

# THE CYBERAMBASSADOR TRAINING PROGRAM

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CyberAmbassador program aims to provide training for CyberInfrastructure professionals, with the goal of developing “CyberAmbassadors” who are prepared to lead multidisciplinary, computationally-intensive research at their home institutions.

## OBJECTIVES

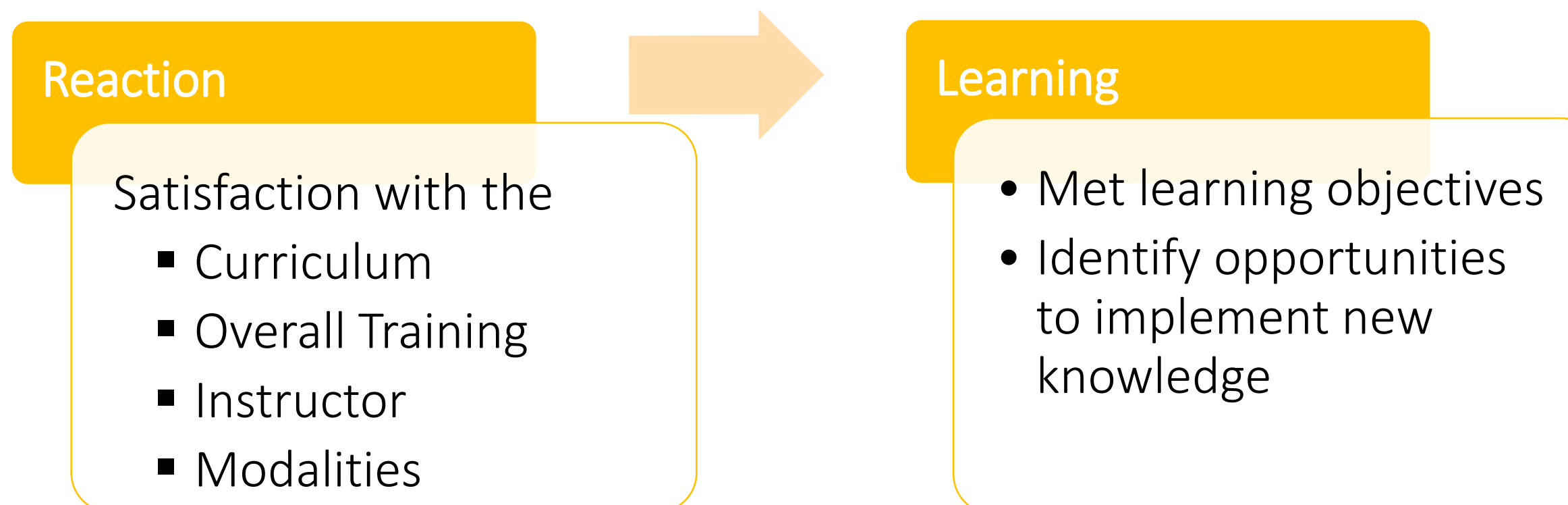
- (1) Develop Curriculum that focuses on professional skills (communications, teamwork, leadership) within the context of large scale, multidisciplinary computational research;
- (2) Pilot, Evaluate, and Revise the curriculum;
- (3) “Train the Trainers” to disseminate curriculum by collaborating with external partners.

## DEVELOPED CURRICULUM

Effective Communication	Leadership	Teamwork
<ul style="list-style-type: none"><li>Mastering complex conversation</li><li>Communicating problems</li><li>First contact</li></ul>	<ul style="list-style-type: none"><li>Roles, responsibilities, and leadership styles</li><li>Effective meeting management</li></ul>	<ul style="list-style-type: none"><li>Ethics and diversity</li><li>Problem solving and decision-making in a group</li></ul>

## METHOD

### Evaluation Framework:



**Data Collection:** Questionnaire (Pre- and Post- Test), with 5-point Likert scale -> very low (1) to very high (5)

Our team have conducted training in 4 different sites:

- 1) short single session, in-person meeting;
- 2) short single session, online meeting;
- 3) short weekly session, in-person meeting (graduate course); and
- 4) single half-day session, in-person meeting.

**Analysis:** Descriptive statistics, paired and independent t-test.

## REFERENCES

Donald L. Kirkpatrick and James E. Kirkpatrick. 2007. Implementing the Four Levels : A Practical Guide for Effective Evaluation of Training Program CyberAmbassadors. Retrieved February 19, 2019 from <https://colbrydi.github.io/cyberambassadors/>

## ACKNOWLEDGMENT



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## SHORT TRAINING (IN-PERSON GROUP vs ONLINE GROUP)

DEMOGRAPHIC	TAKEAWAYS	RESULTS																																																
<div><div><h3>Age</h3></div><div><h3>Gender</h3></div><div><h3>Career Stage</h3></div><div><h3>Educational Level</h3></div><div><h3>Prior Experiences in Communication Training</h3></div><div><h3>Country of University Degree</h3></div></div> <div><p>There are 8 respondents in the in-person group and 11 respondents in the online groups. Both trainings focused on “Complex Conversations” module.</p><p>73% participants from the online group reported having prior experiences in attending online training, either synchronous or asynchronous.</p></div>	<div><h2>DEMOGRAPHIC</h2><p>Both group have almost similar composition in terms of gender, country of university degree, and prior communication training experiences. However, the in-person group is generally younger in both age and career stage, compared to the online group.</p></div> <div><h2>SATISFACTION AND LEARNING</h2><p>Both group are highly satisfied with our “Complex Conversation” module and overall training. Generally, the in-person group reported higher score of satisfaction than the online group, though the difference is not significant.</p><p>Both group reported gains in communication skills knowledge and ability, and the in-person group has significantly higher score than the online group. Since the in-person group is younger with relatively less work experiences, it is possible that the participants will find the curriculum to be more useful.</p></div> <div><h2>THE EFFECTIVENESS OF VIDEO CONFERENCING (VC)</h2><p>Our online participants agree that the use of VC is effective for our training. In-person trainings are not always feasible due to time and geographical constraint. Meanwhile, VC allows training providers to reach wider audiences.</p></div>	<div><h3>Reaction Evaluation</h3></div> <table><tr><th>Learning Evaluation</th><th>In-Person (Pre-Post) M(SD)</th><th>Online (Pre-Post) M(SD)</th><th>P-Value</th></tr><tr><td>Understanding the difference of "jargon"</td><td>1.50(1.41)</td><td>0.45(0.52)</td><td>.037*</td></tr><tr><td>Ability in providing a constructive feedback</td><td>1.13(0.83)</td><td>0.45(0.52)</td><td>.046*</td></tr><tr><td>Ability to be an active listener</td><td>0.75(0.71)</td><td>0.55(0.69)</td><td>.535</td></tr><tr><td>Ability in identifying and accommodating different communication skills</td><td>1.13(0.64)</td><td>0.36(0.50)</td><td>.010*</td></tr><tr><td>Ability to communicate clearly in a variety of context</td><td>0.63(0.52)</td><td>0.18(0.40)</td><td>.051</td></tr><tr><td>AVERAGE</td><td>1.03</td><td>0.44</td><td>.022*</td></tr></table> <p>* Significant at p&lt;0.05</p> <table><tr><th>VC Effectiveness in ...</th><th>Min</th><th>Max</th><th>Mean</th><th>Std. Deviation</th></tr><tr><td>Facilitating Discussion with Peer(s)</td><td>4</td><td>99</td><td>4.33</td><td>38.297</td></tr><tr><td>Facilitating Interaction with Trainer(s)</td><td>3</td><td>99</td><td>4.1</td><td>28.618</td></tr><tr><td>Maintaining Attention</td><td>3</td><td>99</td><td>4.1</td><td>28.618</td></tr></table>	Learning Evaluation	In-Person (Pre-Post) M(SD)	Online (Pre-Post) M(SD)	P-Value	Understanding the difference of "jargon"	1.50(1.41)	0.45(0.52)	.037*	Ability in providing a constructive feedback	1.13(0.83)	0.45(0.52)	.046*	Ability to be an active listener	0.75(0.71)	0.55(0.69)	.535	Ability in identifying and accommodating different communication skills	1.13(0.64)	0.36(0.50)	.010*	Ability to communicate clearly in a variety of context	0.63(0.52)	0.18(0.40)	.051	AVERAGE	1.03	0.44	.022*	VC Effectiveness in ...	Min	Max	Mean	Std. Deviation	Facilitating Discussion with Peer(s)	4	99	4.33	38.297	Facilitating Interaction with Trainer(s)	3	99	4.1	28.618	Maintaining Attention	3	99	4.1	28.618
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## LONG TRAINING (INSTITUTIONAL PD GROUP VS GRADUATE COURSE GROUP)

DEMOGRAPHIC

Age

Graduate Course

Institutional PD

0%

20%

40%

60%

80%

100%

10-24

25-29

30-34

35-39

40-44

45-49

Missing

Gender

Graduate Course

Institutional PD

0%

20%

40%

60%

80%

100%

Male

Female

Career Stage

Graduate Course

Institutional PD

0%

20%

40%

60%

80%

100%

<1

1-2

3-5

6-10

11-15

16-20

>20

Educational Level

Graduate Course

Institutional PD

0%

20%

40%

60%

80%

100%

Current Master's Student

Current PhD Student, 1-2 years

Current PhD Student, 3+ years

Completed PhD

Prior Experiences in Communication Training

Institutional PD

Graduate Course

0%

20%

40%

60%

80%

100%

Yes

No

Unknown

Country of University Degree

Institutional PD

Graduate Course

0%

20%

40%

60%

80%

100%

USA

Europe

Asia

Africa

Others

There are 18 respondents in the graduate course group and 9 respondents in the Institutional PD group. The evaluation focused on three modules: “Complex Conversations”, “First Contact”, and “Communicating Problems”.

The Institutional PD Group training was held 4.5-hours (1.5 hours per module), while the Graduate course was 2-hours per weekly meeting.

TAKEAWAYS

DEMOGRAPHIC

Both groups are very diverse in terms of age, country of university degree, educational level, and career stage. Additionally, both groups consist of more men than women.

SATISFACTION

Both group are highly satisfied with our curriculum and training. The graduate course group have a slightly higher score of satisfaction than the Institutional PD group, though the difference is not statistically significant. The latter finds the module of “First Contact” and “Communicating Problems” to be more relevant with their daily works, while the former reported slightly higher score in the module of “Complex Conversation.” This is probably because some of the participants in the latter group are professionals. They are most likely to encounter more complex problems and meet new people in their daily works, compared to the graduate students groups.

LEARNING

Both group reported to gains more skills and knowledge from each module. The institutional PD group have a higher score than the classroom group, but the differences are not statistically significant. The relative similarity of demographic background between each group may be a possible explanation why the average score is not significantly different.

RESULTS

Satisfaction with the Curriculum

Relevant

Satisfy

Relevant

Satisfy

Relevant

Satisfy

First Contact

Complex Conversation

Communicating Problems

3.44

4.14

4.17

4.14

4

3.88

4.28

4.25

4

4.44

4.39

4.33

Graduate Course

Institutional PD

Satisfaction with Overall Training

Satisfy with structure

Satisfy with pace

Appropriate with level of experiences

Program Meeting Expectations

Willingness to recommend the training

4.41

4.44

4.41

4.22

4.59

4.56

4.59

4.33

4.71

4.56

Graduate Course

Institutional PD

LEARNING EVALUATION	Course (Pre-Post) M(SD)	Institutional PD (Pre-Post) M(SD)	P-value
Complex Conversation	1.08(0.55)	1.30(0.81)	0.434
First Contact	1.29(0.75)	1.46 (1.09)	0.664
Communicating Problems	1.12(0.99)	1.37(0.74)	0.552

\* Significant at p<0.05