SUPPLEMENTARY MATERIALS IV-J-1: RESULTS OF A FOUR-YEAR STUDY ON THE EFFECTIVENESS OF OCO FOR BUILDING LEADERSHIP, TEAMWORK, AND COMMUNICATION SKILLS

Here are the results of a four-year study on the effectiveness of the Olin Conductorless Orchestra for building student understanding and development of professional skills: leadership, teamwork, and effective communication.

In April 2015 I devised an anonymous questionnaire (administered May 1, 2015) to assess whether OCO had made a difference for our students with respect to leadership, teamwork, and communication.

Six questions comprised the questionnaire, each of which started with the contextual clause "From the time you started OCO till the present time ...":

- 1A) has OCO made a difference for your understanding of leadership?
- 1B) has OCO helped you develop your own leadership skills?
- 2A) has OCO made a difference for your understanding of teamwork?
- 2B) has OCO helped you develop your own teamwork skills?
- 3A) has OCO made a difference for your understanding of effective communication?
- 3B) has OCO helped you develop your own communication skills?

Students answered each question by selecting from five possible responses:

- 1. Not at all
- 2. A bit
- 3. Moderately
- 4. Yes
- 5. Significantly

The percentage results given below represent the number of responses marked "Moderately", "Yes", or "Significantly", divided by the number of respondents, where the number of respondents ranged from 14 to 19, depending on the given year. The students in OCO typically include first-years, sophomores, juniors, and seniors.

For the Spring 2015 orchestra, the tabulated responses were as follows:

- Regarding teamwork, 79% of students indicated that OCO made a difference in their understanding of teamwork and 84% indicated that OCO helped them develop their own teamwork skills.
- Regarding communication, 84% indicated that OCO made a difference in their understanding of effective communication and 79% indicated that OCO helped them develop their own communication skills.
- Regarding leadership, 74% indicated that OCO made a difference in their understanding of leadership and 47% indicated that OCO helped them develop their own leadership skills.

In short, students benefited from OCO in terms of teamwork and communication, and less with respect to leadership. This made sense since the students had to work as a team in a conductorless orchestra without a de facto leader. To do a good job, these students had to get better at teaming and communicating with one another.

Since OCO helped grow their understanding and personal development of teamwork and effective communication—two widely acknowledged traits of skilled leadership—it's telling that in written comments, eight of the 19 students expressed "we are all leaders", or a close parallel.

The same survey was then administered over the next three academic years. Table 1 captures those findings.

Table 1

Question #	Spring 2016	Spring 2017	Spring 2018
1A: understanding of leadership	83%	86%	88%
1B: develop [my] own leadership skills	77%	79%	82%
2A: understanding of teamwork	78%	86%	81%
2B: develop [my] own teamwork skills	78%	79%	88%
3A: understanding of effective communication	83%	86%	100%
3B: develop [my] own communication skills	78%	93%	88%

These results show growth in student understanding of leadership, development of their own leadership skills, and student understanding of effective communication. Student development of their own communication skills grew from Spring 2016 to Spring 2017, and still reached a comparably high percentage (88%) in Spring 2018.

Though the percentages for the "understanding of teamwork" questions remained respectably high, they were somewhat lower than the "understanding of leadership and communication" evaluations for Spring 2015, Spring 2016, Spring 2017, and Spring 2018. Two possible reasons for this result are:

- 1. Students at Olin work in teams for a number of required courses throughout their undergraduate years, and
- 2. Teaming strategies have increasingly infused courses since Spring 2015, when the study began.

These reasons suggest students did not ascribe as much understanding of teamwork to OCO. A corollary to this remark would be that OCO students brought the teaming skills they had learned in other courses to bear on their conduct in OCO rehearsals, practice groups, and performances.