TRANSLATING A CORPORATE LEADERSHIP PHILOSOPHY AND PRACTICE TO THE ENGINEERING CLASSROOM

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1. INTRODUCTION

A multi-billion dollar chemical company (Dupont Canada) developed, over twenty years, a unique leadership philosophy and practice that was instrumental in the company’s remarkable improvement and great financial and societal success. The beliefs that are fundamental to this Developmental Leadership model are: values are the foundation of leadership; everyone can learn to lead; leaders develop role model leading competence through learning certain skills, character attributes and purposeful behaviours; the work of leaders in organizations is developing high performance work systems dedicated to achieving sustainable growth; and learning to be a better leader is a life-long endeavor.

A leadership course for engineering students based on this was developed by the former CEO and Chairman of the company (first author David Colcleugh), an engineer by training, and has been offered to undergraduate and post-graduate engineering students at the University of Toronto since 2007. At first the course was offered as a combined undergraduate-graduate course. In 2011 it was decided to offer separate courses for graduate students and undergraduate students. A textbook, Everyone a Leader, was prepared (by Colcleugh) and beginning in 2012 was used, in manuscript form, in both courses. The textbook provided the curriculum and instructional framework that permitted a second instructor to lead the course – (second author Doug Reeve). The Developmental Leadership Model serves as a framework for instruction so long as the instructor’s own leadership experience is well integrated into course discussions. The course has now been offered eight times.

The motivation for the course arises from the belief that engineering students should, in addition to having strong scientific and technical capabilities and being self-motivated to contribute, should be well prepared emotionally, socially, and ethically to accept challenges and should be to committed to develop non-technical as well as technical competencies.

2. COURSE CONTENT

Learning outcomes aimed to take the student through different scales of human systems, self-leading, high performance teams and high performance organizations, by providing them with frameworks for thinking. Learning outcomes state that on completing the course a student will be able to:
1) apply the thinking framework to analyzing problems and synthesizing solutions
2) summarize the characteristics of competent leaders
3) construct a comprehensive set of personal values, a personal vision statement and a personal mission statement
4) facilitate the creation of statements of values, vision and mission for groups and organizations
5) distinguish between leading, managing and following
6) critique the processes and function of organizations

The overarching framework for this approach is shown in Figure 1 Developmental Leadership (Appendix A) which illustrates the first framework for thinking. A series of tetrads set out the path from “ground state” to “ideal goal” from left to right on the horizontal axis and from “future state thinking” down to “taking action” on the vertical axis. The students first examine their own ground state as an aspiring leader and reflect on their goal of being a role model leader. We envision a future state where everyone is a leader and recognize that developmental learning about being self-leading is the necessary action. The organization is considered using a similar framework with the ultimate future state being a high performance business organization.

The second key framework for thinking considers “levels of thought” in guiding analysis through why we do something, then how we do it and then what we do. These three levels are each divided in to three as illustrated in Figure 2 (Appendix B). This framework provides discipline for thoughtful consideration of values, fundamental beliefs, before considering how to go about the work. Only then does one consider what to do.

Recognizing that learning, especially leadership learning, must combine transfer of knowledge with
experience and reflection we have used a number of pedagogical techniques: classroom discussion of personal experience; paired and small group discussion of personal experience; reflection questions that require students to join personal experience to classroom lessons in written responses; readings from the textbook and leadership literature; video materials on leadership; team projects that are used as opportunities to focus and reflect on team processes and performance; and forums in which invited CEOs share their leadership experience with students.

3. CONCLUDING REMARKS

Engineering students have been very receptive to the content and pedagogy of the courses. The written reflections caused students to probe their own experience and provided them, in many cases, with deeply personal learning opportunities. They appreciated particularly the classroom discussions, hearing of real world experience from the CEOs, the instructors and from their classmates.

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We also wish to recognize the many employees of Dupont who created and lived the path-breaking ideas which constitute the Developmental Leadership Model.

References

Figure 2  Complete Thinking: Utilizes All Levels Of Thought

Why we do something
Belief ➞ Things we hold to be true about something
Philosophy ➞ Composite of beliefs we are willing to live by
Principle ➞ Guidelines to assist translating philosophy into action

How we do something
Concept ➞ An idea of how we would like it to be
Strategy ➞ How we accomplish the concept
Design ➞ How to carry out the strategy

What we do
Action ➞ What we do to carry out the design
Audit ➞ Checking what is occurring against what was intended to happen
Evaluate ➞ Measuring the worth of the action