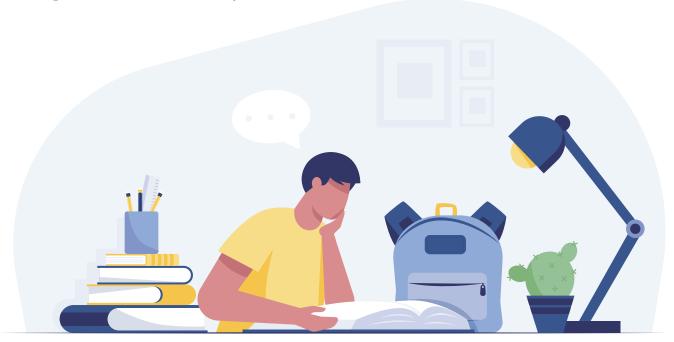
ELEVATE Leadership Development Program

Assessing Effectiveness of Leadership Development in Higher Education

Since the 1950s, researchers such as <u>Donald Kirkpatrick</u> have been trying to evaluate training, including leadership development. There are many studies within higher education that have demonstrated that leadership development trainings for students are not only <u>highly effective</u>, but that leadership skills are some of the most important <u>competencies employers are looking for</u> in college graduates. However, few studies have considered the best or most effective practices to deliver these leadership competencies at the university level.



This white paper aims to share the results of our study, "ELEVATE! Assessing Effectiveness of Leadership Development Methods in Higher Education: A Field Experiment," and other research that sheds light on the best practices and other factors that may affect a student leadership development program.

BACKGROUND

There has been an increasing demand from employers to have college students exhibit leadership competence by graduation. The <u>National Association of Colleges and Employers</u> (NACE) has identified a set of <u>eight behaviors and competencies</u> that employers have expressed all entry-level professionals should have to integrate quickly into their organization and have a successful career. They are:

TABLE 1

NACE College Graduate Requested Behaviors and Competencies

Communication:

- Understand and demonstrate verbal, written and non-verbal abilities (Communication)
- Employ active listening and persuasion (Communication)

Critical Thinking:

- Make Decisions and solve problems (Decision Making/Strategic Planning/Wisdom)
- Proactively anticipate needs (Managing Others)
- Summarize and interpret data with an awareness of personal biases (Self-Awareness)

Career and Self-Development:

- Awareness of strengths and areas of development (Self-Awareness)
- Accepting and applying feedback (Developing Others)
- Developing goals (Self-Control and Management)

Equity and Inclusion:

- Actively contribute and advocate for inclusive and equitable practices
- (Social Responsibility/Responsibility/Ethical Conduct)

Leadership:

- Inspire, persuade, motivate self and others (Manage Others/Intrinsic Motivation)
- Use innovative thinking
- Serve as a role model
- Build trust (Ethical Conduct)

Professionalism:

- Act equitably with integrity (Social Responsibility/Responsibility/Ethical Conduct)
- Maintain a positive personal brand
- Prioritize and complete tasks (Self-Control and Management)

Teamwork:

- Effectively manage conflict (Resolving Conflict)
- Recognized and employ personal strengths, knowledge, and talents (Self-Aware)
- Collaborate with others

Technology:

- Navigate change
- Use technology to improve efficiency

Fisher Leadership Initiative's Principled Leadership Competencies



Simultaneously, higher education has recognized an increased need to train future generations of leaders. <u>Brett Seidle's (et al.) study</u>, as well as many others, have shown that leadership development in higher education can lead to an increase in student leadership performance.

In the same study, Seidle et al. found that the amount of time an individual works in an organization (or the age of the individual) also affects their leadership development. They found that "increases in age may result in either no change or perhaps even a decrease in the change in leadership performance."

These findings demonstrate that leadership development programs should be conducted in higher education settings so we can meet the needs of employers and reach students at an impressionable age.



GROUNDWORK

With the growing emphasis

on student leadership in higher education, there are very few studies on the best practices for delivering leadership development training. In <u>Denise Reyes (et al., 2119)</u> *Meta-Analysis of the State of Higher Education Leadership Development Program Evaluation*, they found several effective best practices:

- Volunteering in a program, versus requiring participation, leads to an increase in motivation to actively attend.
- Temporally spacing out content allows for an individual's mental bandwidth not to be overwhelmed.
- Applying knowledge or practicing skills is the most effective way to foster competencies.
- Giving feedback, both positive and negative, provides students with a better understanding of themselves (their ability level) and what they need to improve.
- In-person facilitation can provide specific guidance, adapt the material, and provide a customized experience.



However, Reyes concluded that there is still room for improvement in the study of leadership development.

These findings led us to design the ELEVATE Leadership Development Program with:

- Paid volunteers
- Spaced learning, to take mental bandwidth into account (In phase II)
- Feedback and reflection activities (only in experimental groups two and three in phase I and experimental group two in phase II)
- In-person facilitation, adaptation of materials, and customized experience (In phase II only)

Reyes et al. (2019) also share that information-based strategies (presenting content directly, for example, using PowerPoint to present information on how to resolve conflict) are the most used method to develop leadership. In his book, *Team Training Essentials: A Research Guild*, Eduardo Salas states that training programs can gain more preferable outcomes by incorporating a variety of delivery methods.**

Another study by <u>Barling and Kelloway</u> suggested that the main training session, along with a few follow-up sessions, can significantly improve leaders' transformational leadership skills by about 25 percentiles. With both phases, we offered at least one workshop each for two weeks for each module.

Additionally, <u>Kolb's experiential learning theory</u> proposes that knowledge is created and gained via transformational experiences. There are four elements of Kolb's theory:

- Concrete experience (CE): Where learning happens when the individual can immerse and observe ("concrete") reality or new experiences (i.e., Case studies and simulations).
- Abstract conceptualization (AC): When information is learned through perceiving, analyzing, planning to develop theories and creating ideas to solve problems (i.e., Lecture, in-class discussion, videos, online modules, reading).
- Reflective observation: Learning through observing others and reflecting on one's own experiences (i.e., Coaching and learning group discussion).
- Active experimentation: Learning through the practical application of content so individuals can test existing ideas or validate learned theories in a structured environment (i.e., Practicum project).



Another element of the ELEVATE study is student engagement. Studies have focused on improving enthusiasm, interest, and participation (Kahu, 2013) to maintain student engagement levels. Gamification, the use of game design in non-game content (Deterding, Dixon, Khaled, and Nacke, 2011), is one way to achieve increased student engagement. Researchers have shown that gamification can have a positive outcome in the educational setting, including user experience, perceived enjoyment, engagement, perceived effectiveness, and motivation (in particular, learning) (Majuri and Hamari, 2018).



To explore gamification in ELEVATE, we utilized the method in two ways: The first was to pay the students a specific amount of money for participating in each section of the study, from taking the pre/postevaluations (\$5 per evaluation) to participating in each of the workshops or online modules (\$20 per session for phases I). The second way we tested gamification was to provide a progression system of digital badges. Upon completion of a module, students were awarded with a digital badge that could be kept and shared on social media platforms (such as LinkedIn) and resumes (See Appendix 1).

An additional area we considered, especially with the continued threat of COVID-19, was whether there is a significant difference between in-person content delivery and remote learning (i.e., Zoom). Although many believe that training that occurs in an online setting is less effective, Reyes did not find any data to support that claim. Still, others feel that outcomes and transformation of remote learning are significantly reduced because of barriers such as a lack of flexibility (Merriam, 2001) and a lack of interaction and engagement (Magerko et al., 2005). However, we believe that with the advancement of technology and training techniques and a properly designed remote training program, there can be similar or increased retention and transformation of leadership skills.





EVALUATION CRITERIA

ELEVATE aims to develop and then assess the effectiveness of different elements in college students' leadership development strategies. For this study, we hypothesize that certain aspects of best practices in delivery and activities will show a significant increase in an individual's leadership development using Kirkpatrick's four levels of evaluation, Reyes' meta-analysis, and other studies previously mentioned. Below are the different areas we have considered:

- 1.1 Groups who received experiential learning elements showed higher postprogram growth than that of the control group and the other traditional group (All studies previously mentioned).
- 1.2 Students show the highest post-program growth when all elements of experiential learning are incorporated (both virtual and in-person) (Reyes, 2019; Barling et al., 1996; Salas et al., 2015).
- 2.0 Students show the highest post-program growth when using gamification (Majiuri et al., 2018).
- 3.0 No significant difference between in-person and remote learning (Merriam, 2001; Magerko et al., 2005).

When using Kirkpatrick's four levels of evaluation for learning and development (reactions, learning, transfer, and results) to assess ELEVATE's hypotheses, we identified the following ways to evaluate the student participants:



- 1. **Reaction** refers to how an individual in a program feels about it. It is essential to obtain their reaction or how they feel about the training to understand better how well the training is received. This is one of the more popular ways to evaluate a program because it can be self-reported and collected immediately after the training is complete. We acquired students' reactions through a survey asking them if they agreed or disagreed with the following statements:
 - I am glad I participated in this program.
 - This program helped me understand what is expected of me in day-to-day activities.
 - This program was of little practical value.
 - Participating in this program has helped me perform my work better.
 - The program materials have served as useful references for me when I am in a professional setting.
 - I frequently use what I have learned in this program in work setting.
 - I have applied what I've learned in this program to my work.

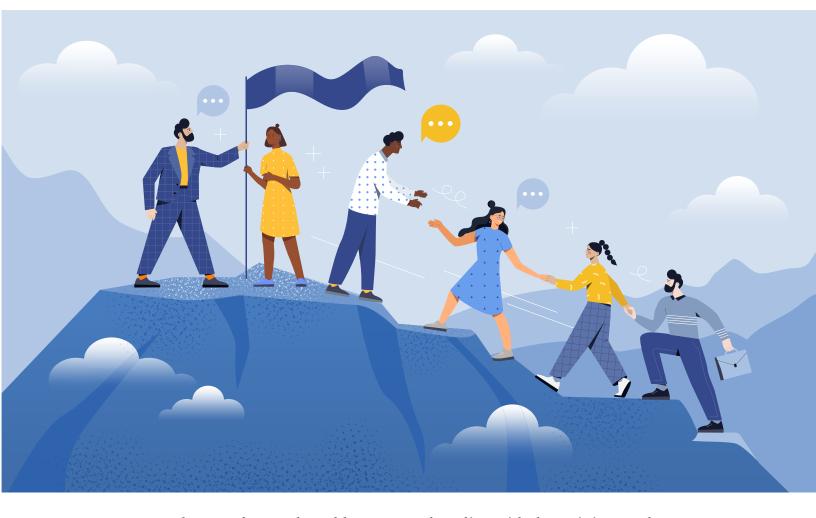
We also have students take the BUILD Leadership Assessment, which is a 360-degree instrument that identifies 18 competencies that we feel are engaging in developing a principled leader. The students evaluate themselves and then ask others that have seen them in a leadership role to assess their competence. Students take the BUILD Leadership Assessment before the modules begin (preevaluation) and one year later (postevaluation).



- **2. Learning Outcomes** refer to the knowledge the facilitator hopes the student/trainee will gain from the module presented. For this type of evaluation, we gave them a survey with situational judgment tests and other questions six months after the program to check their knowledge retention. For example:
 - Leaders at higher levels in the organization generally have higher levels of self-awareness. True or False.
 - The most effective leaders are generally the ones who are neither personally liked nor disliked by their followers. True or False.
 - Lorrie, who used to be a student-athlete, wants to begin an exercise routine again. She recently started a new position as a finance consultant and hasn't had time to exercise for a couple of months. Lorrie has set several goals for herself, found below.
 - Get up at 6:00 am from Monday to Friday.
 - Yoga on Monday and Thursday, Cardio on Tuesday and Friday, and Strength on Wednesday; HIIT on Saturday and Sunday.
 - To prevent myself from not being able to get up, I will go to bed at 10:00 pm every night and set up multiple alarms to be sure.
 - I will give myself until the end of this month to review my progress and my "attendance rate".
 - I will join an online healthy lifestyle group where group members will share progress regularly.
 - Based on the elements of an effective goal, which of the following elements is MISSING from Lorrie's goal?
 - 1. Attainable
 - 2. Specific
 - 3. Expecting barriers
 - 4. Measurable
 - 5. Setting deadlines



3. **Transfer** is taking the leadership training provided and applying it in their daily work and life. Again, we utilize the BUILD Leadership Assessment to determine if there is transfer. We look for an increase in the behaviors or skills rated by themselves. The increases show a transfer of knowledge observed by coworkers, direct reports, and managers.



4. **Results** are when real-world outcomes that align with the training, such as personal or professional goals and performance, are met. Our study does not assess this level of evaluation.

EXECUTION AND ANALYSIS

The ELEVATE Leadership Development Program had two phases, each a semester long. Phase 1 had four experimental groups and one control group:

- **Asynchronous** Received their autonomous, active, application-driven learning through a learning management system.
- **Experimental Group 1** Participated in a 3-hour workshop where leadership content was delivered, and students had opportunities to apply their knowledge.
- **Experimental Group 2** Also participated in a 3-hour workshop but had an additional opportunity to review content, reflect and do activities to apply the knowledge.
- **Experimental Group 3** Participated in a 3-hour workshop, had a workshop to review, reflect and apply, and was given a digital badge to add a level of gamification.
- **Control Group** Participated in four, one-and-a-half hour workshops of non-leadership business workshops, such as Excel at interviews, business writing, and other technical writing.

Each group started with about 30 to 40 students.

The first phase consisted of four modules, each lasting two weeks: Self-Leadership, Team Leadership, Principled Leadership, and Stewardship (See table below for more details).

- Experimental Groups 1, 2 & 3 Each group was given one workshop per week. The first week there was a 3-hour workshop delivering content and chances to apply knowledge. In the second week, the workshop was to review material and complete an application activity (Experimental groups 2 & 3 also had time to reflect on the knowledge gained in the module).
- **Asynchronous Group** Each group was given one module each week that aligned with the modules from the experimental groups. For example, in week one of the first module, students learned about self-awareness. The following week, they learned about self-control and management, including goal setting.
- **Control Group** This group met four times, once per module, to participate in business writing workshops.



TABLE 1: Content contained in each module

Study Design and Interventions PROGRAM CONTENT – PHASE I

	Module I	Module 2	Module 3	Module 4
Experimental Groups	Self-Leadership Self-awareness Goal-setting Self-management & control	Emotional intelligence Communication Decision-making	Principled Leadership Ethical leadership Character development	Stewardship Strategic planning Change agent
Control Group	Excel at interviews (1)	Excel at interviews (2)	Business writing	More on technical writing

With these groups and the content in mind, we took Kolb's (1984) research on the four interactive intervention activities (Abstract Conceptualization, Concrete Experience, Active Experimentation, Reflective Observation) and gamification (See Table 2 below), and distributed them accordingly, specifically testing active experimentation, reflective observation, and gamification to see if there has been an increase in student reaction, mastery of the learning outcomes, demonstration and transference of leadership skills and behaviors to their everyday life, and if there was a significant change in leadership behavior.

TABLE 2: Intervention Activities for the ELEVATE groups in Phase I

Study Design and Interventions

STUDY DESIGN AND INTERVENTIONS

By following the experiential learning style framework, we designed four different types of leadership development activities. We will apply these activities to different experimental groups and compare their effectiveness among these groups and the control group.

	Control Group (N = 60)	Asynchronous Group (N = 60)	Experiential (Traditional) Group I (N = 60)	Experiential Group 2 (N = 60)	Experiential Group 3 (N = 60)
Career Booster	$\sqrt{}$	Х	Х	х	Х
AC	X	$\sqrt{}$	\checkmark	\checkmark	\checkmark
CE	X	X	\checkmark	\checkmark	\checkmark
AE	X	X	\checkmark	\checkmark	\checkmark
RO	X	X	x	\checkmark	\checkmark
Gamification	x	x	x	x	$\sqrt{}$

Note: AC = Abstract Conceptualization; CE = Concrete Experience; AC = Active Experimentation; RO = Reflective Observation.

Phase Two consisted of a similar setup (groups and content), but with one significant difference. Instead of using Zoom for all workshops, we would deliver the content and activities in person. Phase I experienced significant student attrition rates (around 90%). Therefore, we changed the delivery of experimental group 1, 2, and 3 in Phase II to:

- A microlearning video of eight to twelve-minute videos
- A fifteen to twenty-minute podcast with an expert in the field (i.e., Self-Control and Management with Dr. Howard Klein)
- A job aid that shared the key takeaways from the content in the video and podcast (See Appendix 2) in the first week of each module.

In the second week, all three groups received different variations of a workshop where students were able to:

- Review the content (All groups) and reflect (Only experimental groups 2 and 3).
- Apply their knowledge to an activity to practice the new technique properly (See table 3 below for a detailed schedule of Phase II).



TABLE 3: Phase II Schedule of Content



	Module I	Module 2	Module 3	Module 4	Module 5	Module 6
Experimental Groups	Self-Leadership • Self- awareness	 Self-Leadership Self-Control and Management Goal Setting 	Self-Leadership • Emotional Intelligence	Self-Leadership • Intrinsic Motivation	Self-Leadership • Character Development	Self-Leadership • Social Responsibility
Control Group	Excel at interviews (I)	Excel at interviews (2)	Business writing	More on technical writing	Add New Content	Add New Content

Due to lower registration in Phase II (Phase I: 253/Phase II: 140), it was decided to only utilize three groups: Experimental 1 and 2, and asynchronous. With gamification being the only difference between Experimental 2 and 3 in Phase I, and with the understanding that we have data on gamification from Phase I, we could eliminate Experimental Group 2 and only run Experimental 3 in Phase II. To accommodate for the possibility of similar attrition rates as Phase I, we also chose not run the Control Group. We felt that with the low registration, Experimental Groups 1, 2, and the Asynchronous group would shed more light on our hypotheses.

Also, due to unforeseen delays (change of the Primary Investigator and significant student attrition rate), we had to eliminate the Social Responsibility BUILDing Block to ensure that all of Phase II was completed before the end of the spring semester.

To review the data, let's analyze it according to our hypothesis by using Kirkpatrick's recommendation of acquiring learning outcomes from performance evaluations and reactions from surveys:

• 1.1 Groups who received experiential learning elements showed higher postprogram growth than that of the control group and the other traditional group (All studies previously mentioned).

Immediately after the modules were completed for Phase I and II, we conducted a knowledge test. We asked the students to complete situational judgment tests, multiple



choice questions, and true or false statements about the leadership content delivered in modules.

After calculating the average of the students' scores in each content area, half of the Phase I groups scored higher than the control group. Phase II was higher than the control group in every area of leadership development tested except PIIE1 and PIIE2 in Intrinsic Motivation content (See Table 4).

When using the average scores from the post-evaluation with the leadership content consistent between the two phases, this showed that all the groups (Phase I: Experimental 2, and 3 (P1E2 and P1E3), and Control (C) and Phase II: Experimental Group 1 and 2 (P2E1 and P2E2), and Asynchronous (P2A) performed better overall than the control group. The only group that did not perform better than the control was Phase I Asynchronous.

Intrinsic Motivation ** was the only outlier amongst all groups. By removing the Intrinsic Motivation data from the averages, all groups excelled by a range of two points higher to nine points higher over the control group in the Post Evaluation Leadership Knowledge Test (See Table 4 for those average scores and Appendix 1 to view the knowledge test) again except Phase I Asynchronous. Without the Intrinsic Motivation added to the averages, all the Phase II groups excelled better than all the Phase I groups.



TABLE 4: The post evaluation knowledge test data for both phases, all groups. They are split according to phases except for the control group.

POST EVALUATION KNOWLEDGE TEST PERFORMANCE DATA

The following data demonstrates that in both Phase I and II, the experimental and asynchronous groups both show a high score on the knowledge test than the control group, except in with one leadership concept, Intrinsic Motivation.

Groups		Cor	Гest	est				
	SCM	IM	EI	CD	Average with IM	Average without IM		
PI: E1	69.09	45.45	48.18	43.18	51.48	53.48		
PI: E2	65.56	77.78	57.7	38.89	59.98	54.05		
PI: A	56.41	40	52	41	47.35	49.8		
PII: E1	70.95	28.57	61.9	47.62	52.26	60.16		
PII: E2	66.67	30.77	53.72	48.72	49.97	56.37		
PII: A	72.06	50.79	51.12	53.02	56.75	58.73		
PI: C	62.27	44.67	48.4	44	49.84	51.56		

Note: PI = Phase I; PII = Phase I; E1 = Expertmental Group 1; E2 = Expertmental Group 2; A= Asynchronous Group; C=Control Group; SCM = Self-Control and Management; IM = Intrinsic Motivation; E1 = Emotional Intelligence; CD = Character Development

The knowledge test data shows a trend that Phase I and II E1, E2, and in PIIA show higher test scores than the control. This trend leads us to believe that the content provided for the study on leadership development seems to be retained by the student, considering they scored higher than the control group who received no leadership training. However, this study shows we need to re-evaluate the content, especially intrinsic motivation, to see how we can improve student understanding even more.

The second measure of data from ELEVATE is a self-evaluation sent six months after the end of the modules (See Table 5 below). The data shows that students in Phase I seem to have a similar self-rating to those in the control group. However, those in Phase II E2 and A show a trend of rating themselves higher than the control group. This trend shows that the students feel more confident in their leadership ability as a result of their participation in the program.

TABLE 5: The six-month leadership self-evaluation for both phases

ELEVATE												
SIX-MONTH POST SELF-EVALUATION												
_	The following data show students' self-evaluation from a set of statements they rate themselves from a 1 (low rating) to 3 in both Phase I and II (Questions can be found in Appendix 2).											
Groups Six-Month Post Self-Evaluation												
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Average
DI E4												

PI: E1	1.80	1.60	1.80	2.00	1.80	1.80	1.80	2.00	1.80	2.20	2.00	1.87
PI: E2	2.33	2.33	2.44	2.11	2.44	2.44	2.33	2.56	2.44	2.00	2.00	2.31
PI: A	2.36	2.18	2.27	2.09	2.09	2.36	2.36	2.45	2.45	2.00	2.00	2.24
PII: E1	2.00	2.20	2.40	2.00	2.20	2.40	2.40	2.40	2.40	2.40	2.40	2.29
PII: E2	2.30	2.60	2.44	2.40	2.40	2.60	2.70	2.50	2.50	2.70	2.80	2.54
PII: A	2.50	2.33	2.50	2.50	2.50	2.83	2.67	2.83	2.83	3	3	2.63
PI: C	2.33	2.40	2.38	2.38	2.27	2.63	2.47	2.63	2.56	2.56	2.44	2.46

Note: PI = Phase I; EI = Experimental Group 1; E2 = Experimental Group 2; A= Asynchronous Group; C=Control Group; Q refers to question . You can find the questions in Appendix

We also asked students to evaluate the program, asking questions such as:

- I am glad I participated in this program.
- I have applied what I have learned in this program.

These questions were rated on a scale from 1 (strongly disagree) to 5 (strongly agree). There was also one additional question asked – "How likely you would recommend ELEVATE to others?" – rated on a scale from 1 (not likely) to 10 (extremely likely). We found that students from all groups rated the program's content and delivery about the same as the Control. However, except for the question about recommending the course to others, PIIE2 and A scored much higher than the control group. We can attribute this to the content delivery and added reflection throughout each module of E2, the small amount of content between PIA (twelve modules) and PIIA (five modules) and the space between each module (every other week) for PIIA.

TABLE 6: The six-month post program evaluation

ELEVATE

SIX-MONTH POST PROGRAM EVALUATION

The following data show students' program evaluation from a set of statements they rate themselves from a 1 (low rating) to 3 and the last question about recommendation rate 1 to 10 (10 being highly recommend) in both Phase I and II (Questions can be found in Appendix 3).

Groups		Six-Month Post Program Evaluation								
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Average	Q9
PI: E1	2.20	2.80	2.60	2.60	2.40	3.00	2.40	2.20	2.53	5.40
PI: E2	3.22	3.44	3.44	3.00	3.11	3.33	2.78	3.11	3.18	6.44
PI: A	3.64	3.82	3.64	3.00	3.36	3.45	3.18	3.00	3.39	6.91
PII: E1	3.60	3.20	3.20	3.60	3.40	2.80	2.60	2.80	3.15	6.0
PII: E2	2.60	2.80	2.80	3.90	3.20	3.10	3.30	3.10	3.1	8.0
PII: A	3.00	3.42	3.00	4.08	2.67	3.25	2.83	3.17	3.18	9.83
PI: C	3.47	3.18	3.18	3.65	3.29	2.88	3.29	3.00	3.24	6.91

Note: PI = Phase I; PII = Phase II; E1 = Experimental Group 1; E2 = Experimental Group 2; A= Asynchronous Group; C=Control Group; Q refers to question. You can find the questions in Appendix 3

One last way to evaluate a student's reaction to the program is their attendance. The higher the attendance rating and the less attrition (individuals stop coming), the better you can presume the program is, especially if there are no negative consequences for not attending. As you can see from the data, PIIA had the highest percentage of registered students attending. It had an attendance rate of 71.52 (See Table 7). If you remove students that participated in zero sessions, the percentage rises to 90.77, well above the attendance of the Control group. This is even more significant when you consider that if a student did not attend a workshop or complete an online module, they would not receive the money for that event.

TABLE 7: Phase I and II attendance

PHASE I AND II ATTENDANCE

The following data show students' attendance for the entire phase, and for those that took either the self-reflection/program evaluation or

	Attendance for Program	Number of people with Attendance less than 50%	Attendance that took SR survey	Number of people with Attendance less than 50%
PI: E1	18.77	25 out of 29	31.74	5 out of 7
PI: E2	14.81	61 out of 66	36.67	2 out of 3
PI: A	25	36 out of 63	96.83	0 out 7
PII: E1	21.03	32 out of 39	62	2 out of 5
PII: E2	27.58	32 out of 39	63.33	3 out of 10
PII: A	71.52 (90.77 without 0%)	(8 out of 39, all but 1 were O%)	96.67	0 out 14
PI: C	42.31	25 out of 52	62.96	4 out of 18

Note: PI = Phase I; EI = Experimental Group 1; E2 = Experimental Group 2; A= Asynchronous Group; C=Control Group; SR - Self-Reflect/Project Performance; KT = Knowledge Test

We cannot say that any of this data significantly shows a specific phase, group, or way to deliver content is better. However, certain data indicates a need for additional research or speculation about the cause. These trends identified from the data are:

- Phase II shows higher scores over all data sets (Knowledge test, leadership self-evaluation, program evaluation, and attendance) against the control and most of the time Phase I (See Table 4, 5, 6, 7 and 8), which indicate the delivery system E1 and E2, and Asynchronous have characteristics that differentiate themselves:
 - PIIE1 and E2 had unique delivery systems that stood out from their counterparts PIE1 and E2. PIIE1 and E2 both had flipped workshop delivery, in which the student watched a 10 to 15-minute video of leadership content, listened to a 15 to 20-minute podcast from an expert in the field, and reviewed a job aid highlighting the critical points in the content from the video and podcast. The following week, the student would have an opportunity to participate in a one-hour review, reflection and application workshop where they could practice what they had learned, whereas PIE1 and E2 combined the content and application into a traditional, three-hour workshop.

TABLE 8: Post Evaluation Knowledge Test Data placed in ranking order of performance

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POST EVALUATION KNOWLEDGE TEST PERFORMANCE DATA

The following data show how each group in phase I or II compare to the control in the knowledge test.

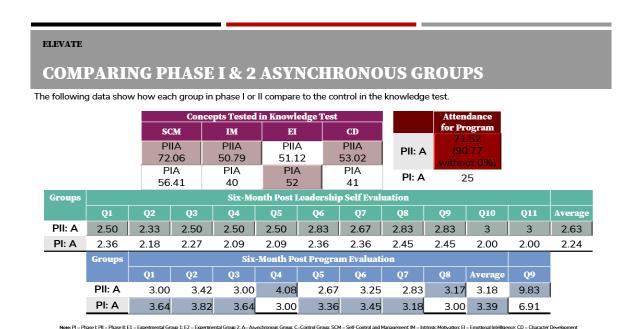
	Concepts Tested in Knowledge Test								
SCM	IM	EI	CD	Average with IM	Average without IM				
PIIA	PIE2	PIIE1	PIIA	PIE2	PIIE1				
72.06	77.78	61.9	53.02	59.98	60.16				
PIIE1	PIIA	PIE2	PIIE2	PIIA	PIIA				
70.95	50.79	57.7	48.72	56.75	58.73				
PIE1	PIE1	PIIE2	PIIE1	PIIE1	PIIE2				
69.09	45.45	53.72	47.62	52.26	56.37				
PIIE2	PIC	PIA	PIC	PIE1	PIE2				
66.67	44.67	52	44	51.48	54.05				
PIE2	PIA	PIIA	PIE1	PIIE2	PIE1				
65.56	40	51.12	43.18	49.97	53.48				
PIC	PIIE2	PIC	PIA	PIC	PIC				
62.27	30.77	48.4	41	49.84	51.56				
PIA	PIIE1	PIE1	PIE2	PIA	PIA				
56.41	28.57	48.18	38.89	47.35	49.8				

Note: PI = Phase I; PI = Phase I; E1 = Experimental Group 1; E2 = Experimental Group 2; A= Asynchronous Group; C=Control Group; SCM = Self-Control and Management; IM = Intrinsic Motivation; E1 = Emotional Intelligence; CD = Character Development

- Comparing all the data to just the two asynchronous phases, where PIIA scored higher than PIA in all areas except (See Table 8 and 9):
 - Knowledge Test: Emotional Intelligence (-0.88 point)
 - Program Evaluation: Q1-3, 5-7 (But not the most critical question recommendation to a friend PIA: 6.91 to PIIA: 9.83).

The data shows that the students may require spacing and reductions of new content to allow students to feel comfortable with the material and retain the highest level of content.

TABLE 9: Comparison of Phase I & II Asynchronous Groups in all data sets



IMPLICATIONS FOR STUDENT LEADERSHIP DEVELOPMENT

The results of ELEVATE revealed the effectiveness of three key practices that student affairs professionals can implement to increase knowledge retention and engagement amongst undergraduate populations.

Adopting A Hybrid Learning Approach

Student affairs practitioners at The Ohio State University and beyond should embrace, not reject, a hybrid approach to learning and development. To maximize knowledge retention and student engagement, practitioners should vary their instruction methods by utilizing self-paced, asynchronous learning opportunities, in-person facilitation, and/or a combination of the two (flipped classrooms).

Utilizing Researched Delivery Techniques

Researched learning and development techniques, such as space learning (allowing time between content delivery to maximize retention) and microlearning (delivering material in smaller chunks) activities, are effective means of developing and engaging the modern student. Student affairs practitioners should consider how they can modify their content and leverage these techniques both inside and outside of the classroom.



Applying Content to the Real-World

To increase the transformation of leadership content, student affairs practitioners should consider how they can actively apply knowledge to real-world experiences. Case studies, "choose your own adventure" experiences, and simulations can help students effectively apply gained knowledge and stimulate transformation.

FUTURE CONSIDERATIONS

In conclusion, these trends identified could be considered even outside of the realm of leadership development. Thus, we recommend more research in leadership development or in a more general educational setting in the areas of:

- 1. Interactive asynchronous work with spacing, where students can have an opportunity to learn the content and apply it on their own time to digest the material, especially if this is in addition to work outside their regular class schedule.
- 2. The flipped classroom or workshop, where students use a variety of media to gain the knowledge required before meeting in-person for a workshop or class. The class or workshop is designed as an active learning situation where the students have the opportunity to review the content, apply what they have learned in a practical application, and reflect on how they then transfer it to their own life.



APPENDIX 1: Badges Awarded Upon Completion of a Module













APPENDIX 2: Example of a Job Aid Given to Students Week One of Each Module

Here is an example of the Self-Awareness job aid given to student after watching the video and listening to the podcast week one.

Fisher Leadership Initiative ELEVATE Leadership Program

Self-Awareness

Self-Awareness

is an individual's understanding of when and why he or she chooses to engage in certain behaviors that promote/hinder effectiveness. Strong leaders use self-awareness to create and work towards a goal.

The Core Self-Evaluation (CSE)

is one way to determine your strengths in one or more of the four dimensions of CSE:



Locus of control: Locus of control is the individuals' internal belief they
can control a broad array of factors in their lives.



 Self-Esteem: Self-esteem reflects one's overall subjective evaluation of one's work. It reflects the overall value that one places on oneself



 Self-Efficacy: Self efficacy is one's belief in their own capability in completing tasks and one's confidence in the outcome.



 Emotional Stability: Emotional stability reflects the tendency to be confident, secure, and steady.

Values

an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite.

Values can:

- Help us grow and develop
- Increase self-awareness
- Create a future we want to experience
- · Guide our decisions and actions
- · Give us purpose
- Provide us with a consistent manner of behavior
- Strengthen ability to influence
- Support us in finding a personal organizational fit
- Produce clarity
- Reduce stress
- · Motivate engagement

Mihaly Csikszentmihalyi, author and professor on motivation, once said:

"A leader will find it difficult to articulate a coherent vision unless it expresses his core values, his basic identity...one must first embark on the formidable journey of self-discovery in order to create a vision with authentic soul."





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APPENDIX 3: ELEVATE Post-Program Leadership Knowledge Test Questions

Now that you have completed the ELEVATE program, we want to know if your understanding about leadership has changed with the following assessment. The purpose of the assessment is for us to keep track of the success of the program, not to assess your leadership abilities. We will not share individual assessment score with anyone outside of the research team. Please do not get anxious about providing the correct answers. We ask that you try to recall and apply as much leadership knowledge as you have learned, during this assessment.

If you have any questions concerning the assessment, please email FCOB-Elevate@osu.edu.

Your full name (e.g., Brutus Buckeye):

I. Below are some statements about leadership. Please choose true or false in response to each statement.

	True	False
$1. \ \mbox{Leaders}$ at higher levels in the organization generally have higher levels of self-awareness.	0	0
The most effective leaders are generally the ones who are neither personally liked nor disliked by their followers.	0	0
Despite its negative reputation, pressure is generally effective as an influence tactic.	0	0
4. The individuals most likely to be seen as effective leaders of a group are those who stand out (are distinct from) the group.	0	0
5. Using tangible rewards (extrinsic motivation) tends to lead to higher levels of intrinsic motivation.	0	0
6. Research suggests that empowering followers too much can lead them to feel overwhelmed and thus be counterproductive.	0	0
7. Research indicates that offering employees positive feedback has a stronger effect on their motivation than monetary incentives.	0	0
 It is more important for a leader to explain the reasoning behind their vision than painting a vivid picture of the future to which the vision would lead. 	0	0



II. Multiple choice questions. There is only **ONE** correct answer for the following questions. Choose the option that you think best answers the question.

Goal-Setting

- 1. Lorrie, who used to be a student athlete, wants to begin an exercise routine again. She recently started a new position as a finance consultant and hasn't had time to exercise for a couple of months. Lorrie has set several goals for herself, found below.
 - a. Get up at 6:00 am from Monday to Friday
 - b. Yoga on Monday and Thursday, Cardio on Tuesday and Friday, and Strength on Wednesday; HIIT on Saturday and Sunday.
 - c. To prevent myself from not being able to get up, I will go to bed at 10:00 pm every night and set up multiple alarms to be sure.
 - d. I will give myself until the end of this month to review my progress and my "attendance rate".

	e. I will join an online healthy lifestyle group where group members will share progress regularly.
Bas	sed on the elements of an effective goal, which of the following element is MISSING from Lorrie's goal?
0	A. Attainable
0	B. Specific
0	C. Expecting barriers
0	D. Measurable
0	E. Setting deadline(s)
Pri	oritizing
set bef	t's Friday, November 3. You have one hour left at work before you start your week long vacation. Just as you are ting up your auto reply for your email, you receive five emails. You will need to prioritize and deal with the emails/task fore you take off from work. Which ONE of the emails belongs to the urgent and important (quadrant I) section of vey's four quadrants?
0	A. Your supervisor asking you to submit a self-evaluation before the one-on-one performance review meeting next month
0	B. Staff association committee's call for submission of a pet photo contest (deadline is Nov. 10)
0	C. Inquiry from a client about a delivery that should have arrived earlier today
0	D. A coworker asking you for survey data on a project you worked together
0	E. Email from HR that asks you to fill up a performance assessment for your supervisor



3. A	A friend tells you that she is ready to drop out from college because she feels that college is not working out for her.
Fro	m your perspective, she is doing fine in classes, her major is a good fit for her personal and career goals, and this may
be	a temporary reaction. Which one of the following options do you think is the most helpful for your friend?
0	A. Tell her that she is overreacting to her stressors in life and she will find this a terrible idea in a few days.
0	B. Tell her that you think her major is a great fit for her and she shouldn't drop out.
0	C. Echo with her feelings by saying that college education is not the only way to success.
0	D. Tell her that you understand her feelings and she should do what she desires
0	E. Ask her what it means that she feels that way
EI	
the	You just had a fight with your mother over the phone on your career choice when you graduate college. In addition, are are still a couple of tasks you need to work on by the end of the week. Which ONE of the following tasks should you see on at this moment?
0	A. Plan your best friend's birthday party next week
0	B. Proof next year's budgeting plan for your student organization
0	C. Write your professor a thank you email for giving you a reference letter for an internship
0	D. Study for your GMAT exam
0	E. Record a welcome video for new members of your student organization
Par	rticipative DM
me gro for	CJ works at a marketing firm and is preparing to host a brainstorming session with the team for a new client's social dia campaign. The client wants the campaign to be as creative as possible. However, CJ is well aware of the danger of aupthink due to a few failed social media marketing examples from other firms. These campaigns seem to be too edgy the audience to even understand the message. Therefore, CJ wants to prevent this type of result. Which ONE of the owing decision-making methods suit CJ's needs the BEST?
0	A. Ask group members to generate and send in ideas anonymously and invite a marketing expert from a local university to the meeting to help evaluate the ideas;
0	B. Use brainstorming techniques to generate as many creative ideas as possible;
0	C. Encourage the team to use freewheeling to come up with wild and creative ideas;
0	D. Ask group members to each send CJ five ideas before the meeting and discuss and vote on these ideas during the meeting:
0	E. Initiate a creative idea competition where the winner with the most creative idea gets a few extra vacation days.



III. Multiple choice questions. There is More Than ONE correct answer for the following questions. Choose ALL of the options that you think best answer the question.

Effective Listening
Which of the following communication behaviors do NOT reflect effective listening? Select <u>ALL</u> options that apply.
A. Acknowledging, repeating, and talking about the content of the speaker's message;
☐ B. Frequently proposing your own ideas on the issue/topic as reaction to the speaker's words;
C. Keeping eye contact during the conversation and giving nonverbal feedback such as head nods;
D. Helping the speaker analyzing his/her issue(s) and offering suggestions to your best knowledge;
E. Showing interest and enthusiasm in the conversation.
Trust
7. The following statements describe different elements of trust in the workplace. Some of them are affect-based and some are cognition-based. Select <u>ALL</u> of the statements that are cognition-based elements of trust.
A. I can talk freely to this person about difficulties.
☐ B. With this person, we can both freely share our ideas, feelings, and hopes.
B. With this person, we can both freely share our ideas, feelings, and hopes.C. This person approaches his/her job with professionalism and dedication.



Fairness

8. l	Henry is a middle manager in a manufacturing company. During a recent 360 degree performance review, hi
sup	pervisor told him that some of his subordinates have commented on Henry's lack of fairness. Such response
cor	mpletely out of Henry's expectation. As Henry recalls his actions in the past 6 months, he thought of five exa
tha	t may lead to such impression that he is unfair. Select ALL of the examples that reflect unfairness in the
wo	rkplace.
	A. When Henry heard that corporate is forming a minority executive fast track program he immediately forward the information to the only minority member in his team, but he didn't openly share the information with the rest of the team.
	B. Henry and Jason like the same football team, so they often hang out in the break room or after work to discuss their team or watch a game together. He sometimes will share exclusive work related information with him.
	C. Henry and John are both married and have two kids of similar ages. Over the years, they became really good friends. Their significant others will sometimes host play dates for the children or have gatherings between the two families. But they don't like to talk about work during these gatherings.
	D. Lauren is a very kind, agreeable and hardworking young women. She often volunteers to take up new projects or help others with their tasks when available. Therefore, when there is an overflow of work around the office, Henry usually asks Lauren if she can take up more work.
	E. Henry and Jessica share very different political views and can sometimes get into arguments when the topic comes up. Therefore, Henry tries to avoid having conversations with Jessica as much as possible to avoid uncomfortable situations.
Eth	ical DM
WO	You and one coworker are working on a project together. Recently, you've been finding mistakes in your coworker's rk. These mistakes have caused you stress and took you a lot of time to correct, but your coworker is very plogetic about the mistakes he made. What do you think is the BEST and WORST response in this situation?
	A. Tell your manager about these mistakes and ask your manager to switch your partner.
	B. Confront your coworkers with these mistakes you've found and ask him to explain what is going on.
	C. Find out why your coworker are making these mistakes and offer to help him with the issues.
	D. Arrange a meeting with both your manager and your partner to discuss these incidents and your frustration with the current situation.
	E. Let your partner know about your frustration with his work and let him know that you will inform the manager if he continues to make such mistakes.



Strategic Planning

- 10. Shawn opened a cafe after graduating college. He wants it to be a cozy and artistic place where college students can relax, study, converse, and enjoy the art and music in their surroundings. However, problems start to show soon after the café opens. Here are some example issues that really bother Shawn:
 - There are multiple competitors in the area. To attract students, some of them start to give free refills or complimentary snacks. It is hard for Shawn to with these initiatives as a startup.
 - 2). To keep the business afloat, Shawn needs to sell more coffee and food. However, Shawn has to sacrifice the number of seating in order to create a cozier environment for the customers, which lead to few coffee and food sales.
 - 3). A few other cafés around the area earn a large portion of their revenue through catering to big or small college evens from conferences to thesis defenses. Shawn tried this, but has had little success.
 - 4). He also read some Google reviews saying that the food in his café is "just OK." Shawn worries this will lead to long-term damage to the reputation of the café.

What practical actions can Shawn take to create innovative ways to get a competitive advantage? A. Conduct a thorough market analyses to try to find a niche for his café. B. Take out a small business loan in order to add the marketing budget, so he can match up to his competitors' promotion efforts. C. Connect to more college students to better understand why they choose certain cafes over others. D. Drop the price for a period of time to attract more customers, while working to improve the environment and service to make them stay. E. Analyze the business since the past few months to identify factors of success and failure. Change Agent 11. Ellen was recently tasked with managing the annual employee engagement survey after the previous project manager retired. After going through the instrument and report, she found some of the items in the survey troublesome and maybe non-effective. She also heard complaints from employees from different department on the survey. Ellen thought of switching to a more effective survey from a different provider. To prepare for such change, select All of the actions she should take first to "Unfreeze" the situation. A. I can talk freely to this person about difficulties. ☐ B. With this person, we can both freely share our ideas, feelings, and hopes. C. This person approaches his/her job with professionalism and dedication. D. If I'm having trouble at work, I know this person will want to listen. ☐ E. People who are not close friends of this individual trust and respect him/her as a coworker.



IV. Please choose true or false in response to each statement.

	True	False
It is important to set very challenging goals even if it is beyond one's ability. The more challenging the goal, the more motivating the goal can be.	0	0
2. Tasks that can be quickly completed should be cleared up first.	0	0
3. Avoidance and suppression can be effective emotional regulation strategies in the short term.	0	0
4. Emotional regulation is about not letting others notice your emotional reactions.	0	0
5. Participative decision-making method can help avoid group think.	0	0
Listening quietly when another is expressing his/her idea is the most important element for effective listening.	0	0
7. Working hard and being competent at one's job is the only way to earn trust from others.	0	0
8. Fairness is all about treating everyone equally.	0	0
In an ethically ambiguous situation, it is best to make decisions that are consistent with one's most cherished value.	0	0
10. Analyzing external forces is one of the most important component of PESTEL analyses for strategic planning.	0	0
11. It is important to reinforce changes by demonstrating the relationship between new behaviors and organizational success after implementing changes.	0	0

We thank you for your time spent taking this survey.

Your response has been recorded.

APPENDIX 4: Six-Month Post Leadership Self-Evaluation Questions

These states were rated on a 1 to 3 scale where 1 relates to a low relatability to the statement and 3 would be a high.

Directions: Rate how much you agree or disagree with the following statements regarding your effectiveness when you take up leadership responsibilities.

Q1: Is a very effective leader.

Q2: Leads a group or team that is effective.

Q3: As a leader, makes a difference.

Q4: Is effective as a leader in influencing others.

Q5: Is satisfying as a leader to others.

Q6: All in all, I'm a leader with whom people like working.

Q7: People enjoyed my leadership.

Q8: I perform tasks and duties that are expected of me.

Q9: I fulfill formal job performance requirements.

Q10: I failed to meet my obligations to the job.

Q11: I neglect essential duties that are assigned to me.



APPENDIX 5: Questions for the Program Evaluation

Please rate how strongly you agree or disagree with the following statements about ELEVATE:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly disagree			
I am glad I participated in this program.	0	0	0	0	0			
This program has helped me understand what is expected of me in day-to- day activities.	0	0	0	0	0			
This program was very relevant to my professional needs.	0	0	0	0	0			
This program was of little practical value.	0	0	0	0	0			
Participating in this program has helped me perform my work better.	0	0	0	0	0			
The program materials has served as useful references for me when I am in a professional setting.	0	0	0	0	0			
I frequently use what I have learned in this program in work settings.	0	0	0	0	0			
I have applied what I've learned in this program to my work.	0	0	0	0	0			
On a scale from 0-10, how likely are you to recommend ELEVATE to a friend or colleague?								
Not at all likely	Extremely li	kely						

On a scale from	0-10, how	likely a	re you	to rec	ommend	ELEVATE	to a	friend	or
colleague?									

Not at all	likely								Extre	mely likely
0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0

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