

Simulation-based constructivist approach for education leaders

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Abstract

The purpose of this study was to reflect the leadership strategies that may arise using a constructivist approach based on organizational learning. This approach involved the use of simulations that focused on ethical tensions in school principals' daily experiences, and the development of codes of ethical conduct to reduce these tensions. The study included 50 teachers who served in school leadership roles in addition to their regular teaching jobs. The teachers participated in 50 simulation sessions. The data were analyzed with ATLAS.ti 5.0. Five dimensions of tensions between leadership strategies were found to be related to the central concept of "Leadership strategies derived from simulations:" *Engaging versus Monitoring; Envisioning versus Implementing; Implementing versus Engaging; Monitoring versus Envisioning, and Articulating versus Envisioning*—demonstrating the complexity of dialogue during the simulations, which include a multifaceted model of tension between values, and codes of ethical conduct. The study findings may encourage school principals and education leaders to use simulations to help unravel ongoing ethical dilemmas in school for the development of leadership strategies based on organizational and constructivist learning theories. These learning conditions may provide fertile ground for practicing difficult ethical decision-making and thus enhance the professional development of education leaders.

Keywords

Constructivist approach, ethics, ethical dilemmas, leadership strategies, principals, simulation, teachers

Introduction

According to constructivist theory, learning is an active process, in which participants construct new knowledge based on their current and past knowledge and experiences. The participants in the learning process reflect on prior knowledge and construct their own views of the world through experiences occurring in their physical and social environments (Kolb and Kolb, 2005). Previous studies indicated that education leaders' use of simulations might help their application of a theory that could lead to constructivist learning based on ethical decision-making, moral sensitivity and

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moral judgment (Ritter, 2006; Trevino et al., 2006). Simulations may provide a more complex and realistic learning environment than other training strategies as well as a relatively risk-free environment for learning and experimentation (Salas et al., 2009). However, no studies, to date, have focused on leadership strategies that may emerge through a constructivist approach by investigating ethical cases presented in simulations by education leaders.

At a time when school principals are frequently faced with ethical cases, requiring implementation of improvised solutions, a constructivist approach that steers education leaders toward strategic solutions may help to promote school effectiveness. Therefore, the purpose of this study was to explore education leaders' ethical tensions and leadership strategies in the daily experience of school principals through examining a constructivist approach. This approach was based on organizational learning theory in simulations that focused on ethical events and codes of ethical conduct derived from them. The derived study questions were: (a) Will a simulation-based constructivist approach for education leaders raise ethical dilemmas, codes of ethical conduct, and leadership strategies based on scenarios dealing with ethical issues?; (b) What are the characteristics of these ethical dilemmas, codes of ethical conduct, and leadership strategies? The findings will reveal whether there is a need to develop simulations as an ongoing opportunity for school principals and education leaders to hold a constructive collegial dialogue to help them navigate school dilemmas and difficult ethical decisions.

Constructivist approach

"Constructivism" covers a broad array of complex philosophical theories that address the acquisition of knowledge (Phillips, 1995). Considered one of the most influential approaches to learning during the last two decades of the 20th century, the constructivist approach continues to be applied to education practices today (Harris and Graham, 1994). The constructivist approach holds that exposing the learner to new experiences creates perturbations—forms of mental disquiet that challenge the learner to understand and make sense of new information generated by the new experience (Powell and Kalina, 2009). This cognitive development occurs when the learner is compelled to use prior experiences and knowledge to comprehend and digest the new information, resulting in the acquisition of new knowledge (von Glaserfeld, 1989). Each learner is uniquely active in the creation, interpretation and reorganization of the new knowledge (Windschitl, 1999). Thus, the constructivist approach forces the learner to think through the new information, leading to a deeper understanding of that information (Baturay and Bay, 2010).

Whereas "cognitive constructivism" recognizes that individual learners construct ideas based on their personal experiences, "social constructivism" expands the construction process to include interaction with others as another means of making sense of new information (Phillips, 1997). In an educational setting, the combination of social and cognitive constructivism contributes to the constructivist learning environment (Powell and Kalina, 2009). Through constructivist educational practice, students are encouraged to apply existing knowledge to authentic problems and to engage in dialogue with peers to help them interpret information (Windschitl, 1999). As a result, learning satisfaction increases because participants in the learning process discern a link between their learning and real-life activities (Baturay and Bay, 2010). Role plays, simulation, reflective essays and cooperative learning are all among the activities that can promote knowledge construction and individual learning (Willey and Burke, 2011).

In a group setting, it is the members of the group who often create the cognitive challenges that require the learner to consider the exchange of new information within the group, to process this

information and ultimately to create new knowledge (Perkins, 1999; von Glaserfeld, 1989). The primary goals of constructivist groups are providing experiences that expose participants to varied perspectives, stimulating multiple ways to consider and resolve problems, allowing for the evaluation of alternatives, making learning realistic and relevant, and encouraging ownership and self-awareness in the learning process (Willey and Burke, 2011). The objectives of group constructivist learning are students' acquisition of learning skills that promote independent thought, the enhancement of respect for diversity, and increased self-awareness (Schweitzer and Stephenson, 2008).

This study focused on a unique constructivist approach based on organizational learning theory. According to Argyris and Schön (1978), knowledge and actions are simultaneous, and organizational learning occurs when the learning agent's discoveries and evaluations are embedded in organizational memory. An individual's knowing in action is meshed with that of other organizational members to create organizational-level knowledge. When this knowledge is shared in a dialectical, reflective manner through mutual inquiry and reflection, learning can be a "self-organized" emergent process (Lichtenstein, 2000). In an organizational sense, first-order learning refers to improving performance within a specific framework of mission, strategy, and objectives, whereas second-order learning implies calling the entire framework into question, identifying a new mission and set of goals that better achieve what is necessary at that time.

According to Argyris and Schön's (1996) approach, the need to shift from first-order to second-order learning is sparked by an organizational dilemma, a problem that can be resolved only through an organizational inquiry, which leads to a restructuring of the organizational theory of action. To be successful, it requires simultaneity of theory and practice, understanding and action, and knowing and doing in a reflective practice, which generates learning in individuals and organizations (Argyris and Schön, 1978).

Stable solutions do not characterize organizational learning because solutions to organizational problems are often short-lived or create new problems (Argyris and Schön, 1996), especially when considering ethical issues. If an organization is to gain consistent benefit from learning, the task at hand is not how to solve a particular ethical problem, but how to create conditions based on constructivist learning that facilitate people's ability to identify and resolve ethical dilemmas (Willey and Burke, 2011). In Schön's model, truly effective learning generally begins when one is faced with mismatch between thinking and action. Learning comes about only through dilemmas, when individuals are confronted with progressively intolerable conflict between elements central to their theory in use (Schön, 1983). When faced with something unexpected, the sense of surprise and the resulting reflection in action can lead to a new way of testing the situation. The inquiry examines one's tacit understandings, makes conscious one's underlying assumptions, and provides access to an alternative theory of action. In light of this, in the present study, I investigated whether simulations based on ethical cases may promote constructivist learning that emerges from organizational learning theory.

Simulation as promoting constructivist learning in educational leadership

Thavikulwat (2009) defined simulations as exercises allowing participants to experience the reality of functioning in an artificial environment. In other words, simulations are simplified versions of reality. They capture the essential dynamics of a workplace in a way that allows learners to explore different approaches, test diverse strategies, experience various outcomes, and build a better overall understanding of key aspects of the real world (Hill and Semler, 2001; Romme, 2004).

Cooperation is the key element in simulations, because participants determine how to solve problems by choosing from a range of possible decisions and evaluating diverse feedback (Romme, 2004). Participants can learn from peer feedback as they role-play different functions, as well as by observing their behavior recorded by video camera.

According to Brookfield (1990), simulations promote constructivist learning through engaging participants' psychomotor, affective and cognitive learning domains, which tend to result in a deeper and more memorable experience. Role-playing during simulations refers to active experiential exercises, which can help participants learn about ethics through illustrating potential decisions to be made in relation to ethical dilemmas (Sims, 2002; Sims and Felton, 2006). The role-playing during simulations actively engages participants in the learning process and can leave a memorable impression (Sims, 2002).

Simulations are popular learning methods in higher leadership education. They can offer an engaging and innovative learning experience to students and are able to realize positive learning results (Schwartzman, 1997), especially if educational leadership is perceived as a field that offers alternative ways of situating ethical leadership and addresses blind spots in our ethical knowledge and disciplinary ethical practice. Interest in leadership today is focused on the objectives of leadership (e.g. moral, ethical), not only on its effects. I refer here to the change-related function of leadership, for example, goal-setting and developing a vision for the school, or creating motivation for achievement, rather than to the managerial processes that maintain stability in schools such as organization and coordination (Heck and Hallinger, 2005). Leadership today is focused on the areas of "moral leadership" and "leadership development," which have received major cross-national attention (Oplatka, 2009; Oplatka and Addi-Racah, 2009). Thus, it seems appropriate that simulations be used as a practical tool in learning about ethical dilemmas in leadership.

Ethical dilemmas in leadership

According to Hallinger and Heck (2002), an educational leadership mission connotes a moral purpose. It is the moral character of a mission that reaches into people's hearts and engages them to act on behalf of something beyond their own immediate self-interest. The power of a mission lies in the motivational force of engaging in a shared quest to accomplish something special, not merely in having a productivity target. In education, education leaders might sense their work as a calling, again implying a mission or a moral challenge.

A school is an ethical organization whose leaders are confronted with daily challenges involving a variety of ethical dilemmas and moral decisions. As such, educational leadership based on moral aspects is needed (Denig and Quinn, 2001). The ethical dilemmas of principals are related to many different aspects of their duties during the workday. These include problems with misbehaving staff, teachers abusing students, heterogeneous class division, parents involved in school decision-making while criticizing teachers and the pedagogical processes in the school, and school-related incidents that take place outside school. Many tasks facing the school leadership might include ethical problems such as whether principals should follow their conscience or act according to common sense, when these might be in contradiction to the law. Which should take precedence—concern for the teacher or concern for the child? Who should receive more resources—low- or high-performing students? Majority versus minority—whose side are they on? (Norberg and Johansson, 2007).

Numerous ethical dilemmas in leadership are mentioned in the literature (e.g. Eyal et al., 2011; Normore, 2011; Shapiro and Stefkovich, 2005). Sometimes, education leaders have to decide

whether or not to support the parents' educational agenda in light of the ultimate needs of the child (Norberg and Johansson, 2007). Another ethical dilemma can arise from the tension between promoting egalitarianism and attending to differential needs. Education leaders must decide which principle of fairness is relevant in each situation—either equal allocation and treatment or differential allocation and treatment (Strike et al., 2005).

An additional ethical dilemma may arise based on school stakeholders' autonomy to pursue their goals in the school. Stakeholders may be people from the school (teachers, students, management) or from the community (parents, local authority). Different stakeholders might have different ideas about what is "good," leading to questions of whose viewpoint should be accepted (Baete, 2011). In this case, education leaders may find themselves forced to make decisions against their own conscience, with the associated moral consequences, while dealing with multiple and sometimes contradictory demands by different people at the school (Starratt, 2004). In cases of ethical dilemmas involving a conflict of ethical principles, an ethical code of conduct that sets boundaries for accepted behavior might help education leaders solve conflicts of interest in a balanced and flexible manner (Shapiro and Stefkovich, 2005).

Ethical codes of conduct for education leaders

Numerous organizations in different countries have articulated a variety of ethical behaviors expected of education leaders (e.g. BCPVPA code of professional practice, 2007; The NASSP Ethics for School Administrators, 2001; The Code of Ethics of the American Association of School Administrators-AASA, 1993; Georgia School Principals' Professional Code of Ethics, 2010). In addition, efforts are being made in many countries around the world (e.g. New Zealand, USA, Canada) to develop and assimilate ethical conduct among educators through workshops and cases studies (Bourke and O'Neill, 2009; Campbell, 2003; Carter, 1998). Nevertheless, studies found education leaders in different countries, who could benefit from a code of conduct focusing on leadership, and who are unaware that such codes exist (e.g. Shapira-Lishchinsky, 2012; Shortt et al., 2012).

Moreover, previous studies indicated that the ability to think and act ethically requires more than an understanding of ethics and adherence to an ethical code of conduct (Newman and Pollnitz, 2002). A code of ethical conduct can be of assistance, but might not provide clear guidance to teachers faced with making decisions. Even though organizations and systems may give directives to staff in certain situations, it would be impossible to cover all situations that may arise (Carter, 1998). In many cases, the resolution of ethical problems depends on the situation, the context and the people involved (Strike et al., 2005). Thus, the use of simulations based on ethical dilemmas facing education leaders would help to explore a wider range of possible situations. This, in turn, might help to develop leadership strategies through a context based on ethical cases, which might promote education leaders' ongoing professional development.

Leadership strategies

Eacott (2010) proposed five leadership strategy dimensions: envisioning, engaging, articulating, implementing and monitoring. More specifically, Eacott (2012) proposed five leadership strategy dimensions: (i) *Envisioning*—which focuses the principal's behavior toward the creation of a desired future position for the school, requiring a vision for the future built on critical reflection and dialogue; (ii) *Engaging*—which focuses on the active involvement of a wide range of participants in conversations, discussions and decisions regarding the strategic direction of the school;

(iii) *Articulating*—which focuses not only on conversations and discussions about the school direction, but also on bringing it to life through conversations and dialogue; (iv) *Implementing*—concerned with the translation of the school's strategic direction into action and particularly the alignment and timing of actions. Building on other features, implementation requires the staff to understand and to be committed to the enactment of the school's strategy; and (v) *Monitoring*—which focuses on the processes of continuous, systematic monitoring of actions through in-depth evaluation.

In summary, the framework of the present research was based on simulating ethical incidents, focusing on leadership strategies through constructivist and organizational learning theories.

Method

Participants

Study participants were 50 teachers (35 women and 15 men) from different schools in the center of Israel, and from different disciplines (e.g. Biology, Mathematics, History, and Bible Studies), and different levels of schooling (elementary, junior high, and high school). In addition to teaching, they served in educational leadership roles such as vice-principals, coordinators, and school mentors. Their leadership tasks included leading school teams, advising and assisting individual teachers, participating in school decision-making and developing curriculum content. Ethical incidents might be encountered in any of these roles.

The teachers were enrolled in an MA program in educational administration at one of the largest universities in Israel. As is the case with other leadership programs in Israel, graduates of this program are entitled to participate in tenders for school principal positions. The average age of the participants was 44.10 (SD = 3.75) and their average teaching seniority was 16.80 (SD = 4.30). Forty-five participants were tenured; the others were employed through temporary contracts. Of the participants, 43 worked in full-time jobs, and the rest worked less than full-time. All of the participants had a bachelor's degree.

Data collection

The data were collected during 2012. Ethical considerations regarding study procedures were made on the basis of guidelines taken from the Ethical Principles of Psychologists and Code of Conduct (2002). First, permission to perform the study was obtained from the Institutional Review Board at the university of the lead researcher (the author). Following this, in group information meetings, research assistants informed the participants that they would be required to provide ethical experiences to be role-played in simulations, which would then serve as the data for studying the leadership strategies.

All the participants took part in the study voluntarily, after their day of study at the university, and were assured that their statements during the simulations could not be traced back to them upon publication of the findings. This assurance was a contributing factor in the trainees' willingness to participate. They received a formal letter describing the goals of the study, the pledge to preserve anonymity and confidentiality, and their right to withdraw from the research at any time. They were also asked to sign an informed consent form including specific consent to being video-recorded. The lead researcher was not involved in the team simulations either as a mentor or a preceptor, and therefore no conflict of interest or dependence existed between the study subject and the author.

Procedure

The study comprised 50 simulation sessions, lasting 45 minutes each (generally, a 10-minute period of role-playing and 35 minutes of discussion), and with two to three simulation sessions per meeting. The participants were divided randomly into 10 groups of five, meaning that each group met twice during the research period.

The study was performed using a three-phase design:

1. *Generating a pool of ethical cases for simulations.* Before the actual meetings, each participant was asked to send an email to the research coordinator, who was experienced in team mentoring, in which they described one ethical case that they had experienced while serving in their additional role as a school leader. The research coordinator then re-formulated the descriptions of the ethical cases, without changing their essential content, but adapted them to fit the role-playing structure of the simulation.
2. *Simulating the ethical incidents.* For each session, the research coordinator randomly chose an ethical case for the participants to simulate. The research assistants, who were also experienced in team mentoring, randomly chose pairs of trainees, who would actively execute the role-playing, and allocated their roles. The role-playing took place in an adjacent classroom, while the other participants observed a real-time video recording of the simulation projected onto a screen.
3. *Investigation.* This involved viewing the videotaped simulations and discussing the emerging ethical dilemmas and the derived codes of ethical conduct. On receiving the 'time-up' signal from the research assistants, the role players joined the observers in the classroom and a video technician uploaded the videotaped simulations to the classroom computer. The research assistants selected specific segments of the video recording to project onto a screen in the simulation room. They chose segments that included the focal points that highlighted the ethical dilemmas and derived codes of ethical conduct.

To create a supportive, nonjudgmental environment, which is essential to the effectiveness of a simulation meeting (Salas et al., 2009), research assistants were careful to phrase their comments and feedback in a supportive and nonjudgmental manner. The supportive atmosphere was reflected in the participants' discussion of the ethical cases that they had experienced. As the simulations covered sensitive ethical issues, the discussions were prompted by a set of specific questions, such as: "What ethical dilemma/s arose in the simulation?"; "Can you suggest roles appropriate for school principals that emerge from the simulation?"; or "Can you suggest codes of ethical conduct that emerge from the simulation?"

Data analysis

The videotaped simulations and discussions were transcribed verbatim by two research assistants. The participants were identified by code numbers to assure anonymity. After transcription, the data were analyzed using qualitative methodology, and ideas and themes emerged (Taylor and Bogdan, 1998). All of the data were analyzed by three independent persons: the author and two research assistants. These assistants were not present during data collection. First, the research assistants and the lead researcher analyzed the data independently and then came together to perform a cross-checking procedure in which they reflected on suitable categories and suggestions for ethical dilemmas and codes of ethical conduct. To ensure accuracy of the analysis, data were coded and

analyzed using the ATLAS.ti 5.0, a software package that allows qualitative analysis of textual data (Muhr, 2004). The software assists the methodical organization and documentation of themes within data and allows the user to collect passages of text from one or more text documents (Crego et al., 2008).

Findings

Data analysis followed a three-step process, as outlined by Strauss and Corbin (1998):

The first step consisted of *open coding*—comparison, conceptualization and categorization of data. The data were examined for similarities and differences, and initial conceptual categories were identified. In the open coding stage of data analysis, similar ethical dilemmas (e.g. “education for all versus aspiring to high scholastic achievements”) and codes of ethical conduct (e.g. “the principal should stick to his/her pedagogical vision”) were clustered into subcategories.

The second step involved *axial coding*—each subcategory of ethical dilemmas and derived codes of ethical conduct was placed along the axis of tension between leadership strategies that emerged from the analysis. The following are five specific examples of the axial coding process findings based on the original scenarios. All participants’ names were changed to assure confidentiality.

Simulation 1: envisioning versus implementing

The original scenario. You are a high school principal. The head of the local council wants to meet you, to discuss the relatively small number of students in your school who are entitled to a matriculation certificate compared with the other school in the local council. You know that the other school has a very selective intake of students, whereas you follow the pedagogical approach that education should be accessible to anyone who wants to study. Therefore, the other school’s policy of accepting only high-achievement students is reflected by the relatively high number of students entitled to a matriculation certificate. Your policy of indiscriminate acceptance, including low-achievement students, is reflected by the relatively low number of students in your school entitled to a matriculation certificate.

The derived simulation includes a discussion between a local council head and a school principal. Part of their discussion is reproduced below:

Head of local council: The average grades in the final exams are higher than in your school. You reduce the average and shame the local council.

School principal: My school doesn’t expel students for low achievement. I’m willing to expel students for violent behavior. This is in your interest also. The school should not earn itself a reputation for not supporting weak students.

Head of local council: I don’t want to expel students either. But I want our local council to be at the top. High scholastic achievements will attract more people to live here. It will strengthen our local council, and will attract good students to study in your school. It is also in your interest. What do you intend to do to improve your students’ achievements?

School principal:

First of all, we have outstanding students who support the weaker students, and providing this support can educate them to become better citizens. In addition, I will think about how to allocate resources differently to improve the situation.

In the simulation, the participant, who role-played the principal, chose to redistribute the school's resources to help the low-achieving students. The derived ethical dilemmas "education for all versus aspiring to high scholastic achievements," and the derived code of ethical conduct "the principal should stick to his/her pedagogical vision" emerged during the discussion in the investigation phase based on the videotaped simulations. The ethical dilemmas and the code of ethical conduct that arose in the investigation phase were placed along the *Envisioning versus Implementing* leadership strategy axis. This was because the principal's desired vision of "education for all" led to problems when implementing this vision, reflected by the school's low pass rate of the matriculation exams.

Simulation 2: engaging versus monitoring

The original scenario. You are the principal in an elementary school. Rachel, a homeroom teacher in your school, asks you to move Eran to a special education school because she cannot cope with his behavior in the class. She tells you that Eran's behavior is harming the class, and prevented them from completing the curriculum by the end of the year. Eran's parents, who work in prestigious professions, do not want to have Eran assessed because they are afraid that he will be labeled as a special education student. If the parents do not agree to the assessment, it is against the Ministry of Education rules to move Eran.

The derived simulation includes a discussion between Rachel and the principal. Part of their discussion is reproduced below:

Rachel (the homeroom teacher):

Eran doesn't fit in to the regular class. He needs a special education school. Because of his behavior, I didn't finish teaching the curriculum. I refuse to teach him next year. Any other student with his condition would not be allowed to continue. Just because his father is a lawyer and his mother is a doctor, it doesn't mean that a special needs student should learn in my class.

School principal:

He has not yet been diagnosed as a special needs student. How can you determine that he is a special needs student?

Rachel:

He has not been diagnosed because his parents refused to have him assessed. They don't want their child to be recognized as a special needs student. I have a lot of experience. I know he is a special needs student because of his behavior and the way he studies; the class cannot continue to study while he is in the classroom.

School principal:

OK, Please collect all the relevant information; we will meet with the supervisor, and see what we can do to have him moved to an appropriate school. During the simulation, the principal chose to seek help from the supervisor to have the student moved. The derived ethical dilemma "the individual

student's well-being versus the other students' well-being," and the derived code of ethical conduct "the principal should be responsible for the students' needs and accountable for their achievements" emerged during the discussion in the investigation phase based on the videotaped simulations. The ethical dilemmas and the code of ethical conduct that arose in this phase were all placed along the *Engaging versus Monitoring* leadership strategy axis category. The tension between the two strategies was manifest through the principal expressing his opinion that Eran should stay in the classroom because he had not yet been assessed, and his monitoring of the situation, through acknowledging that his classmates were unable to learn the curriculum when Eran was present in the classroom.

Simulation 3: articulating versus envisioning

The original scenario. You are the new principal in a secondary school. You introduced the procedure of homeroom teachers making house calls to students, but a senior teacher with tenure refuses to participate. You invite the teacher for a discussion.

The derived simulation includes a discussion between a school principal and one of his tenure teachers, who intends to retire in the next two years, and does not want to make the effort to participate in house calls. Part of their discussion is reproduced below:

- School principal:** Dani, I see you in a leading role for the other teachers to follow. I need you to mentor them. This is a great project to assimilate our vision of caring for our students. It will increase their motivation.
- Dani (the teacher):** School vision . . . is not relevant to me anymore. I intend to retire in the next two years.
- School principal:** I need your experience to guide the other teachers. So, would you join me and we'll do the first house calls together?
- Dani:** You know what, I will join you, but I think that you are wrong. The parents don't like house calls.

The principal argues that he needs the teacher's help as a role model, and he adds to the original option that he invited the teacher to join him in the first house call. The derived ethical dilemma "professional commitment versus colleague relationships," and the derived code of ethical conduct "the principal should lead his team to professionalism," emerged during the investigation phase. The ethical dilemma and the derived code of ethical conduct were placed along the *Articulating versus Envisioning* leadership strategy axis. The tension was created within the principal, who used dialogue to try and articulate and empathize with the objecting teacher's perceptions, even though they contradicted his own pedagogical vision.

Simulation 4: implementing versus engaging

The original scenario. You are the principal in a community high school. Camal, Aya's father, wants to meet you. His daughter wants to study Physics but her average grades are not high enough. His two older daughters majored in Physics in your school and are now studying prestigious professions at university. Camal asks you to give Aya a chance, because she is a good student.

The derived simulation includes a discussion between the principal and Aya's father. Part of their discussion is reproduced below:

Camal (the parent): This meeting is difficult for me, because I don't like to intervene . . . Aya wanted to take Physics. Last year, 85 per cent was enough. Now, it is not. I don't understand; all the teachers know that she is a good student.

School principal: This year, there was a great demand for Physics, so the minimum grade was raised. I couldn't accept all the students who wanted to major in Physics.

Camal: It is not fair; there are other solutions, such as opening another class, bringing in another teacher. Aya wants to study medicine like her two older sisters. You are blocking her chance. I ask you to give her a chance, to move her to the Physics class. If she doesn't succeed, then move her back to Humanities.

School principal: It is not fair to let Aya study Physics when other students at her level will be denied the chance. I have an idea. She will start by majoring in Humanities. If she gets good grades, then she can move to Physics.

Camal: That way, she will lose half a year of Physics. Look, she is a good student; I will give her private lessons to help her to realize her dream of becoming a doctor.

School principal: Give me two days. I need to consult the teaching staff, to see what we can do with Aya, while not discriminating against other students.

The principal asks for a few days to discuss this issue with his staff. The ethical dilemma "professional autonomy vs. parents' intervention," and the derived code of ethical conduct "the principal should respond equally to all parents" arose during the investigation phase. The ethical dilemma and the derived code of ethical conduct were placed along the *Implementing versus Engaging* leadership strategy axis. This was because, by refusing to accept students who were not up to the required standard, the principal was implementing the school's policy of maintaining the standard of excellence and preserving the equivalence approach, but at the same time, was considering whether or not to authorize the parent's active involvement by granting him his wish.

Simulation 5: monitoring versus envisioning

The original scenario. You are the principal in a high school with 500 students. Daniel is a student in 11th Grade. His parents complain that the Math teacher gave him a low-class grade because of his absences due to his activities on the school committee. You arrange a meeting with Naomi, the Math teacher.

The derived simulation includes the following discussion between the principal and the Math teacher (Naomi). Part of their discussion is reproduced below:

School principal: We have a problem. On the one hand, school encourages volunteering. Daniel was absent because he represented our school in various external social activities. He was also absent from Math lessons because he

needed to organize the social activities inside school. On the other hand, he should know how to manage his time, and not to miss so many lessons. His parents are angry because they believe that his low grade in Math is because of his social activities in school, and they claim that the school is not supporting him.

Naomi (the teacher): I can't give prizes to a student who was absent from so many lessons and didn't study Math; I already gave him two points above what he deserves.

School principal: But there is something else. How can I encourage other students to contribute to the school if they see that we are not helping these students?

Naomi: I have a principle; no prizes for nothing. I will give him homework to do by next Monday, and I might consider improving his grade based on the result.

The principal explains that no student will want to contribute to the school committee, and the teacher decides to give the student an opportunity to improve his class grade. The derived ethical dilemma "teacher's autonomy versus encouraging students' contribution to school," and the derived code of ethical conduct "the principal should respect and include all concerned in making ethical decisions" arose during the investigation phase. These ethical dilemmas and the derived code of ethical conduct were all placed along the *Monitoring versus Envisioning* strategy axis. This was because the principal found that the continued in-depth evaluation was undermining his vision of "encouraging students to be involved in school." Teachers were not encouraging students to participate in social activities because this caused them to be absent from lessons, and led to low achievements.

The third step was selective coding. In this step, selected categories of tension between leadership strategies were organized around a core category (central explanatory concept). More specifically, the analysis found a set of five dimensions on the leadership strategy axis: (1) *Engaging versus Monitoring* (20 cases); (2) *Envisioning versus Implementing* (11 cases); (3) *Implementing versus Engaging* (eight cases); (4) *Monitoring versus Envisioning* (seven cases) and (5) *Articulating versus Envisioning* (four cases). The central concept found to emerge from these five leadership strategy dimensions was "Leadership strategies derived from simulations."

The main consideration in the ethical dilemmas and derived code of ethical conduct described above was caring for students or teachers (16 cases). A significant number of the ethical dilemmas and derived codes of ethical conduct, which preoccupied the participants, involved the issue of whether or not to act according to school standards (14 cases). Additional ethical dilemmas and derived codes of ethical conduct focused on family agenda (10 cases), and student equality (seven cases). Other ethical dilemmas and derived codes of ethical conduct focused on professional autonomy: to obey one's superior or to follow one's own beliefs (three cases). The majority of the leadership strategies involved interactions: between the education leader and parents (25 cases); between the education leader and the teachers (17 cases); between the education leader and his/her charge (eight cases).

Discussion

The main purpose of this study was to use a constructivist approach to explore the ethical tensions and leadership strategies in the daily experiences of school principals and recommend the development of a code of ethical conduct to balance these tensions. Simulations as a tool of

constructivist learning based on organizational learning were found to have the potential to highlight the tensions between different leadership strategies (e.g. engaging versus monitoring, envisioning versus implementing, implementing versus engaging, monitoring versus envisioning and articulating versus envisioning) which turn simulations into opportunities for rich learning experiences.

The simulations' contribution was in learning how to reduce the following tensions: (a) between *articulating* and *envisioning* through discussing the school's vision which cannot be realized, and thereby reaching a solution; (b) between *engaging and monitoring*, through discussing the future of the school and continuous monitoring of results; (c) between *envisioning and implementing*, through examining the gap between an individual's vision and its expression in the field; (d) between *implementing* and *engaging*, through responding equally to the people involved; and (e) between *monitoring* and *envisioning*, through including all concerned in making ethical decisions.

The tension that was found between leadership strategies may indicate that the participants' strategies are influenced by moral judgment, which might change depending on the situation (e.g. Simulation 4, the great demand for Physics caused the minimum acceptance grade to be raised), on the context (e.g. Simulation 2, the student was not suitable to be part of a regular class, but was allowed to remain because of his parents' prestigious status) and on the people involved (e.g. Simulation 1, the point of view of the principal versus the point of view of the head of the local council). In general, the simulation team is a supportive learning context in which education leaders have the opportunity to consider different leadership strategies from different perspectives. This is with a view to developing a code of ethical conduct designed to help them deal successfully with ethical decisions in school.

In the present study, leadership strategies that emerged from the simulations could be explained in the context of the tension between promoting egalitarian processes and attending to differential needs. For example, in Simulations 1 and 4, the tension lay in whether to determine a minimum standard for acceptance to the school or into a specific class, or whether to consider a student's desire to study despite her low achievements; in Simulation 2, the tension was between whether a student whose behavior was inappropriate in a regular class should be allowed to remain in the class because of his parents' needs. This tension existed also in Simulation 5, where the student received a low grade according to school standards, after having neglected his studies for the sake of school activities.

Other leadership strategies emerged based on the Israeli education system, which is characterized by limited resources compared with other countries (OECD, 2012). Hence, a situation has been created in which education leaders are sensitive to issues of resource distribution among their students. This was illustrated in Simulation 1, through the principal's attempt to allocate resources differently to improve the students' achievements, and in Simulation 4, when the principal would not consider expanding the Physics teaching staff, despite the great demand for the subject.

Several leadership strategies emerged based on education leaders' experiences of having difficulty discussing students' functioning with parents (Simulation 2, Simulation 4, and Simulation 5). Parents and education leaders use different frames of reference when considering what is important for the children. Parents are emotionally involved in their own children's upbringing, whereas education leaders' point of reference is the functioning of the school.

Based on previous studies (Shapira-Lishchinsky, 2013; Bourke and O'Neill, 2009; O'Neill and Bourke, 2010), it seems that in many countries (e.g. New Zealand, USA, Canada, Israel), codes of

ethical conduct for education leaders are still in the assimilation stages or are an unfamiliar concept. The findings of the present study suggest that the codes of ethical conduct, which emerged from simulations based on education leaders' experience, could focus on finding a balance between competing leadership strategies based on ethical principles, considering the specific context and the specific people involved. Hence, education leaders would be empowered to deal more successfully with emergent ethical dilemmas. In difficult cases of ethical judgment, these codes of ethical conduct may provide practical tools for dealing with ethical dilemmas, because a general code of ethical conduct cannot include all situations potentially facing education leaders.

This study does not cover new ground in terms of offering entirely new simulation workshop techniques. Its innovation lies in exposing the complexity of the dialogue that occurred during the simulations, as the participants discussed the implications of the scenarios through engaging in collegial constructivist dialogue that gives them access to quality learning experiences. In addition, this study proposed integration of constructivist theory, simulation technology, cases of ethical dilemmas, and reflecting leadership strategies. All of these may provide the appropriate learning conditions to enhance the professional development of the participating education leaders. Another possible outcome is the increased number of leaders with ethical awareness. This might be crucial, as the challenges facing new principals are becoming increasingly complex.

Conclusions, limitations, and future study

This study indicates that combining constructivist approach and organizational learning theory with simulation provides education leaders with attractive and effective learning experiences, considering the dynamics of complex and realistic contexts. The simulation presents the scenario without the effects that manifest themselves in real-life contexts. It provides more perspectives from which to identify ethical issues, concerning moral sensitivity, moral judgment, and practical issues such as developing a code of ethical conduct and emerging leadership strategies. Thus, as mentioned earlier, the simulations may provide ongoing opportunities to engage in collegial constructivist dialogue that gives the education leaders access to the quality of these learning experiences, and hence assist their development as leaders. Simulations within a constructivist approach might be a way for principals to navigate ongoing school dilemmas while using the tough decisions facing them as the material for their own and their colleagues' ongoing professional development.

Three main limitations of this study should be mentioned. First, it is possible that in an involuntary context (e.g. compulsory courses), results might differ. Second, findings were presented from trainees at a single university, which may not extend to trainees in other universities in and outside Israel. Third, despite the findings, there is no way of knowing how education leaders would perform in actual situations. Nevertheless, the findings indicate that the inclusion of integrated approaches in leadership programs by involving participants from different disciplines and using workshop simulations might encourage strategic thinking among future leaders.

Future studies are recommended, both in Israel and overseas, using a larger number of simulations, to explore their additional benefits such as psychological empowerment and self-efficacy based on pre- and post-questionnaires. In addition, longitudinal research should consider the effectiveness of such simulations by examining reports from the participants themselves and from their superiors, which address their leadership strategies and their ability to deal with ethical dilemmas. Researchers would also do well to investigate the cross-cultural validity of the current findings by conducting this research in other developed countries.

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