

Independent Research from Corporate, Academic, and Military Institutions on the Effectiveness of SimuLearn's Virtual Leader

Case Study One

Executives in Class:

From “Recalling” To “Applying” New Knowledge

Background

Dr. John Dunning, Professor of Organizational Behavior at Troy University, discovered that despite the popularity and high marks given by students to a required capstone Public Administration OB class, when he surveyed multiple classes six months after the courses were over, the knowledge and theories learned were not being applied in the workplace.

Process

John Dunning ran two Organizational Behavior classes. One class studied using the more traditional curriculum, and one class used Virtual Leader instead of reading some case studies and writing some papers.

The class that used Virtual Leader had the following characteristics:

- Number of students – 15
- Average age of students – 38
- Range of ages – 27 to 53
- Number of Managers – 12
- Number of Military – 9
- Number having previous leadership of management training – 13
- Average number of graduate courses taken - 5

The class was broken up into three teams. These teams worked together to support each other to complete each of the five scenarios using different leadership styles.

Results

Six months after both classes were over, Dr. Dunning again polled the students. The differences between the two classes were significant (figure 1). The traditional class using case studies and reports, as was consistent with the earlier surveys, could recall some portion of class material.

But the students who went through the class that used SimuLearn's Virtual Leader had significantly greater occurrences of both being able to explain the material and, most importantly, being able to apply it.

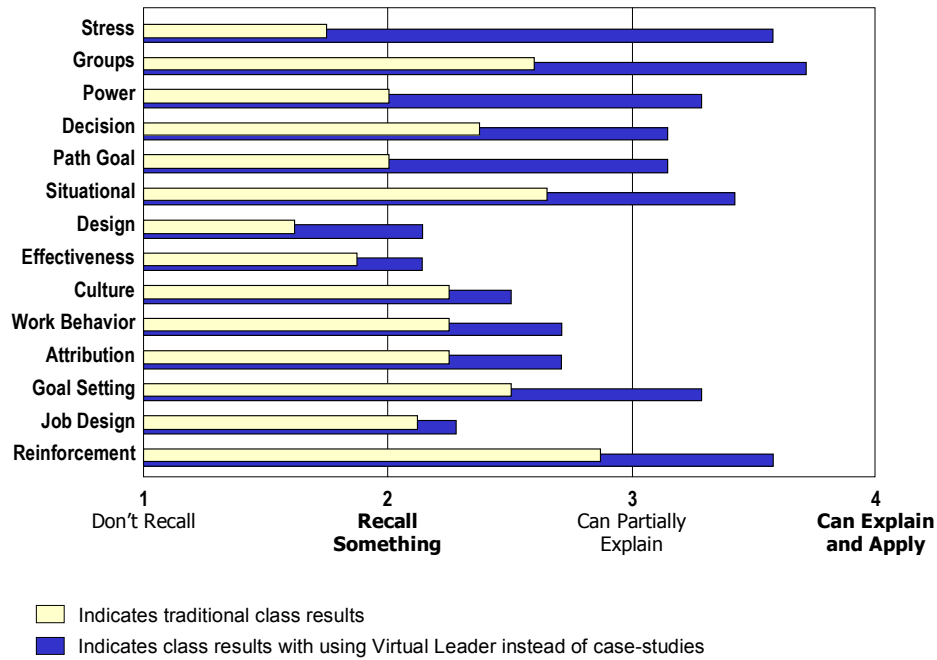


Figure 1: Practiceware drove Application of Content in Academic Environment

Some of the contributors to this can be found in the debriefing at the conclusion of the class. Dr. Dunning tallied the following statements.

- 14/15 supported the statement that simulations like Virtual Leader are the “future of learning.”
- 13/15 supported the statement that Virtual Leader was a valuable tool for learning about theory.

The students and professor supported that observation that “Three to One” was a more accurate and useful leadership approach than more academic models, and that Virtual Leader supported much more than just the leadership segments of the OB course.

Summary

Using practiceware significantly increased application, not just memorization of learned content.

Case Study Two

United States Military Academy: Self-Paced Practiceware Deployment Beats Traditional Approach

Background

The United States Army has a highly developed doctrine on the process of leader development. Recently the Army has put new emphasis on the self-development pillar to promote the development of self-awareness through the Leader Development Portfolio (LDP), which has elicited new approaches to training.

Process

Twenty-six cadets at the United States Military Academy were randomly assigned to either a case study (control condition) or a computer simulation (experimental condition) group.

The control condition consisted of a series of Army leadership related interactive case studies (branching story style simulations) created by the Army Research Institute, and the experimental condition used a non-customized version of SimuLearn's Virtual Leader simulation program. Initial leadership tendencies were measured.

Participants worked through their respectively assigned methods in a completely self-paced, asynchronous process.

Participants then were measured on their preferences for leadership styles through a pre-post instruction survey for each of the styles, and the ability to apply the right leadership style to the right situation, with the "right" answer and approach determined by seasoned military officers.

Results

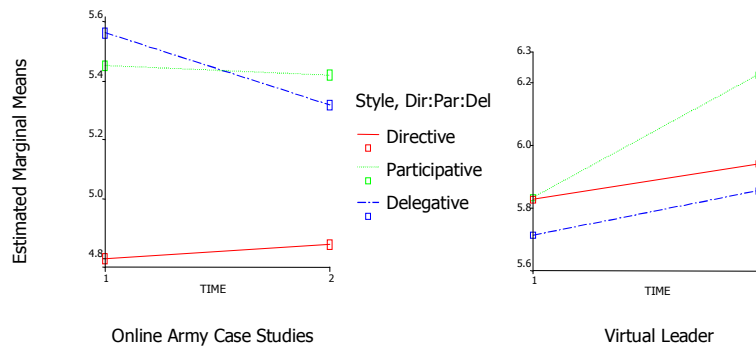


Figure 2: Military Case Study versus Virtual Leader in Leadership Comfort Levels

First, users of Virtual Leader showed an increase in the comfort levels with all three leadership styles.

The chart on the left of figure 2 shows the mean comfort level score for the Case Study group. The graph shows no overall change, but a significant decrease in the comfort level with the Delegation style.

The chart on the right of figure 2 shows the mean comfort level score within the Virtual Leader group. The graph shows an overall increase for each style with the greatest increase in the Participative style.

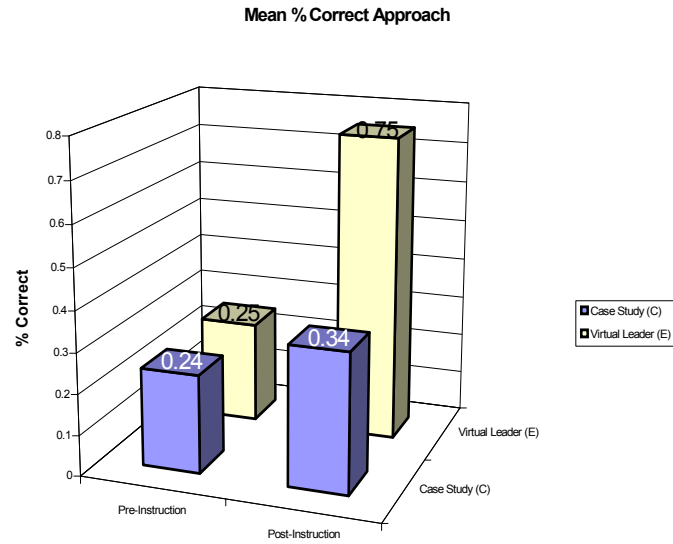


Figure 3: Increase in Application of Correct Leadership Approach

More importantly, the study found support for the hypothesis that the simulation method increases the ability to correctly apply theory taught within a program of instruction compared to case studies (figure 3).

Summary

The Virtual Leader simulation increased the users' comfort with and use of alternative leadership styles over branching story case studies.

Case Study Three

Center for Creative Leadership/ North Carolina A&T State University: Cognitive Impact of Learning About Leadership Vs. Practicing Leadership Skills

4.1 Background

Dr. Alice C. Stewart and Dr. Jacqueline A. Williams noted that leadership education in most business schools do not match the expected leadership competencies and behaviors outlined for employees at lower levels of the organization. Working out of North Carolina A&T State University and the Center for Creative Leadership, they compared two pedagogical methods, one traditional and one simulation based and online and their impact on the participants' understanding of leadership.

4.2 Process

Forty three undergraduate honors students from various university programs were enrolled in a two day leadership training program sponsored by faculty at the School of Business and Economics North Carolina A&T State University . Four faculty were engaged in this program with two research assistants. Students who agreed to participate were randomly assigned to either the traditional or experiential condition. Students were not told of the other training program. Their behaviors were observed, and pre and post surveys were implemented to measure shifts in perceptions of the role of leaders.

4.3 Results

The traditional and experiential groups, though taught similar concepts, seemed to incorporate them differently. The challenge of the experiential simulation made participants question their initial perceptions of the ideal leader.

While, on an item-by-item basis, there seems to be more cognitive schematic shift in the traditional group, the magnitude of shift within the experiential group was greater. The conclusion from this research is that the simulation seemed to have a more narrow, but stronger effect on the participants' perceptions regarding leaders. The opposite tends to be the case in the traditional condition.

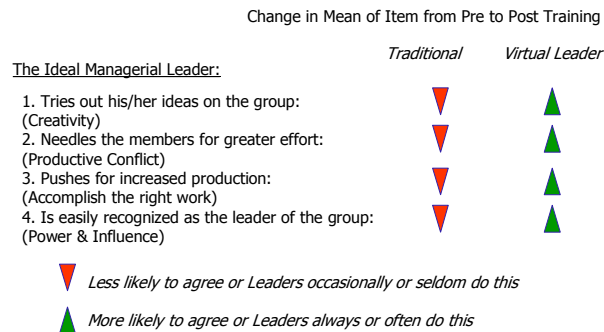


Figure 4: Despite Similar Curricula, Different Approaches Created Some Differing Opinions

The research also found that in some areas, students who went through the traditional approach had significantly differing views of leadership (figure 4). Finally, the students that used Virtual Leader throughout the sessions exhibited superior collaboration and team skills.

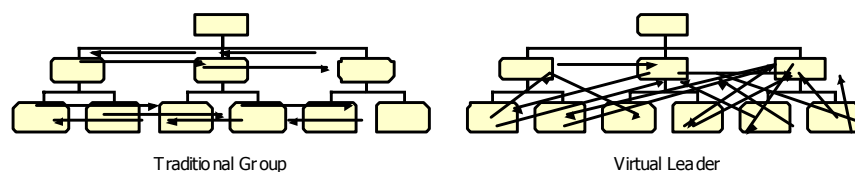


Figure 5: The Virtual Leader Group Exhibited Superior Collaboration And Team Skills.

4.4 Summary

Traditional pedagogy may create more incremental cognitive change, while pedagogy using the game-based simulation resulted in narrower, but deeper cognitive change. Traditional methods are optimized around cognitive needs, such as retaining knowledge, while Virtual Leader is better for teaching more dynamic skills including problem solving, social judgment and collaboration (figure 6).

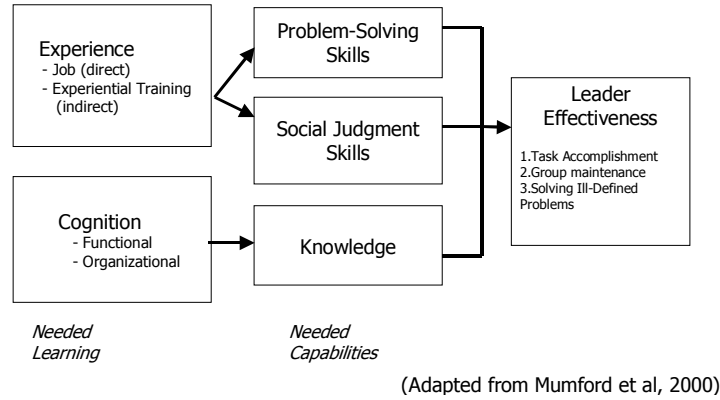


Figure 6: Experiential Learning Better For Dynamic Skills

Case Study Four

Fortune 100 Company: An Extra Day Every Week of Work

Background

The challenges at a division of a Fortune 100 company were typical. The groups needed to relate better across departments, achieve desired meeting outcomes, better use time, and build healthy relationships.

To create “influential leaders,” the division heads brought in three elements:

- Virtual Leader, the off-the-shelf version of the leadership simulator from SimuLearn;
- Corpath, a firm focused on executive coaching; and
- GEMA™-Lead360, one of the most rigorous 360-assessment tool on the market today.

Process

A 360 pre-assessment was conducted around the participants. The managers themselves, their peers, their subordinates, and their supervisors were given an extensive questionnaire about the managers’ performances.

The managers were then introduced to Virtual Leader, and were required to spend eight two-hour lab sessions practicing on the simulator, broken up over four weeks. The labs were available twice a week, allowing flexibility of the managers, and were staffed with a Corpath facilitator to answer questions and provide background. Half way through the lab sessions, the Corpath facilitator spent one-on-one time with each participant, reviewing the results of their original 360 assessment, and putting it in context of their behavior in the simulator.

The participants “graduated” five weeks after they began the program. Then, six months after the program began (five months after the last contact), the managers again were assessed both on business performance changes (something the organization rigorously tested), and a second 360 evaluation.

Results

The participants who went through the Coaching/Simulation program improved their teams’ relative performance rankings (a non-subjective metric on volume of successful client jobs completed), on average, 22.0%.

Just as relevant was the way that these managers got these accelerated results. Six months after the program, the increases in positive behaviors and the cessations of negative behavior across peers, subordinates, and superiors were unprecedented in GEMA™-Lead360 ‘s fifteen-year history, including previous Corpath/ GEMA™-Lead360 joint engagements.

Positive Behaviors - Service Beyond Self				Difference	%
		Pre	Post	Scores	Increase
Contribution	Self	69.2	81.1	11.9	17.2%
	Superiors	61.3	72.5	11.2	18.3%
	Peers	63.9	75.5	11.6	18.2%
	Subordinates	69.4	77.6	8.2	11.8%
Cooperation	Self	75.8	86.3	10.5	13.9%
	Superiors	65.2	86.2	21.0	32.2%
	Peers	68.3	77.0	8.7	12.7%
	Subordinates	71.8	82.8	11.0	15.3%
Connection	Self	72.6	82.4	9.8	13.5%
	Superiors	69.2	77.6	8.4	12.1%
	Peers	69.7	80.0	10.3	14.8%
	Subordinates	76.8	85.8	9.0	11.7%
Average Increase					16.0%

Figure 7: Analysis of Increase of Positive Behaviors in Fortune 100 Company

Negative Behaviors - Self Beyond Service			Difference		%
		Pre	Post	Score %	Decrease
Superiority	Self	15.8	9.4	-6.4	-40.5%
	Superiors	12.8	7.8	-5.0	-39.1%
	Peers	21.6	10.4	-11.2	-51.9%
	Subordinates	13.2	4.6	-8.6	-65.2%
Domination	Self	16.1	13.6	-2.5	-15.5%
	Superiors	15.4	10.0	-5.4	-35.1%
	Peers	20.1	10.4	-9.7	-48.3%
	Subordinates	17.3	6.6	-10.7	-61.8%
Withdrawal	Self	22.1	15.9	-6.2	-28.1%
	Superiors	18.7	12.5	-6.2	-33.2%
	Peers	19.6	15.5	-4.1	-20.9%
	Subordinates	16.7	7.6	-9.1	-54.5%
Average Decrease					-41.2%

Figure 8: Analysis of Reduction of Negative Behaviors in Fortune 100 Company

The simulation supported the increase of positive behaviors (figure 7), but even more reduced the occurrences of negative behavior (figure 8). The student themselves, curiously, were least aware of their new capability (figure 9), suggesting the value external measurement rather than self-assessment.

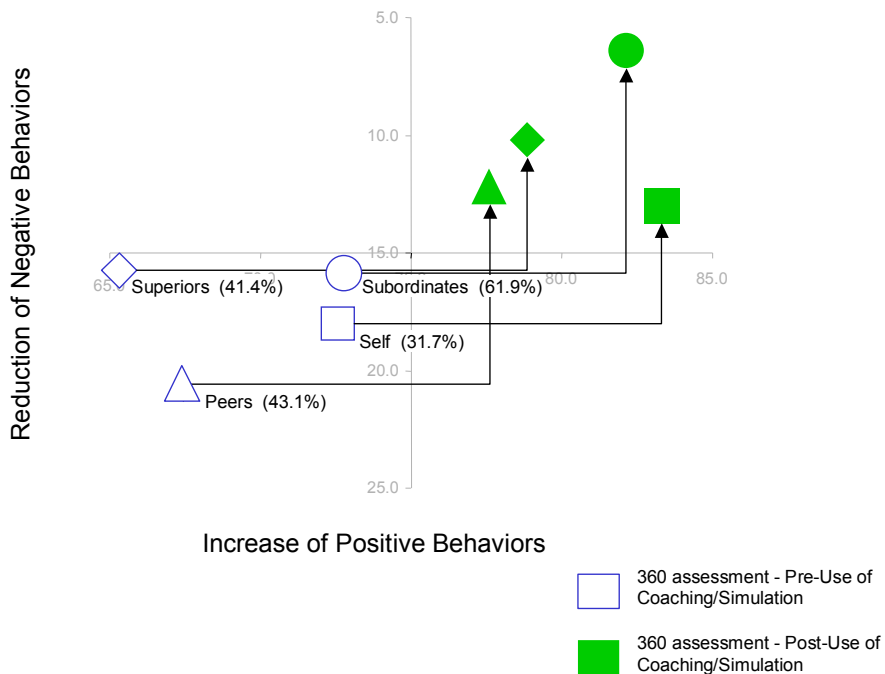


Figure 9: Summary of 360 Results in Fortune 100 Company

Summary

The corporate managers that went through the assessment/coaching/ simulation program significantly improved their value to their organization, while strengthening their relationship with their peers, supervisors, and subordinates.