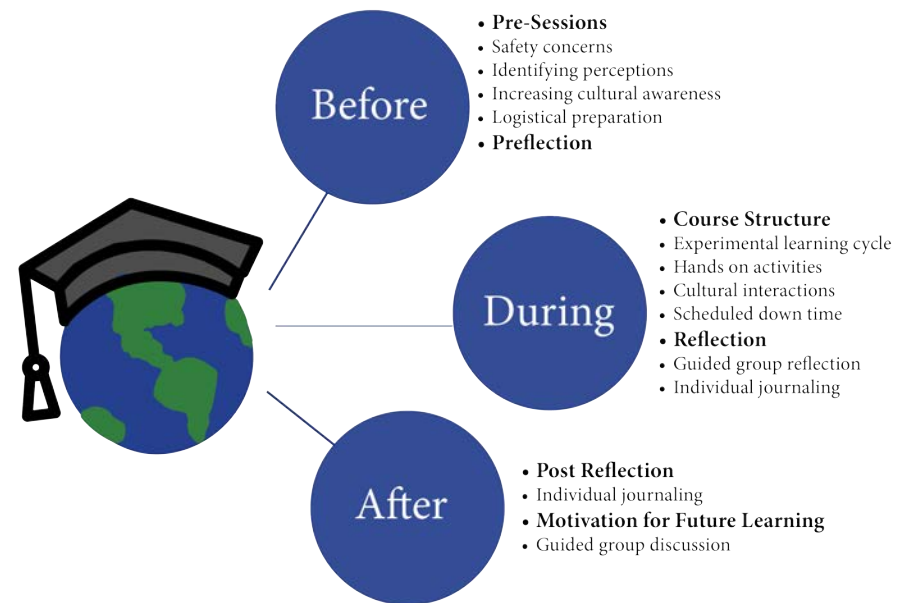

Before
- **Pre-Sessions**
- Safety concerns
- Identifying perceptions
- Increasing cultural awareness
- Logistical preparation
- **Preflection**

During
- **Course Structure**
- Experimental learning cycle
- Hands on activities
- Cultural interactions
- Scheduled down time
- **Reflection**
- Guided group reflection
- Individual journaling

After
- **Post Reflection**
- Individual journaling
- **Motivation for Future Learning**
- Guided group discussion

Figure 9. Adapted model for best practices in study abroad programs (Rodriguez & Roberts, 2011).

Conclusions
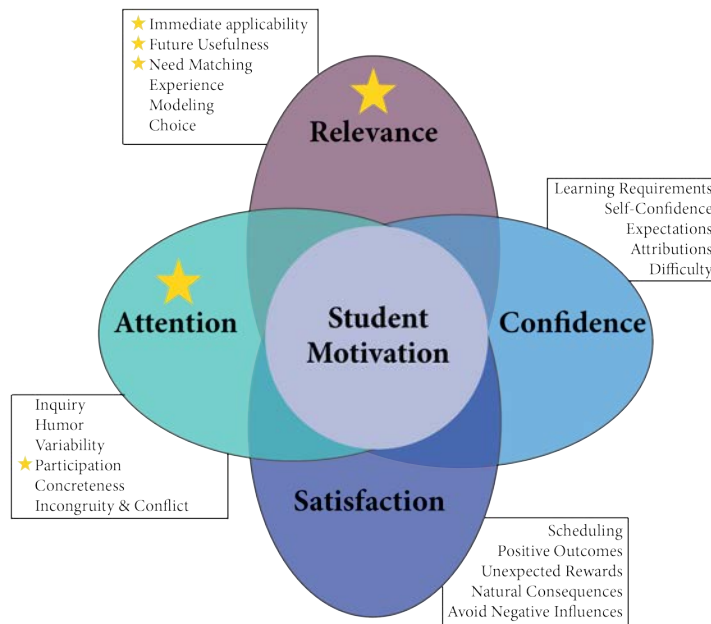## Implications for practitioners: Increasing intrinsic motivation

Immediate applicability
Future Usefulness
Need Matching
Experience
Modeling
Choice

Relevance

Learning Requirements
Self-Confidence
Expectations
Attributions
Difficulty

Attention

Student Motivation

Confidence

Inquiry
Humor
Variability
Participation
Concreteness
Incongruity & Conflict

Satisfaction

Scheduling
Positive Outcomes
Unexpected Rewards
Natural Consequences
Avoid Negative Influences

Figure 10. Attention, Relevance, Confidence, Satisfaction Model of Motivational Design Theories for promoting and sustaining motivation in the learning process (Keller, 2009).

1) Learn student's personal interests and motivating factors.

2) Introduce a topic and give students enough information to help them realize it may be personally rewarding and interesting to further explore.

3) Set goals for the students in the classroom and outline them clearly and communicate student success is not guaranteed, but is likely if they to put forth a quality effort.

4) Encourage independent learning and cooperative learning as part of a group.

5) Allow students to feel like they are able to freely partake in some of the learning process by choosing their own assignments.
(Ministry of Education in Guyana, 2019)

Engagement Construct – Skills Engagement (E1)

Engagement Construct – Emotional Engagement (E2)

1) Explicit Instruction
   -Include a quick list of learning outcomes and implications in your syllabus.

2) Situated and Transformative Practice
   -Create projects or assignments that involve solving a real problem in students' communities.

3) Critical Framing
   -Show your own skepticism towards marginalizing and unscientific practices (e.g.: practices that are based in evidence, but still value other ways of knowing) in your discipline.

4) Aesthetic Framing
   -An aesthetic framing speaks of making connections to the content in a way that inspires emotional responses from students. Keep in mind that music, lighting, and other modalities can also have an effect on emotions (Mehta, 2016).
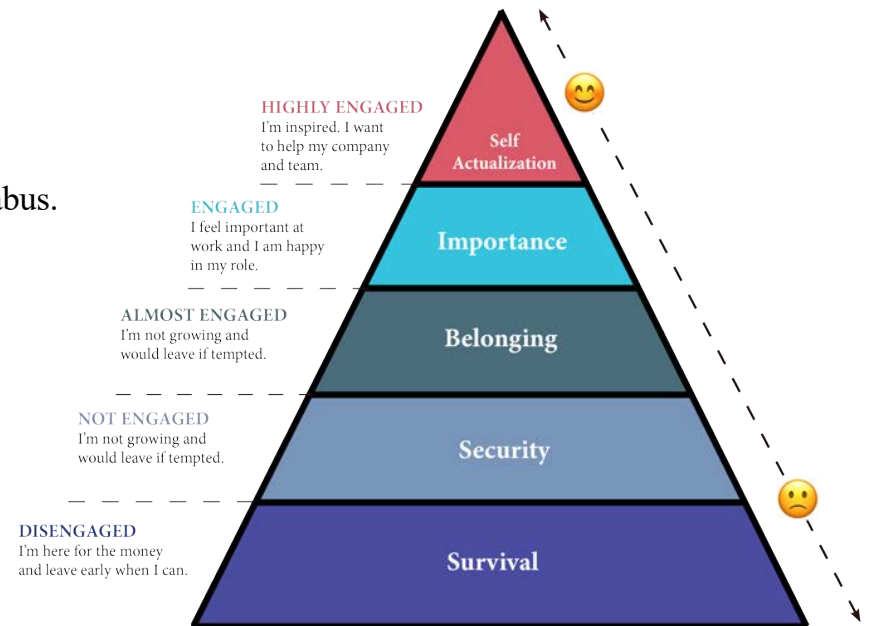

HIGHLY ENGAGED
I'm inspired. I want to help my company and team.

Self Actualization

ENGAGED
I feel important at work and I am happy in my role.

Importance

ALMOST ENGAGED
I'm not growing and would leave if tempted.

Belonging

NOT ENGAGED
I'm not growing and would leave if tempted.

Security

DISENGAGED
I'm here for the money and leave early when I can.

Survival

Figure 11. Adapted Maslow's hierarchy as a method to better understand a company's relationship with its employees, as well as the employee's motivation to become an advocate for the organization (Brito, 2018).

Conclusions
Implications for future studies

❖ Study with a shortened timeline or using predominately freshman or sophomore students (to reduce senioritis affect) (Obj. 2).

❖ Qualitative study to determine post-IP best practices, especially for intrinsic motivation (to know), emotional engagement, and skills engagement (Obj. 2).

❖ Determine if IP types (faculty-led, internships etc.) and or program lengths influence student motivation and engagement (Obj. 2).

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Questions?