

## **A Multimedia Approach to Enhancing School Leaders' Reflective Thinking and Decision Making**

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### **Summary**

This article presents an overview of one multimedia project—the Administrator Case Simulation (ACS) Multimedia Library—focusing on the professional development of school administrative leaders involved in collaborative school leadership. The article provides an overview of the multimedia case simulation concept and describes multimedia case design features. The ACS simulations' integrated professional learning approach to enhancing the reflective thinking and decision making abilities of school leaders is highlighted.

**Key Words:** Multimedia Case Simulations, Organizational Leadership, Reflective Thinking and Decision Making

### **Introduction**

Educational training and development have long been recognized in the corporate world as important elements contributing to an organization's overall ability to maintain personnel who: (1) possess the cutting-edge leadership knowledge and skills to be able to deal effectively with current complex issues and challenges; and (2) who can help the organization remain vibrant and competitive in an ever-changing environment (Schwartz, 1996). In school organizations, providing effective leadership skill development for educational leaders can be especially challenging due to the unique nature, complexity, and press of school teaching, leading, and learning environments.

As a university professor and school personnel development consultant specializing in the pre-service and in-service preparation and development of elementary and secondary school administrative leaders (principals, assistant principals, curriculum specialists, and the like), I have

always been fascinated—and, admittedly, not a little perplexed—by the set of daunting challenges embedded within the following general pedagogical question (a question which has followed me throughout my career in higher education): How does one actually “teach” aspiring and practicing school leaders to be effective (or more effective) reflective thinkers and decision makers? Given that the arena of school leadership is decidedly context-specific and organizationally complex, is it possible (within pre-service university preparation program and in-service staff development settings) to mold or influence the insightful thinking and decision making development of aspiring and practicing administrative leaders in the ways they react and lead in challenging school leadership dilemma situations? And, what kinds of instructional tools and/or techniques might prove most useful in pursuing such an endeavor?

These are the kinds of questions that have stimulated my ongoing pedagogical quest for powerful teaching and learning tools to effectively engage school leaders who are interested in examining and enhancing their own school leadership reflective thinking and decision making (RTDM) abilities. And, these questions eventually led me to experiment directly with the possibilities of multimedia technologies for creating the kinds of context-rich and multi-leveled interactive environments within which school leaders might examine and refine their own organizational leadership RTDM abilities.

Beginning in 1993, I began to experiment with the hyperlinking features of available multimedia software as a way to provide users with the ability to manipulate and navigate through multiple kinds and levels of interactive databases (including video, graphic, and text data). Further refining these early experimental efforts with a team of multimedia developers and school leaders, together we collaboratively developed an initial series of interactive multimedia simulations. These simulations focused on real school leadership dilemma challenges experienced by regional elementary and secondary school principals. These early interactive simulations became the prototypes for the expanded school leadership “administrator case simulations” multimedia development teams and I would become involved in creating over the next several years.

### **Administrator Case Simulation (ACS) Project Development Activities**

Armed with external funding support during 1996 through 1998 provided through major grants (totaling US \$400,000) from the Sid W. Richardson Foundation (Fort Worth, Texas), the Abell-Hanger Foundation (Midland, Texas), and the Franklin Charitable Trusts (Post, Texas), development teams were organized to engage in initial Administrator Case Simulation (ACS) Project case simulation development activities. These funded project activities included working extensively with regional schools, school districts, and education organizations throughout Texas in filming ACS case scenes and developing the multimedia simulations. The ACS Multimedia Lab acquired broadcast-quality betacam SP cameras, audio microphone and mixing equipment, and digital nonlinear editing system hardware and software to facilitate field production work and to support case simulation design and post-production refinement efforts. ACS “case development teams” (one team for each case simulation developed) consisted of a variety of personnel, including multimedia specialists in camera and lighting, dramatic arts, digital editing, post-production, and instructional design—all working in close collaboration with university researchers and regional school district and education agency personnel.

A central goal of ACS project development activities from the outset was to work to capture as accurately as possible within a multimedia case simulation framework the complex realities of the dilemma situations experienced by school leaders in the regional schools we were working with. Thus, project teams worked diligently and in close partnership with the principals, assistant principals, teachers, curriculum specialists, and other school community leaders in the regional schools who provided the real-life school leadership dilemma situations on which the ACS case simulations were based. ACS case simulations developed were all constructed from actual real-world situations and experiences of the principals and school community colleagues who participated as full members of ACS project teams in multimedia case development and field testing activities.

Individual case simulation production teams spent approximately six to eight months at the regional school sites at which each case simulation was produced. School administrators, teachers, curriculum specialists, other professional staff, and school community members were involved as key members of case simulation production teams. Individual site-specific teams prepared databases and scripts for filming and multimedia production for each school leadership case developed. Multiple case video scenes, expert panel perspective sequences, and other reflective video scenes were all filmed on location at the case production school sites.

One intriguing “team learning” benefit that became ever more evident as case teams worked on developing and refining the school leadership simulations was the deep organizational insights that emerged as a result of school site team members’ collaborative efforts—the actual administrators, teachers, staff specialists, and community members who had “lived” through the dilemma situations. The often difficult process of dissecting, sifting through, discussing, and critically analyzing school leaders’ lived experiences for the purpose of distilling these experiences into a coherent case dilemma “school leadership script” became for the school leaders involved a kind of catalyst for organizational learning. These case scripting and development activities served to focus individual school community groups on the deep issues involved in their school leadership case challenges, and emphasized for them the extent and impact of stakeholders’ multiple (and multi-levelled) perspectives on these challenges and how these perspectives were often in conflict. This multi-perspectivist (i.e., “plays-within-plays”) analysis of school organizational leadership challenges confronting each school community became an important ongoing aspect of school site case development work.

Individual ACS project teams engaged in a number of important steps in the case simulation development process, both on-site and at the university-based ACS Multimedia Lab, including: (1) selecting and articulating individual school organizational leadership cases (involving case teams delineating multiple school community challenges, themes, etc. present in each dilemma situation); (2) storyboarding individual case video scenes; (3) rehearsing and filming case scenes (involving actual school community members themselves studying and taking on case “roles” of other school stakeholders with varying perspectives); (4) obtaining and organizing relevant case materials (e.g., demographic information on student and school community populations, school performance and improvement data, available content information and resources relating to the case, etc.); (5) preparing various video, graphic, and text databases; (6) laying out, editing, and refining the

multimedia presentation; and (7) developing reflective thinking and decision making prompts and user response/data collection mechanisms for inclusion in each case simulation. Instructional technology specialists in digital video capture, non-linear editing, and multimedia production were important members of case simulation development teams throughout the lengthy process of envisioning, designing, and producing individual school cases. Participating school site case production teams typically spent approximately one calendar year overall in developing and refining an individual ACS multimedia case simulation.

### **Collaborative Leadership Case Set**

Funded collaborative project efforts described above resulted in the production of a five-case Collaborative Leadership Case Simulation Set (ACS Multimedia Library, 1998). This CD-ROM multimedia set includes cases dealing with:

*Collaborative Leadership* (consensus building) — This case addresses challenges involved in developing genuine collaborative leadership in schools and the difficulties school leaders often face in attempting to build shared leadership vision among school community stakeholders. A junior high school improvement initiative involving the integration of technology into the curriculum provides the frame for a goal consensus and collaborative leadership dilemma confronting the school community improvement team.

*Equal Access* (student rights) — This case addresses the issue of student equal access rights in schools. Increasingly, student groups are challenging school leaders to provide a variety of co-curricular and social opportunities (student organizations, clubs, etc.) to meet student interests and needs. Important legal and organizational considerations involving issues of equal access, student rights, and the responsibilities of school leaders for fostering responsive and equitable school learning environments for all students are examined.

*Inclusion* (special education) — This case explores the challenges school leaders face in providing high-quality, inclusive learning environments for students. Difficulties school leaders can encounter in providing adequate classroom learning environments for all students, meeting individual student needs, ensuring teacher preparedness, and confronting parental concerns are important dimensions of inclusion addressed.

*Resistance to Change* (teacher assessment and development) — This case portrays some of the complex challenges often encountered by school leaders involving performance assessment and development of school personnel. Issues contributing to difficulties in the appraisal process, including conflicting teacher beliefs about effective teaching practices, team collaboration, and curriculum planning, are explored.

*Instructional Leadership* (curriculum integration) — Challenges to school leadership related to improving student performance and instructional effectiveness are explored in this case. Several important leadership dimensions of the school-wide instructional improvement process are

highlighted, including needs assessment, collaborative planning for curriculum integration, and group ownership in the improvement process.

### **Multimedia Case Simulation Design**

The ACS cases are keyed to multiple sets of school administrative leadership professional performance standards, including: (1) the National Policy Board for Educational Administration (NPBEA) standards (NPBEA, 1993); (2) the Interstate School Leaders Licensure Consortium (ISLLC) standards (ISLLC, 1996); and (3) the Texas Standards for the Principalship (Texas State Board for Educator Certification, 2005).

The ACS Collaborative Leadership case simulation design presents users with a fully interactive, simulated principal's office environment. This two-dimensional, simulated office environment serves as an interactive interface for multiple kinds of information databases (e.g., student demographic information, school performance and accountability data, personnel records, etc.) which school principals would normally have access to. Within this simulated office environment, case simulation users can: (1) obtain information regarding specific national and state standards each case addresses; (2) access online virtual mentors (e.g., master principals, state education agency personnel, university professors) via the on-line state (Texas) education network (TENET); and (3) search case-relevant information contained in digital file folders within the simulated office environment.

A Case Video Scenes Database presents users with video portrayals of scripted scenes depicting critical incidents relating to the school leadership case dilemma situation. Through accessing this database, users can view these short scenes portraying multiple stakeholder perspectives and situations informing the overall case dilemma. Individual scenes portray interactive clashes among multiple stakeholders and their conflicting perspectives on critical school leadership issues, and how these interactive encounters contribute to the case dilemma. The video control panel includes "video-mark" feature capabilities which enable users to digitally mark specific sections of video for further analysis. The case simulations' video-mark features tap some of the unique hyperlinking capabilities of multimedia software through enabling users to isolate and analyze individually selected sections of video, then link their selected scene clip analyses to relevant information found in multiple national and state standards (accessed via the Professional Standards databases included within the simulation). Users input their narrative reflective analyses of "video-marked" school leadership scene clips directly into the computer, which stores user reflective analysis entries in the case simulation assessment program.

Users demonstrate their familiarity with national and state standards and supporting knowledge domains—and, importantly, their ability to provide meaningful rationales for their selection and application of these standards and domain areas—through documenting their reflective thinking in a Knowledge and Skill Base Application Rationale Area. Within this area, users have ready access as well to all information databases (e.g., school demographic profiles, student performance data, video-marks, etc.) available in the case's school leadership environment. Finally, users can apply insights developed through engaging the school leadership case simulation within the Case

Reflective Decision Making Area. This area stimulates users to directly apply organizational leadership insights about case dynamics gained from their scene clip (video-mark) reflective analyses to develop specific decision making action plans. Within this area, users can also review short expert panel video sequences profiling leadership perspectives of seasoned administrators and school community leaders reflecting on key issues and stakeholder dynamics represented in the case.

In summary, the ACS multimedia cases incorporate a number of key design features that collectively reflect an integrated systems approach to school leadership assessment and professional learning, including: (1) simulated environment authenticity; (2) environment/database interactivity; (3) diagnostic assessment capability; and (4) a clear focus on enhancing the reflective thinking and decision making (RTDM) insights and abilities of school administrative leaders.

### **An Integrated Professional Learning Environment for Reflective Thinking and Decision Making**

The ACS case simulation professional learning design focuses on providing an interactive, multimedia learning environment within which users can articulate and examine their own reflective thinking and decision making in response to school leadership dilemma situations. A three-step *Reflective Thinking and Decision Making (RTDM) Model of School Organizational Leadership* was developed to serve as an underlying professional learning conceptual framework organizing the various interactive case simulation elements and structuring the way users navigate through the simulations and reflectively engage individual case situations. The RTDM model is based on conceptions of reflective analysis and professional practice found in the literature on organizational learning and leadership development (Fullan, 2001; Schön, 1983, 1987, 1988). A central focus of the RTDM professional learning model is on helping users examine complex school leadership dilemma situations in ways that enable users to leverage their own reflective thinking to reframe these organizational leadership situations from intractable dilemmas into solvable problems.

As a process for organizational leadership case analysis, the RTDM model highlights the importance of clearly identifying upfront the core dilemma situation through delineating key issues informing the overall school leadership case (**STEP 1: Dilemma Articulation**). These key issues typically deal with both *surface-structure* and *deep-structure* dimensions of the case dilemma. Surface-structure dimensions involve readily apparent aspects or “symptoms” of dilemma situations— aspects that are organizationally “on-the-surface” and require immediate attention (such as the direct challenges school leaders must face when dealing with low test scores, insufficient resources, student drug use, school community gang violence, etc.). Deep-structure dimensions, in contrast, involve more systemic issues, often deeply embedded in the cultural fabric of the organization—the underlying “root causes” of the more apparent surface-structure “symptoms”—that require more insightful analysis to identify and address (such as conflicting cultural and/or political perspectives and beliefs existing among multiple population groups within a school community).

As a way to stimulate case simulation users’ deep-structural analytic thinking, individual ACS case video scenes portray brief interactive encounters between/among individual stakeholders and

stakeholder groups within the school community, each of whom may harbor unique, and sometimes entrenched, perspectives and beliefs regarding key issues and/or challenges existing in the case situation. These politically charged individual scenes present the case simulation user with multi-stakeholder perspectivist clashes (or “critical incidents”) which can suggest deep-structural political and/or cultural dilemma dimensions which may be operating at an underlying systemic level within the organization and fueling the dilemma situation.

As users examine individual case scenes, they are directed to record their narrative reflections concerning case key issues, critical incidents involving multiple stakeholder perspectivist clashes, and dilemma dimensions using the video-mark and analysis tools accessible within the simulation environment. Users are encouraged to provide written justification for their analytic thinking by linking their written case analyses to relevant national and state professional leadership standards and other knowledge base information available in the case simulation database.

An especially intriguing aspect of each case simulation is that school leaders portrayed in individual case scenes appear to be “stuck in their dilemma”—that is, they appear to have reached the limits of their reflective thinking insights and have exhausted their action plan (i.e., decision making) options. Therefore, in conjunction with the process of identifying and examining case key issues and multi-perspectivist critical incidents, case simulation users are encouraged to reflectively brainstorm, identify, and apply appropriate concepts, conceptual models, theories, etc. from the leadership knowledge base that they feel might be useful as *alternative lenses* through which to reframe the case situation from an intractable dilemma into a solvable problem (**STEP 2: Alternative Lens Application**). This process of “reframing” the case dilemma through reflectively selecting and applying one or more relevant alternative lenses to shed additional light on and clarify the complexities of the case situation gets to the heart of deep-structural organizational case analysis—namely, discerning at a fundamental level the systemic cultural and/or political “root causes” underlying and fueling the organizational leadership dilemma situation. Collectively, this complementary process of identifying case-specific key issues, analyzing multi-perspectivist critical incidents, and selecting and applying potentially useful alternative lenses helps users generate organizational leadership insights needed for fully articulating the core surface-structure and deep-structure dilemma dimensions operating in the case.

For example, a case’s *surface-structure dilemma* (identified through reflecting on several key issues operating in a school leadership dilemma situation) might be: How will I, as school principal, deal with low test scores? A corresponding *deep-structure dilemma* (identified through applying one or more powerful concepts or conceptual models from the available organizational leadership knowledge base that would enable the case analyst to generate new, alternative insights about the case dilemma’s underlying systemic dimensions) for the same case might be: How will we, as a teaching, leading, and learning community, develop a shared vision of a coherent school-wide curriculum that effectively meets the needs of diverse learners?

Following this overall reflective thinking process of identifying case key issues, analyzing critical incidents, brainstorming and applying relevant alternative lenses, and articulating the case’s core surface- and deep-structural dilemmas, simulation users are then encouraged to apply

organizational insights gleaned within STEPS 1 and 2 to engage in informed leadership decision making—that is, to generate appropriate leadership action plans to address the case’s dilemma dimensions and move the school community forward (**STEP 3: Action Plan Development**). Interactive guides embedded within the case simulation environment prompt users to generate short- and long-term action plan strategies in response to surface- and deep-structural case dilemma dimensions users have identified. To further inform their leadership decision making and action plan development, users can review expert panel video sequences provided in the simulation environment profiling brief discussions among seasoned administrators and school community members on case-specific school leadership best practices.

Collectively, this three-step *RTDM Model of School Organizational Leadership* (STEP 1: Dilemma Articulation; STEP 2: Alternative Lens Application; and STEP 3: Action Plan Development), serving as a conceptual frame and interactive template for the ACS case simulations, provides a straightforward and realistic way for users to examine and reflectively engage real-world school leadership challenges within a simulated organizational environment. Importantly, this three-step reflective thinking and decision making (RTDM) process provides users with an integrated professional learning approach for examining and leveraging their own reflective thinking insights to arrive at meaningful, action-oriented school leadership decision making choices.

### **Impact of Case Simulation Development and Use on School Leaders’ Professional Learning**

A central goal of Administrator Case Simulation (ACS) Project activities reported in this article was to develop technology-integrated professional learning tools for aspiring and practicing school leaders. A key aspect of the ACS development process involves engaging multiple school leaders in creating multimedia cases highlighting real school leadership dilemma situations. The ACS case simulations developed utilize a multi-perspectivist organizational learning approach to assist school leaders in becoming more insightful reflective thinkers and decision makers.

Initial ACS project development work completed thus far has engendered among participants involved (university multimedia specialists and multiple school site case team members) some preliminary insights regarding the impact on team developers and users of case simulations as professional learning tools. Case simulation production teams at the multiple school development sites uniformly noted the positive influence the case simulation development process itself (i.e., collaborative case script writing, video scene filming, database development, etc.) had on expanding the leadership thinking of school site team members (principals, teachers, curriculum specialists, and community members). Case team members’ collective efforts at each production site to carefully portray as accurately as possible within the simulation’s video scenes the multiple role perspectives of stakeholders involved in the dilemma situation (including how these perspectives clashed) enabled school team members to generate new, richer insights regarding the interactive dynamics of the case situation. These insights often led stakeholders (using the *Reflective Thinking and Decision Making [RTDM] Model of School Organizational Leadership* embedded within the case learning design) to deeper understandings regarding cultural and/or political root causes of the organizational conflicts besetting their school community.

Importantly, the three-step RTDM Model (i.e., STEP 1: Dilemma Articulation; STEP 2: Alternative Lens Application; and STEP 3: Action Plan Development) integrated within the ACS case simulation navigational design served to provide both school team developers and subsequent users of the case simulations with a practical technology-integrated means for examining and enhancing their individual and collective school leadership reflective thinking and decision making. Specifically, developers and users were able to tap the interactive and hyperlinking features of the ACS cases to link their analytic thinking regarding multiple stakeholder leadership dynamics portrayed in the various case video scenes to relevant national and state school leadership standards and other case-specific information available in the case simulation databases. The resulting new organizational insights derived from this case scene analysis process proved especially useful to school leaders as they proceeded to apply these insights directly to formulate case-specific short- and long-term action plan strategies to address in depth their school leadership dilemma challenges and move their school community forward.

In a fundamental sense, the collective analysis and reframing dimensions incorporated into the overall ACS case simulations' *reflective thinking and decision making* (RTDM) professional learning design were found to offer case team developers and users a practical means to engage entrenched, real-world school leadership dilemma challenges in a different way. The ACS case simulations encourage developers and users to creatively *re-envision* (Fullan, 2001) school leadership dilemma situations through applying a multi-perspectivist approach to analyzing and reframing these situations (i.e., the *Reflective Thinking and Decision Making [RTDM] Model of School Organizational Leadership* integrated within the ACS case simulation design). This multi-perspectivist approach to organizational case analysis, it was discovered, holds some promise as a new kind of technology-integrated means for enhancing school leaders' professional learning. The uniqueness of this integrated professional learning approach lies in its ability to challenge and stimulate school leaders to formulate new, more relational holistic and organizationally inclusive leadership insights that can directly impact and enhance the quality and effectiveness of school leaders' resulting decision making strategies.

## **Conclusion**

This article has presented an overview of one multimedia technology project—the Administrator Case Simulation (ACS) Multimedia Library—and a discussion of key concepts involved in the design and development of the ACS multimedia case simulations. A unique focus of the ACS case simulations is on creatively leveraging the interactive power of multimedia technology to create technology-integrated simulations that can engage school leaders in a multi-perspectivist, reflective analysis of organizational leadership challenges and dilemma situations. A central goal of the ACS case simulation design is to assist school leaders in examining and enhancing their own reflective organizational thinking and decision making.

The 1998 Collaborative Leadership Case Simulation Set is currently being used by a variety of entities, including universities, state and regional education service centers, professional organizations, and schools and school districts in Texas and other US states. As an outgrowth of

the multimedia project design described in this article, a current interest of ACS Multimedia Lab project teams is on working to develop new generations of multimedia case simulations (as well as reconfiguring cases already developed) for streaming via the internet to facilitate direct access by university professors, education service center personnel, professional organization staff developers, school and school district educational leaders, and all those interested in enhancing the quality and effectiveness of school organizational leadership.

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