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Optimising by minimising: interruptions and the erosion of teaching time

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Abstract

The current and continuing international cycle of public school reforms, founded primarily on the premise that educator accountability will result in improved learning outcomes, places additional pressure on teachers and administrators to better facilitate student achievement. The essential challenge is to forge improved learning environments that provide opportunities for enhanced student growth. Unfortunately, many schools seem to remain mired in cultural norms and routine practices that appear to impede, rather than promote, the realisation of that goal. A study conducted in eight Louisiana (USA) school districts supports my earlier findings in Canadian schools and strongly suggests that continuing misuse of scheduled class time through regular encroachments from outside the parameters of the classroom serve to erode instructional time and minimise learning opportunities. Many teachers remain frustrated and indignant about their inability to better control the learning environment.

Introduction

More than at any other time in the history of public education, schools and school districts throughout the Western world are being held accountable for student learning outcomes. New standards of performance have been enacted in Britain and other European countries as well as in Canada, Australia and New Zealand. In the US, state-mandated school reforms of the past several years – and more recently, the new federal school accountability initiative articulated and legalised through the Bush administration's No Child Left Behind Act (NCLB 2001) – have greatly increased expectations that educators do more to ensure that students better meet standards of learning performance, particularly as measured by standardised testing procedures.

For policy makers, administrators, teachers and students, it has meant renewed emphasis on student acquisition of basic knowledge and skills in core subject areas. With this comes the concomitant pressure to do better in learning environments that, despite innovations in instructional approaches and technology of contemporary schooling, nonetheless remain remarkably similar to those of decades ago.

Typically, solitary teachers are still charged with instructing a group of students for a relatively brief period of time in a particular subject area before moving on to another topic or, as in the case of higher grade levels, passing the group onto another teacher who will repeat the cycle. With the exception of some deviation through continuing experiments in such ventures as block scheduling, year-round schooling, four-day school weeks, and school-to-work initiatives, school organisational structures – including total instructional hours, the number of school days, and assigned subject areas – have remained largely immutable. In effect, then, the basic principle is that educators at all levels are expected to achieve considerably more by making appropriate adaptations to an enterprise that by its very size and nature has routinely demonstrated the capacity and the resolve to severely curtail their successful application.

A repeated credo in these times of enhanced expectations has been that of 'making the most' of what is currently available, but which may have been under-utilised in the past. Although exceptions are occasionally evident, there have been limited manipulations of the typical school year or school day – particularly in terms of extensions of either. With commensurate increased operations and labor costs, the potential for student and teacher fatigue, and interference with family vacations and student summer employment expectations, there seems little likelihood that the typical 5–6-hour school day or the 185–190-day school year will be substantially increased on a wide-scale basis in the foreseeable future.

However, the assertion of a direct relationship between instructional time and student outcomes has been a contentious topic. For instance, a number of US studies undertaken in the 1970s and 1980s tended to support the view that greater learning time was linked to greater achievement (eg Bloom 1974; Denham & Lieberman 1980; Kuceris & Zakariya 1982), but were tempered by subsequent assertions that time on-task was less important than factors such as student ability and the employment of effective teaching strategies (eg Karweit 1983; Levin & Nolan 1996; Walberg 1988). Nonetheless, a report issued by the National Center for Education Statistics (NCES 1993) stated that the effective use of classroom time was the single greatest influence on student learning opportunities and outcomes. Conciliatory positions began to materialise in the 1990s as Levin and Nolan (1996) admonished that poor teachers using poor instructional strategies are unlikely to increase student learning, essentially concurring with Moore and Funkhouser (1990, p 16) that gains in outcomes are likely if 'effective teaching practices and curricula are tailored to learning needs'.

Notwithstanding the lack of a definite resolution to the issue, research-based evidence suggests that much could be done to use the school day more

effectively. For instance, Gilman and Knoll (1984) determined that as much as 60% of the typical secondary school day was consumed by non-instructional events such as class changes, lunch periods and extracurricular activities. Similar conclusions were made by Boyer (1983) and Goodlad (1984). Several years earlier, the Austin Independent School District in Texas was alarmed by the observed instructional time wastage in its schools and took measures to reclaim an average of 23.5 minutes per day – the equivalent of 16 full days per school year (Hester & Ligon 1978).

Still, the problem seemed to persist in many jurisdictions. Lutz and Lutz (1987) alleged that a local Texas school board deliberately circumvented state-mandated time requirements in order to permit sports-related activities which absconded students from classes for lengthy periods. Elsewhere in the US, Seeman (1994, p 115) referred to the overuse of extracurricular activities and time-consuming episodes that reflected 'bad or loose school rules' which continuously absorbed class time. In Canada, Ranallo (1997, p 64) contended that time spent on 'assemblies, special events, timetable adjustments, unexpected interruptions, discipline matters, etc.' meant that only a portion of allotted time was effectively used for instructional purposes.

Following a study of classroom interruptions at several junior high schools in Great Britain, Varley and Busher (1989) developed a continuum to exemplify the range of intrusions experienced by junior high school teachers. Interruptions of internal and external origin were classified as: (1) totally unavoidable contingencies (eg student illness, structural damage to physical plant); (2) unavoidable and outside the teacher's control (eg maintenance work, medical check-ups); (3) avoidable interruptions (eg unscheduled parental visits, messages from other staff members); and (4) planned interruptions (eg visiting presenters, parent helpers). Among their conclusions, the researchers determined that the incidence of classroom interruptions appeared to be lower in schools that adopted definite policies to address them, and were less problematic in classes headed by teachers who exhibited effective classroom management skills.

Two studies undertaken in Canada in more recent years strongly suggested that time wastage remained problematic in public schools. Limiting his research to the nature and extent of externally imposed classroom interruptions, Leonard (1999, 2001) found that many teachers wrestled with numerous impositions made upon them and their students during regularly scheduled class periods. While some schools were found to have adopted strategies or guidelines which 'strongly reinforce stated policies about the importance of protecting the learning environment' (Leonard 2001, p 108), others had just as clearly permitted regular and repeated intrusions into the classes, with detrimental effects upon learning opportunities. My intent in undertaking the research I report here was to determine if such unfavorable schooling circumstances persisted in another particular North American jurisdiction and, if so, the extent to which efforts intended to address them had been successful.

Method

The research outlined here is the latest in a series of investigations I have undertaken to address the nature, extent and apparent consequences of externally imposed classroom interruptions in schools. From the first two studies I conducted in Saskatchewan, Canada, I concluded that outside sources routinely impinge upon the allocated instructional time of classes, and that many teachers consider these intrusions to have a deleterious impact upon their work and on the students (Leonard 1999, 2001).

The intent of the current study was threefold:

- to ascertain if similar circumstances may or may not exist in a specific American public school environment;
- to uncover additional insights as to the apparent causes and consequences of such instructional time erosion; and
- to determine the extent and success of measures designed to curb classroom interruptions.

The acknowledged underlying premise is, of course, that curtailed instructional time impacts negatively upon student learning opportunities (McCombs & Whistler 1997; Nelson 1990; Stuck & White 1992).

In the fall of 2001, I was part of a research team that distributed survey questionnaires to 500 systematic randomly selected public school teachers in 88 schools located in 10 districts, or parishes, in Northern Louisiana. The questionnaire addressed various aspects of the school professional community, particularly the nature of collaborative practices among teachers. Of the 238 teachers who returned completed forms, 101 volunteered to participate in a second questionnaire intended to solicit greater detail about conditions considered to promote or discourage teacher interaction and, by extension, student learning. One section of the instrument specifically addressed aspects of classroom interruptions, and was used to generate the research data I report here.

Respondents were asked to indicate the frequency and sources of externally imposed classroom interruptions, the perceived effect of these encroachments, and what measures, if any, had been taken to reduce classroom interruptions as well as the results of those actions. Additionally, teachers were asked to indicate the type of school they worked in (ie: primary/elementary, middle school/junior high, or senior high school[1]) and its size by enrolment figure (eg <500, 500–1000, or >1000). The follow-up self-administered survey was distributed to the teachers during the spring of 2002. This resulted in 56 completed forms from 46 schools in eight districts, and a return rate of 54.5%.

Results

Survey participants were asked to indicate, on average, the number of times they estimated their classes were interrupted from outside the parameters of

the classroom during the course of a full school day. Table I is a summary of the responses, and indicates that all teachers signified that they typically experienced some interruptions each day. Combining all school types and sizes, the frequency category of '3–4 times' was most often selected (38.9%), followed closely by '7–8 times' (22.2%), '1–2 times' (20.4%) and '5–6 times' (18.5%).

There was considerable variation among the schools in terms of size and type. For instance, the highest frequency interruption category – '7–8 times' – was reported by 26.7 % of the middle schools/junior high schools, compared with 17.6 % of senior high schools. The smaller-size schools tended to report greater intrusion frequencies at the highest level of '7–8 times' (enrolment of <500 students – 21.4%; 500–1000 students – 26.1%) than the largest schools (0.0%). It is nonetheless notable that, overall, four out of five respondents (79.6%) indicated that their classes were interrupted from the outside at least 3–4 times per day, and two out of five (40.7%) reported at least 5–6 such occurrences.

Table I: Frequency of interruptions by school type and size

Estimated daily interruptions	Percent reporting by grade levels			Percent reporting by school size			Total percent reporting
	P/E	MS/JH	HS	<500	500–1000	>1000	Schools combined
Not at all	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1–2	23.1	20.0	29.4	14.3	13.0	28.6	20.4
3–4	38.5	46.7	29.4	50.0	34.8	42.9	38.9
5–6	19.2	6.7	23.5	14.3	26.1	28.6	18.5
7–8	19.2	26.7	17.6	21.4	26.1	0.0	22.2
Other	–	–	–	–	–	–	–
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

There was considerable variation, yet also some consistency, among school types and sizes with respect to the sources of externally imposed interruptions (see Table II). Respondents were asked to make selections from a prepared list and to identify 'other' sources. In all categories of school type and size, the public address system or intercom was selected most often

(82.1% of combined respondents). This was followed closely by 'other teachers and teacher aids' (50.1%) and 'other students' (45.5%). However, the intercom seemed to play a considerably larger role in intrusions in the smallest size schools (<500 students – 93.3%) and primary/elementary schools (88.0 %) than in other schools. Also, other teachers and teacher aides were reported as interruptions by more than two-thirds of teachers working in mid-size schools (schools with 500–1000 students – 68.2%), but only 14.3% of those in the largest size schools (>1000 students).

The largest schools also did not seem to have a problem with other class students or outside students infringing upon class proceedings, but these did seem to be a factor for all other school sizes and types. Parents and other 'visitors' were selected by almost one third (34.6%) of the combined respondents, with relative consistency across school categories. Extraneous noise (eg students in the hallway, maintenance work) seemed more of a problem for middle schools and junior high schools (35.7%) and the smallest schools (<500 – 33.3%) than for other school types and sizes. Other sources of non-listed interruptions were identified by all but one category of school (ie schools with <500 students), and included the phone ringing, fire drills, club meetings and taking yearbook pictures.

Table II: Sources of interruptions by school type and size

Source of Interruptions	Percent reporting by grade levels			Percent reporting by school size			Total percent reporting
	P/E	MS/JH	HS	<500	500–1000	>1000	Schools combined
Intercom system	88.0	71.4	82.4	93.3	81.8	71.4	82.1
Teachers/aides	64.0	28.6	47.1	33.3	68.2	14.3	50.1
Other students	56.0	28.6	29.4	46.7	54.5	0.0	45.5
Parents/visitors	40.0	28.6	29.4	33.3	40.9	42.9	34.6
Administration	12.0	42.9	41.2	20.0	45.5	42.9	32.7
Noise	24.0	35.7	23.5	33.3	18.2	0.0	29.1
Other sources	4.0	35.7	17.6	0.0	22.7	42.9	21.8

Although there were a number of differences, the types of externally imposed classroom interruptions identified in the Louisiana schools were not highly dissimilar to those evidenced in the Canadian schools in the earlier research studies. For instance, the Louisiana teachers (82.1%) and the Saskatchewan teachers (80.2%) most commonly identified use of the 'intercom' as a source of class time encroachment. Other major perpetrators in both jurisdictions included other teachers and staff, other students, parents and other visitors, and school support staff and administrators.

However, there was a sizable difference in the estimated frequencies of interruptions occurring. While slightly more than half of the Canadian teachers (54.8%) reported that their classes were interrupted at least 3–4 times per day, almost four out of five (79.6%) of their Louisiana counterparts made that assertion. Also, the highest frequency category of 7–8 or more daily interruptions was reported by Louisiana teachers at almost four times the rate (22.2% versus 6.0% for Saskatchewan). On the surface, this would seem to indicate that although sources of class intrusions are largely similar across the two jurisdictions, the overall frequencies may be a greater concern in Louisiana schools. Consideration of additional anecdotal data seems to provide insight in that regard.

The 56 survey respondents had widely varying impressions of the impact of interruptions originating outside classroom boundaries. One middle school teacher seemed to imply that there may be psychological or attitudinal benefits to infringements upon instructional time, as she exclaimed that her 'Students love it when the phone rings!' Unlike that teacher, the vast majority of teachers seemed to regard interruptions as either a necessary and relatively harmless facet of school life (13 teachers), a phenomenon highly contextual in its impact (eight teachers), or an intolerable and frustrating circumstance that impedes educational progress (28 teachers).

Several respondents stated that their classes simply 'stop working, listen, then go back to whatever' when intercom announcements are made during instructional time. Several spoke of the children being accustomed to interruptions generated from messages being delivered, specialists visiting and students being taken out of the classroom, and that routines had been established, with minimal impact. This high school teacher noted the necessity of certain routine practices:

> I am sure it is disturbing [but] we try to keep these to a minimum; the necessity of using class time is obvious – for scheduling, counselor visits, discipline, communicating with the student body.

Other teachers noted the importance of circumstantial factors such as the time of day, the particular class being taught, and the length of the interruption. Still, the majority of comments about the impact of outside intrusions were characterised by concern, frustration and even consternation. As one junior high school teacher succinctly but strongly stated it:

> Interruptions mutilate a lesson, distract students, and frustrate teachers! [original emphasis]

Respondents spoke of students and teachers losing concentration, a loss of the learning momentum, and time being wasted in efforts to refocus on the lesson. As one elementary teacher expressed:

> They interrupt the flow and momentum of the lesson. Students get off track and start talking. When it's time to resume the lesson I have to get the students' attention again and backtrack in the lesson to preserve continuity.

Echoing the above sentiments, this high school teacher indicated how interruptions can be frustrating and harmful to learning patterns:

> The momentum is lost! Modification of lessons becomes necessary – often resulting in a less effective lesson. Students often interpret any interruption as a signal that class is over.

Others spoke of particular problems in some lessons, such as mathematics instruction and in classes containing students with Attention Deficit Hyperactivity Disorder and others who may have difficulty concentrating. One well-experienced high school teacher said that her class is sometimes 'interrupted four times in one period with as many as 20 to 30 names being called out!' An elementary school counterpart said that each day 'the last 30 minutes are shot' due to continuous messages about car and bus departures. The following comment, made by a teacher in a large elementary school, is representative of the concerns expressed:

> Because I teach in a departmentalised setting, uninterrupted time is essential to getting my subject matter taught. At times, I become very frustrated because of all the morning announcements. There is the pledge, the singing of the national anthem, moment of silence, birthdays, character counts, messages, and numerous announcements. Way too much lost instructional time.

It is apparent from the preceding discussion of comments made about the impact of externally imposed classroom interruptions that most of the participating teachers considered them to be a problem. This provides strong support for the results of earlier research I conducted in Canadian schools (Leonard 1999, 2001). The questionnaire completed by Louisiana teachers, however, extended further into the nature of the phenomenon by asking respondents about efforts that may have been made to address unfavorable circumstances, and what the eventual outcomes of those attempts had been.

A few teachers stated that the topic had not been formally addressed because no real problem was perceived to exist in their schools – either because the perception was that most interruptions are a necessary part of school life, or because those that do occur are kept to a minimum. Many more, however, identified a number of practices that had been initiated to curb the incidence rate. They spoke of administration's emphasis on 'time-on-task' and the adoption of such practices as scheduling times for intercom announcements, preventing students from loitering in hallways, having teachers avoid making visits to other teachers during instructional periods, and having the office personnel intercept school visitors. This high school teacher noted the new arrangements at his school:

> Less [sic] people call you to talk, or even set up appointments because a conference has to be handled through the office. You don't get your message until your planning period.

One elementary teacher remarked that her school's 'supportive administration and colleague cooperation' had 'gone to great lengths' to minimise interruptions. Another primary grade teacher outlined her school's announcement policy:

> Our principal makes announcements right after the bell in the morning and right before the dismissal bell in the afternoon. She rarely comes on the P.A. during the rest of the day.

Other teachers were clearly not pleased with administrative policies and cultural norms that sustained an environment where intrusions were commonplace. One elementary teacher acknowledged that some interruptions – such as those pertaining to individual student needs – are unavoidable, but estimated that half of those she experiences 'are originated by other teachers trying to accomplish goals during the day so that they can leave when the students leave'.

Some teachers were clearly dismayed with the lack of success in addressing what was perceived by many to be a time usage problem. Typical assessments ranged from 'semi-effective' to 'no change'; and 'some do not adhere to the rule' to 'no difference'. One junior high school instructor stated that attempts to make improvements usually resulted in the situation being 'better for a brief time and then it's back to business as usual'. A similar circumstance is described in this brief narrative by a high school teacher blaming the school's administration:

> As we planned for our first year of 4 X 4 block our faculty agreed unanimously that we wanted no interruptions that weren't absolutely necessary. We scheduled school pictures to be taken on orientation days prior to the opening of school. Representatives of the companies dealing with senior rings, invitations, etc. were scheduled only during lunch break. Club meetings could only be held before school, at lunch, or after school. Announcements over the P.A. system were minimal and were delivered only during the first or last 5 minutes of a class period. It was heaven!
>
> Our administration changed and things deteriorated to the old way. It is a source of great frustration to the teachers who are conscientious about their classes.

Some other teachers squarely targeted school administrators for their 'lack of organisation', which had reportedly allowed conditions of time wastage to deteriorate to unacceptable levels.

Many survey respondents were eager to provide advice on how to improve the learning environments of their schools, by adopting and enforcing stronger policies with respect to class time encroachments. This middle school teacher made the following statement about intercom announcements:

> Announcements during the day should be made at the end of class periods unless it is an emergency and only to the classes necessary – not to all classes. Many announcements only pertain to the 7th and 8th grade so why interrupt the 5th and 6th?

This elementary teacher seemed equally frustrated with unfavorable intercom announcement practices:

> I would like to see morning announcements begin promptly at 8:00, not at 8:20 when I have already begun teaching and must stop in the middle of my lesson for what seems an eternity.

Others suggested that classroom phone systems equipped with voice mail capacity would help limit unnecessary interruptions and permit teachers to deal with non-emergency matters at appropriate times. Several more suggested exercising greater control over students using the corridors, and reducing noise levels when teachers move groups of students during instructional periods. One recommended that scheduling faculty meetings more frequently would reduce the need for teachers to pass along bits of organisational information to each other at inappropriate times. A teacher-librarian lamented that she, like others in her position, is expected to juggle teaching, clerical work and technology duties simultaneously, and recommended that the district allow more 'flexible scheduling' of library hours to avoid this.

Discussion

The quantitative and qualitative data gathered from the 56 Louisiana teachers from eight districts and 42 schools who completed the questionnaire addressing aspects of externally imposed classroom interruptions are not, in isolation, sufficient to draw firm conclusions. However, combined with the findings of similar studies I undertook in Canada, and which together involved approximately 500 teachers and 600 different schools (Leonard 1999, 2001), they indicate that the problem of instructional time wastage by factors typically beyond the control of the classroom teacher has a certain form and is current in occurrence.

The nature of classroom interruptions and their attributed impacts were remarkably similar across jurisdictions. In each of the survey-based investigations, the school intercom was named by approximately 80% of respondents as a regular source of intrusion upon instructional time. In Louisiana and Saskatchewan, additional identified major interlopers included other teachers and students not assigned to the particular class, parents and other outside visitors, and administrative and clerical staff.

For some teacher respondents, class time interruptions did not seem to present a problem; they were considered a necessary characteristic of school life and essentially harmless. For the majority of respondents, however – and again in both jurisdictions – their effect was deemed a source of concern and frustration. The origins of the interruptions did not appear to concern teachers as much as their timing and frequency. Many spoke of repeated incidents where the attention of students and teachers is being drawn away from the

class subject or activity at hand toward the distracting event. As one female teacher stated: 'Interruptions are never at an opportune time', while a male colleague chastised that 'they are never welcome or in any way productive to the learning process'.

There is little doubt that many incidents encroaching upon instructional time are necessary, and others – while not always imperative in nature – are brief and have rather innocuous consequences. These types of intrusions did not appear to cause the consternation displayed by many of the participant teachers. Indeed, my related study (Leonard 1999), incorporating more than 90 periods of classroom observation over several months in more than 20 schools, determined that very few classroom intrusions could be characterised as of immediate importance to the classroom inhabitants, and relatively few seemed to cause little or no distraction to the students, teachers and instructional activities. In particular – as echoed by the most recent Louisiana data – generalised public address announcements relevant to only select teachers, students or classes were being regularly communicated throughout the schools.

Although the collated Louisiana data signify some variations in interruption sources with respect to school type and size, there is no apparent definite pattern, and this may be attributed to the limited number of respondents in certain categories. Nonetheless, it is evident that other staff members and parents tended to be more frequent interlopers in primary and elementary classrooms than those of higher grades. Conversely, school administrators appeared more likely to interrupt class sessions in middle schools as well as junior and senior high schools than in lower grade schools. These findings are consistent with data collected on the Canadian schools. However, the Saskatchewan data indicated that incidents generated by outside students occurred more frequently as grade levels rose. This pattern was not wholly evident in the Louisiana study.

Perhaps the most notable difference in the American and Canadian results is, however, that considerably higher proportions of teachers in Louisiana reported at least 3–4 interruptions in a typical day (79.6% of respondents versus 54.0% in Saskatchewan). This would seem to indicate that, while the sources of intrusions on instructional time were quite similar across the jurisdictions, the severity of the problem may be more pronounced in the Louisiana schools. This is particularly disturbing in terms of the conclusion reached in an earlier study: that teachers tend to underestimate the actual number of daily intrusions into their class space (Leonard 1999)[2]. In any case, it is apparent from the current and earlier research that time wastage due to unnecessary class interruptions may be a fundamental problem in public schools.

Conclusions and implications

The findings of the American and Canadian studies of externally imposed classroom interruptions provide irrefutable evidence that, at least for some teachers, a significant problem exists – the consequence of which is a less than optimal teaching and learning environment. Interestingly, a disparate

recognition of the actual and potential negative outcomes of these prevailing conditions is apparent.

A number of surveyed teachers in both countries outlined measures undertaken in their schools to prevent the unnecessary erosion of instructional time. These respondents had high praise for the organisational and leadership skills of administrators, as well as the common resolve of faculty to adopt and implement policies that reflected a clear valuing of the core technology of schooling: the teaching and learning processes in the classroom.

Many other teachers were unmistakably annoyed and exasperated that they were subject to deleterious conditions they felt they had little or no power to remedy. They repeatedly pointed to prevailing school cultural norms and inept or indifferent administrators as the central root of the circumstance. Indeed, the high incidence of teacher and administrator interruptions signifies that not only were they seen to be doing little to overcome the problem, they were contributing to its potency. The greatest harm may obviously be perpetrated in these schools, where students and teachers are regularly denied the opportunity to engage in the education process under optimal conditions – at least in terms of maximising instructional time without unwarranted outside interference.

Cultural norms exert considerable force on routine practices in any organisation (Fullan 2001; Lambert 1998; Schein 1992). However, when customary behavior is actually detrimental to the performance of the organisation and its goals, then it is the responsibility of its members to undertake appropriate measures to correct damaging behaviors (Leonard & Leonard 2001; National Commission for Excellence in Education 1983; Short & Greer 1997; Snowden & Gorton 1998). In schools where the prevailing practice is to encroach habitually upon instructional time through varied and frequent interruptions that erode allotted class periods, deliberate and resolute intervention is clearly desirable.

While all teachers and support staff should share responsibility for promoting optimal learning conditions, it is primarily the administration of any given school – in particular the principal – who must shoulder the main burden of accountability (Maehr & Midgley 1996; Speck 1999). Authentic instructional leaders actively and consistently adopt policies and model behaviors that clearly demonstrate what is most prized; similarly, poor instructional leaders also communicate what is not genuinely prized. Allowing thoughtless, frequent intrusions into the learning environment is an overt illustration of the latter.

Adjudicating what constitutes important and contributory interaction with classes of teachers and students is unlikely to impede the creation and maintenance of professional learning communities. Indeed, especially in those schools where instructional procedures and student learning outcomes continue to lag behind expectations, it is likely to have the opposite effect. The emergence of schools as authentic learning communities requires new forms of shared leadership that are visionary and inclusive (Fullan 2001;

Green 2001; Hord 1997). It does not, however, displace the need for leaders who place strong emphasis on the central objective of optimal student growth. As many of the teachers who participated in this research seem to strongly signify, curbing the gratuitous erosion of instructional time is one potent way that school leaders may work toward achieving that goal.

Notes

1. Schools were categorised as 'high schools' when they included other grade levels as well.

2. In-class observations undertaken by Leonard (1999) extrapolated typical classroom interruptions to average approximately 12 daily and 2000 total yearly incidents across all school types and sizes.

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