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Erosion of Instructional Time: Teacher Concerns

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ABSTRACT In an era in which schools are expected to achieve more for their students many teachers remain frustrated by the increasing results-driven demands made upon them. They sometimes lack the types of controls that allow them to harness both their own energy and that of their students. This article addresses a facet of teacher worklife in which many feel disempowered: the regular infringement of outside intrusions into the classroom learning environment. A stratified random-selection of teachers in the Canadian Province of Saskatchewan were surveyed regarding their experiences and feelings about such time-consuming episodes. The study was designed to provide supplementary data to an earlier investigation of the nature and frequency of externally-imposed classroom interruptions by attempting to ascertain their perceived impact. The results dramatically illuminate the extent of the problem as well as the array of teacher perceptions of and reactions to it.

Introduction

Persisting pressure to improve student learning demonstrated by measurable outcomes has prompted numerous structural and procedural reforms in public education. The past decade has repeatedly witnessed state education departments and local school districts struggling to identify the best formulae for balancing greater student achievement with new notions of accountability. Taxpayer resistance to further expenditures, however, has compelled those in positions of governance and administrative authority to find innovative ways of attaining higher goals with limited added resources. Consequently, making better use of what is currently available to educators has become a common credo in many jurisdictions, worldwide. For some, the obvious solution to the demand to do more with less seems to be in the better utilization of extant teaching and learning opportunities.

One considered manner of attempting to achieve the objective of more efficient schooling is to optimize instructional periods through the curtailment of class time wastage. This paper builds upon earlier empirical research reported by Leonard (1999) which determined that the consumption of class time by externally-imposed classroom interruptions is excessive and may be more extensive than even teachers themselves realize. Some educators consider the encroachment upon classes by elements beyond the perimeters of the classroom walls to be a non-issue and, consequently, tend to treat it with indifference or, for some, even with positive acceptance. For others, it is a circumstance that creates conditions considered to be near intolerable and clearly counter productive to schooling purposes. This report submits an array of teacher viewpoints and provides strong additional evidence that, in many schools, a serious problem persists.

Instructional Time and School Effectiveness

Students of the school effectiveness movement which developed from the heightened 1970s resolve to recognize the potential success of *all* students are familiar with the conflicting research of the period addressing the extent of school influences upon student outcomes. Earlier postulates that schools have limited actual impact upon student outcomes (e.g., Coleman et al. 1966; Jencks et al. 1972; Bloom, 1974) gave way to other conceptions of school effectiveness which strongly challenge that position (e.g., O’Rielly, 1975; Moos, 1979; Walberg, 1988, Levin & Nolan, 1996).¹ However, whether or not the amount of instructional time made available in schools is sufficient as well as the nature of its usage continues to foment considerable debate. For instance, after an extensive search of the literature, Freeland (1980) concluded that “research in recent decades has confirmed that added instructional time does not always lead to intended results” (p. 11). A decade later -- and following another relevant literature review -- Cotton (1990, as cited in Nelson 1990) was similarly skeptical about a positive correlation between time expenditure and student learning outcomes. Furthermore, but with the possible exception of at-risk students, the Virginia State Department of Education (1992) contended that most field studies lacked “sufficient rigor to draw causal relationships about the cumulative, long-term effect of altering instructional time” (p.84). Notwithstanding these conclusions, there are those who strongly profess the opposite to be the case.

For Kuceris and Zakariya (1982), time on task is considered to be the most effective tool schools have available to them to ensure student achievement. That supposition was clearly

¹ For a more extensive discussion of the research about the effect of schools on student outcomes see Leonard (1999) and Saurez, Torlone, McGrath, and Clark (1991).

apparent in a 1993 report issued by the National Center for Education Statistics (NCES, 1993) in which the effective use of classroom time was said to be the singularly greatest influence on student learning opportunities and outcomes. Moreover, the alleged lack of rigor in time-and-learning studies was repudiated by Levin and Nolan (1996). They were unequivocal that “there is a statistically positive relationship between time devoted to learning and scores on achievement tests” (p. 105). Nonetheless, simply increasing the amount of instructional time available may be insufficient and equal attention may need to be given to the actual *use* of that time.

For instance, Moore and Funkhouser (1990) contend that “gains in student achievement are likely to occur when increases in instructional time are combined with effective teaching practices and curricula that are tailored to learning needs” (p. 16). Or, As Levin and Nolan (1996, p. 106) put it: “Spending more instructional time with a poor teacher or on poorly devised learning tasks will not increase student learning.” A review of three studies undertaken by Nelson (1990) also concluded that sound teaching methods and classroom techniques must be used in conjunction with additional allocated time. Since for reasons pertaining to fatigue, staffing costs, family vacations, and student employment opportunities, school authorities are reluctant to expand either the length of the instructional day or the academic year, the obvious option would be to make more effective use of the instructional time already available (Leonard, 1999). Creating such an imperative is, however, unlikely without first establishing that prevalent circumstances are unacceptable.

Use of the School Day

Over the years, there have been a number of published reports addressing the time disposition of the typical school day. An apparent problem with time wastage in public schools seems to have

endured through much of the 20th century. Gilman (1973) replicated a 1920s excursion by educational innovator Sidney Pressey to his daughter's elementary school and, as in the earlier investigation, determined that much of the school day was wasted on organizational inefficiencies coupled with teacher and administrator mismanagement. Later, Gilman and Knoll (1984) determined that about 60 percent of the typical high school day was consumed by non-instructional events such as class transitions, recess and lunch periods, and non-academic activities. Similar conclusions were reached by Boyer (1983), Goodlad (1984), and the Virginia State Department of Education (1992). Earlier, an intensive study using randomly-selected observation methods and involving a much larger number of schools was undertaken by the Austin Independent School District (Hester & Ligon, 1980). The investigators determined that between only 47 percent and 50 percent of the typical student's six and one-half hour day was used for instructional activities. By undertaking measures to reduce time permitted for managerial and non-instructional activities the Austin school system was able to reclaim an average 23.5 minutes per school day -- a figure which translates into as much as 16 full instructional days per school year.

Concerns about the use or mis-use of class time continue to be expressed in the literature. For instance, Levin and Nolan (1996) note that the amount of time spent on instruction can vary widely from class to class and school to school -- much of it as a direct consequence of system, teacher, and administrator policies. Ranallo (1997) contends that only a portion of allotted time becomes productive instructional time as much of it continues to be "absorbed by assemblies, special events, timetable adjustments, unexpected interruptions, discipline matters, etc."(p. 64). Similar concerns are expressed by Seeman (1994, p. 115) who attributed much time wastage to

“bad or loose school rules” as policies permit such time-consuming episodes as fund-raising, outside noises, and classroom intrusions. An example of such asserted administrative mispractices were outlined in a report originating in Texas (Lutz & Lutz, 1987). The authors submitted that the local school board deliberately circumvented state-mandated time requirements in order to provide for athletic practices and games which removed students from the classroom for lengthy periods. Such administrative policies and organizational norms act to extricate much of the control that teachers might otherwise have over their classes and how their instructional time is expended.

Erosion of Instructional Time

Few published studies have actually attempted to determine the nature and extent of externally-imposed classroom interruptions. Lysiak (1980) placed outside disruptions into two distinct categories: planned and unplanned. *Planned* interferences included such things as pep rallies and assemblies while *unplanned* interferences were comprised of such events as public address announcements and students and adults coming into the classroom. While planned interruptions consumed “large amounts of time”, the unplanned variety, depending upon the class context, ranged from no time to 27 minutes (p. 14). Furthermore, Lysiak determined that as grade levels increased so did the amount of time consumed by both categories of interruptions. Without citing specific time estimates, Ranallo (1997) argued that the ratio of *engaged time* (time on task) to *allotted instructional time* (formally scheduled time) in schools was “often shockingly low”. He argued that concerted efforts should be made to maximize students’ engaged time by several strategies, including “not interrupting students who are working” (p. 64).

Limiting the number of intrusions into the classroom setting is essentially protecting the

learning environment (venue where instruction and learning occurs) from potential negative impacts of the *supporting environment* (the sociophysical systems which surround the learning environment). Tessmer and Harris (1992) contend that the “environmental press” of this “surrounding influence” can have a powerful effect on student learning and behavior. Whether educators are aware of these conditions -- or even if they choose to disregard them -- they suggest that the capacity exists for deleterious outcomes. They use the following analogy:

To ignore the environment when planning instruction is like ignoring the weather when planning a picnic: you can plan a ‘perfect’ picnic without considering the weather and blame the weather if it rains on your picnic, but your picnic is still a failure because you didn’t consider the weather! (p. 18)

The extent and nature of environmental or external intrusions into the classroom setting was the subject of a study conducted by Leonard (1999). Using direct observation research methodology in a dozen schools in three school districts in Western Canada, it was calculated that the typical class was interrupted by outside sources approximately 12 times per day or 2,000 times per school year. These frequencies were found to be substantially higher than even teachers themselves estimated. Particular sources and frequencies of the interruptions tended to vary somewhat over school size and type with high schools and those with larger enrollments being inclined to experience greater numbers of interferences emanating from outside the classroom. Overall, other students, teachers, and the intercom were found to be the greatest interlopers. The research described in this paper was designed to provide additional evidence about the nature of class interruptions and how teachers perceive them to impact upon them and their students.

Research Method

The preceding review of the literature presents strong evidence that the wastage of instructional time in many schools is an on-going problem which may severely inhibit learning opportunities for students. The study detailed here was designed to expand upon recent research undertaken and reported in Leonard (1999) about one major category of class time erosion, to wit: externally-imposed classroom interruptions. The intent was not only to gather more data about the nature and extent of the problem but also to achieve a fuller understanding as to its impact, particularly from the perspectives of teachers themselves. For those purposes, a stratified sample of 1,000 classroom teachers (500 from rural schools, 500 from urban schools) out of a total of approximately twelve thousand in the Province of Saskatchewan were randomly selected to complete in a survey questionnaire. Teachers to whom the surveys were mailed for self-completion were employed in 472 different schools including all common configurations, that is: primary, elementary, middle, secondary, and all-grade schools². A total of 557 or 55.7 percent of the surveys were completed and returned to the researcher.

Appropriate procedures were undertaken to collate the data in terms of the frequencies, sources, and perceived impacts of the externally-imposed interferences of class pedagogical proceedings. For the purposes of this report, the terms 'interruption', 'intrusion', 'interference', 'disruption', 'impingement', and 'encroachment' are used more or less interchangeably and are defined essentially as any occurrence, episode, or happening which breaks the planned flow or continuity of a lesson. External or extraneous interruptions are considered to be those which

² There were only three exclusively middle-grades schools (i.e., grades 6-8) within the researched population. Consequently, respondent data from those schools were combined with the elementary designation data (i.e., grades 4-8).

originate from outside the classroom or class group. As they are largely considered to be a matter of classroom management practice, this study did not address disruptions which originated from within the confines of the classrooms themselves. A discussion of the findings is presented below.

Presentation of the Data

The 557 randomly-selected teachers who responded to the survey questionnaire addressing aspects of externally-imposed classroom interruptions were asked to indicate the typical daily number of such occurrences. Response options ranged from 'not at all' to '7 to 8 times' to a specified 'other'. The largest single proportion of respondents (39.7%) indicated that they experienced between one and two intrusions per day (see Table 1).

[INSERT TABLE 1 APPROXIMATELY HERE.]

This was followed by '3 to 4' (34.8%) and '5 to 6' occurrences (13.2%). Combined, more than half (54.0%) estimated their classes were interrupted from the outside at least 3 to 4 times each school day. There was noticeable consistency across class grade levels as 54.3 percent of each of elementary and high school teachers fell into this frequency category while 51.8 percent of primary teachers made a similar report. However, the data indicates that high school classes were considerably more likely to experience more frequent interruptions (i.e., at least 5 to 6). Twenty-five percent of the secondary school teachers reported this high rate compared with approximately 15 percent of the lower grades schools. Table 2 provides a break down of the estimated frequency of externally-imposed classroom interruptions by school type.

[INSERT TABLE 2 APPROXIMATELY HERE.]

As Table 3 illustrates, the school public address system or ‘intercom’ was by far the most often attributed source of externally-imposed classroom interferences. With four out of five teachers (80.2%) reporting that their classes were regularly imposed upon by ‘intercom’ communications, it more than doubled (36.9%) the second highest rate of ‘message delivery’. Slightly less than one-third (31.7%) of the respondents referred to unspecified ‘visitors’, other ‘teachers’ (16.2%), and other ‘students’ (14.6%). Additional named interruption sources included ‘parents’ (11.4%), the ‘telephone’ (10.9%), and school ‘administrators’ (8.2%). Less frequently identified intrusion sources included ‘deliveries’, calls to ‘school assemblies’, ‘student council activities’, loud ‘hallway noises’, and ‘safety drills’. Appendix A contains a complete summarized listing of the teacher-identified sources of externally-imposed classroom interruptions.

[PLACE TABLE 3 APPROXIMATELY HERE.]

The data clearly reveal that there was wide variation in how teachers perceived the impact of the encroachments upon them and their students. In response to the open-ended survey question regarding the impact of the interruptions, more than half of the respondents (56.5%) indicated that they considered the intrusions to be of a serious negative consequence while slightly more than a third (35.8%) reported that they had little or no manner of effect. Another 6.5% contended that the impact of such intrusions were highly contingent upon contextual

factors such as the nature of intrusion, the particular class involved, and the point in the scheduled lesson where of the encroachment occurred. In summary, the range of recorded reactions to the interruptions ranged from near indifference to vigorous indignation.

The six individuals who chose to view extraneous impingements in a more positive deportment wrote of the need for schools to maintain open lines of communication and to promote a collaborative learning environment. As this female elementary teacher of more than 20 years experience put it: “We welcome anyone to our room and involve them in whatever we are doing. They are simply a part of the class day.” Another elementary teacher saw such activities as fund-raising during class time as being an obligatory component of school life:

Although these interruptions occur, they are necessary as it is important to remain informed and working towards common fun [activities] and fund-raising goals foster school community spirit.

One male high school teacher even looked upon outside encroachments as “welcome breaks”. However, and as will be apparent from the data presented later, the sanguine sentiments of these teachers were not shared by the vast majority of respondents.

As noted above, more than one-third of the classroom teachers reported that externally-imposed interruptions had minimal or no impact upon instructional proceedings. As this newer female teacher at a small all-grade school contends, appropriate measures can be taken to lessen the potential consequences:

There aren't enough to be a problem. Some interruptions occur, however students learn how to deal effectively with interruptions and how to keep going once the interruption has been removed.

Another primary grades teacher put it in a similar fashion:

My kids are used to it! They just keep working or listening. They are taught to ignore [them] -- and they are usually short interruptions.

Thirty-five of the 554 randomly-selected teachers who responded to the question about the impact of the encroachments suggested that the class context was a pivotal factor. They spoke of such variables as the nature of the class group and the subject matter being addressed as well as the actual placement of any given intrusion in terms of the class period and of the school day. As this female primary teacher put it: "I'm used to it. Sometimes they are more inconvenient than others. It depends on what we are doing at the moment." This male secondary teacher seemed to largely concur: "I've never liked them. Depending on what I'm doing they can be very disruptive or not disruptive at all." This person saw them as being sometimes problematic but, yet, as necessary adjuncts to school life:

It happens so regularly I almost expect it. It can be very distracting -- especially on a hard to settle class, but we take it in stride. We're not just a classroom on its own and in order to promote school community most of these interruptions are needed.

Such tolerant viewpoints were relatively few, however, as most respondents were more definite on how they viewed such occurrences: they were either considered to have no bearing upon regular class proceedings or they were deemed to be largely unbearable. A few respondents noted that the staffs at their schools had made efforts to reduce the effects of classroom

intrusions by such measures as having the secretary screen calls or by scheduling intercom announcements near the beginning or end of class periods. One recommended that posting a 'do not disturb' sign on the classroom door may have the desired outcome.

Despite the noted potential for reductions in the number and influences of episodes on externally-imposed classroom interruptions as well as for the capacity of others to perceive them to be necessary and even beneficial components of school life, more than half (303 out of 554) of the total number of responding teachers viewed them as being seriously problematic. They spoke forcefully of how students are distracted from their work, how teachers have to reteach material, and how classes are required to attend to what often proves to be superfluous matters. With respect to irrelevancies, this comment by an elementary teacher who estimated seven to eight interruptions of her class daily was representative of several others:

Constant P.A. announcements that aren't even for the students.

They are for the janitor or to announce staff meetings or any other thing the principal doesn't want to walk around to do. It's very disruptive and irritating. Gets us off track. Students can't concentrate and forget [the] train of thought. I get frustrated because we have to stop to listen on the off chance it might be directed at us.

Many others -- such as this female high school teacher of more than 20 years -- also spoke of being frustrated by the continual erosion of instructional time:

They create gaps in learning -- diminish time on task, short circuit important developmental time, particularly in skills subjects. They also mean teachers have to speed up to cover material because they have less time. Slower students get left behind. Also, there is no time to do any "fun" stuff that keep weaker students motivated.

The loss of focus for both students and teachers was a recurring expressed concern. One respondent with a telephone situated in her classroom reported that students receive at least "seven" calls a day -- and are often required to leave the classroom afterward. Getting some students, particularly those with special needs, refocused on their tasks was considered to be major problem for some teachers. As this primary teacher noted:

ADHD children act up. Autistic children become over-stimulated or fearful. I have to stop and look for material for others so I have to review the lesson in progress and then carry on.

Others spoke of the difficulties that such distractions created in terms of getting through planned lessons in the time allotted. As this comment illustrates, unscheduled visitors were seen as particularly burdensome:

I plan on so many minutes and a long interruption means I may not finish something or be able to end the way I planned. Parents may want to ask me questions in the hall. That may leave 25 kids with nothing to do until I return. I like to know when kids will leave so I can plan for it. It is basically saying: Whatever is going on in the

classroom is not as important as anyone else who wants to interrupt.

The sentiments of the majority of these teachers might be summarized by two teachers; one all-grade school female teacher stated that “interruptions are never at an opportune time” while a veteran male high school counterpart chastised that “they are never welcome or are in any way productive to the learning process.” Those points will be further addressed in the concluding section.

Discussion and Conclusions

The data presented in this report clearly illustrate that externally-imposed classroom interruptions are a major concern for many teachers. Almost all (98.4%) of the 557 randomly-selected Saskatchewan teachers who responded to the survey indicated that they experience interferences from outside the physical parameters of the classroom. In terms of Tessmer and Harris (1992), this could be stated in terms of the *supporting environment* encroaching upon the domain of the *learning environment*. Of course, almost half of the teachers (46%) reported that they experience such interruptions only twice or fewer times daily. Of the remaining respondents, slightly more than a third (34.8%) reported intrusions of 3 to 4 times daily with the remaining 19.2% estimated at least 5 to 6 such occurrences. With four out of five teachers naming it, by far the most frequently noted source of class interference was the public address system or ‘intercom’. This was followed by the identified sources of ‘message delivery’, ‘unspecified visitors’, ‘other teachers’, ‘other students’, ‘parents’, and the ‘telephone’ (see Table 2). While there was wide variation in the reported impact these interruptions made on classes, more than half indicated that they considered them to constitute a serious problem. These

teachers were often very ardent in their written expressions of the damaging effects of these intrusions, particularly in terms of how they distracted students and squandered instructional time.

In the earlier study on this subject, Leonard (1999) concluded that teachers may underestimate the number of times their classes are actually intruded upon from the outside. Direct classroom observations in a dozen schools in three school districts determined that the average interruption frequency was twice that considered to be the case by teachers themselves and that the typical class experienced external interference almost 12 times per school day or 2,000 times per school year. Leonard suggested that, over time, many teachers may become “insensitive” to classroom intrusions and that the problem may be more trenchant than even teachers themselves fully realize (p. 468). If those earlier research conclusions are valid, the reported frequencies of external interruptions in this study, though disquieting, may also reflect conservative estimations and, consequently, a problem that remains substantially underrated.

The Leonard (1999) study also concluded that many teachers find such circumstances to be wholly counter productive to the established goals of schooling. For Leonard, the solution lay in concerted efforts to formulate policies at both the district and the school levels that clearly acknowledge when such a problem exists and then to set about implementing and monitoring planned corrective actions:

If instructional time is indeed considered to be sacrosanct, it needs to be more apparent through appropriate policies and actions that protect students and their teachers from unjustified interferences so that they can best get on with the task that under ideal conditions is

inherently demanding and fraught with uncertainties. (p. 472)

The underlying philosophy of such proposed policies would be that every effort should be expended to create the kind of learning environment that optimally nurtures student learning. Schools that are firmly learner-centered are “distinguished by practices, structures, and policies that promote motivation, learning, and achievement for *all* students” (McCombs & Whisler, 1997, p. 131). In particular, teachers of at-risk students or those students with special needs were among the most vocal in their derision of prevailing interruptive practices. Loss of focus by these students, they said, simply meant that they tended to get “left behind” or “become over-stimulated and fearful.” McCombs and Whisler suggest that schools should be organized around conceptions of time use that are promulgated on what is best for students rather than on adult convenience.

While policies establishing the importance of appropriate time usage can provide direction and support for those at the school-site level, it is at the latter that the daily routines and patterns of practice are embedded in cultural norms. Notwithstanding that recent years have increasingly witnessed the move toward empowered school learning communities, it is still the principal who continues to play a critical role in maintaining an orderly and academically-focused school environment (Stringfield & Teddlie, 1991; Ysseldyke, Christensen, & Thurlow, 1987). A report compiled by the Virginia State Department of Education (1992) addressing the interaction between instructional time and student learning called for school administrators to refocus the scheduling of instructional practices with greater sensitivity to learning needs:

Educators and others agree that management of allocated times is of the utmost importance in assuring productive student learning. School administrative and instructional practices influence the use of scheduled time for student instruction. Practices that foster student effort and match student learning needs with instructional tasks enhance student productive learning. (P. 83)

The research into one component of time usage reported here strongly suggests that many teachers continue to feel that outside forces prevent them from optimally meeting the needs of their students. Almost everyone recognizes that there are important matters that, by necessity, must encroach upon instructional time. It is the deliberate and persistent restriction of those class intrusions to those which are indeed imperative that may provide a feasible solution. That conclusion was also reached by Stuck and White (1992) following their investigation at 13 school sites across the State of North Carolina as they recommended that school-wide strategies be adopted to curtail classroom interruptions by reducing or eliminating external distractions.

While newer conceptions of learning communities may encourage regular interaction between groups and individuals as a daily part of the collaborative culture (Leonard & Leonard, 1999), many or most of the interruptions identified by the surveyed teachers did not seem to be of that nature. Rather, they were largely characterized by routine notices and unwanted visitations during scheduled instructional periods. Some teachers reported that they considered these episodes to be largely innocuous, while any others clearly harbored exigent resentment toward both the nature and frequency of the external impositions. The evidence suggests that, on

at least one level, the issue is largely contextual in that classes and their teachers may respond very differently to similar happenings. In effect, teacher-registered reactions clearly ranged from that of casual indifference to that of explicated indignation. Realization of optimal standards of the learning environment would seem to compel that professional educators attempt to reconcile these apparent incongruencies of what constitutes 'best practice'.

Notwithstanding the recorded perceptual variances in both the study described here and the earlier Leonard (1999) empirical research, there are many schools which have adopted policies that strongly reinforce stated philosophies about the importance of protecting the learning environment; others clearly have not -- or, at least, have failed to act upon them. It is at these schools that time erosion and teacher frustrations are likely to be more prevalent. It is also more probable that such schools are failing to maximize learning opportunities for their students and, consequently, may be struggling to meet those prevailing demands for improved outcomes.

References

- Bloom, B.S. (1974). Time and learning. American Psychologist, 29(2), 682-88.
- Boyer, E. L. (1983). High School: A Report on Secondary Education in America. New York: Harper & Row, Publishers.
- Coleman, J., Campbell, E., Hobson, C. McPartland, J., Mood, A., Weinfeld, F. and York, R. (1966). Equality of educational opportunity. Washington, D.C.: U. S. Government Printing Office.
- Freeland, K. (1980). Have you seen Comenius lately? Morehead, IN: Morehead State University. ERIC Document ED 202 778.
- Gilman, D. (1973). One problem: Inefficiency is a big waste of time. Junior and Middle School Bulletin, Winter, p.5.
- Gilman, D. and Knoll, S. (1984). Increasing instructional time. What are the priorities and how do they affect the alternatives? NASSP Bulletin, 68(470), 41-44.
- Goodlad, J.I. (1984). A Place Called School: Prospects for the Future. New York: MacGraw-Hill Book Co.
- Hester, J. and Ligon, G. (1978). Where does the time go? A study of time use in public schools. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, March 27-31. ERIC Document ED 153 307.
- Jencks, C., Smith, M., Acland, H., Bane, M., Cohen, D., Gintis, H., Heyns, B. and Michelson, S. (1972). Inequality: A reassessment of the effect of family and schooling in America. New York: Basic Books.

- Kuceris, M and Zakariya, S. (1982). Time on task: Using instructional time more effectively.
Arlington, VA: American Association of School Administrators.
- Leonard, L. (1999). Towards maximizing instructional time: The nature and extent of
externally-imposed classroom interruptions. Journal of School Leadership, 9(5), 454-
474.
- Leonard, L. and Leonard, P. (1999). Reculturing for collaboration and leadership. The Journal of
Educational Research, 92(4), 237-254.
- Levin, J. and Nolan, J. (1996). Principles of classroom management: A professional decision-
making model (2nd ed.). Needham Heights, MA: Allyn & Bacon.
- Lysiak, F. (1980). Time utilization study: Classroom observation 1979-80. Fort Worth, TX: Fort
Worth Independent School District, Texas Department of Research and Evaluation
- Moore, M. and Funkhouser, J. (1990). More time to learn: Extended time strategies for Chapter
I students. Washington, DC: U.S. Department of Education ERIC Document 317 279.
- Moos, R. (1979). Evaluating educational environments. San Francisco: Jossey-Bass.
- McCombs, B. and Whisler, J. (1997). The learner-centred classroom and school: Strategies for
increasing student motivation and achievement. San Francisco, CA: Jossey-Bass
Publishers.
- NCES. (1993). Time in the classroom. Indicator of the month. Report Number NCES-94-398.
Washington, DC: National Center for Education Statistics. ERIC Document ED 367
667.
- Nelson, S. (1990). Instructional time as a factor in increasing student achievement. Portland,
OR: Northwest Regional Educational Laboratory.

- O'Rielly, R. (1975). Classroom climate and achievement in secondary school mathematics classes. The Alberta Journal of Educational Research, 21(?), 241-248.
- Ranallo, J. (1997). Student conduct management: The passionate side of teaching. Vancouver, B.C.: Eduserv.
- Saurez, T., Torlone, D., McGrath, S. And Clark, D. (1991). Enhancing effective instructional time: A review of the research. Chapel Hill, NC: North Carolina Educational Policy Center, University of North Carolina.
- Seeman, H. (1994). Preventing classroom discipline problems: A guide for educators -- second edition. Lancaster, Pa: Technomic Publishing.
- Stringfield, S. and Teddlie, C. (1991). Schools as affectors of teacher effects. In Effective Teaching: Current Research, Waxman, H. and Wahlberg, H. (Eds.), Berkeley, CA: McCutchan Publishing, 161-179.
- Stuck, G. and White, K. (1992). Maximizing time to teach and time to learn. Chapel Hill, NC: North Carolina Educational Policy Research Center. ERIC Document 373 402.
- Tessmer, M. and Harris, D. (1992). Analysing the instructional setting: Environmental analysis. London: Kogan Page Ltd.
- Virginia State Department of Education. (1992). Instructional time and student learning: A study of the school calendar and instructional time. ERIC Document ED 356 555.
- Walberg, H.J. (1988). Synthesis of research on time and learning. Educational Leadership, 45(6), 76-85.
- Ysseldyke, J., Christenson, S., and Thurlow, M. (1987). Instructional factors that influence student achievement: An integrative review. Monograph, Instructional Alternatives Project. University of Minnesota ERIC Document ED 303 977.

Table 1: Frequency of externally-imposed classroom interruptions as reported by randomly-selected teachers (N=557).

| Estimated Daily Interruptions | Number Reporting | Percent of Total |
|--------------------------------------|-------------------------|-------------------------|
| not at all | 9 | 1.6 |
| less than 1 | 26 | 4.7 |
| 1 - 2 | 220 | 39.7 |
| 3 - 4 | 193 | 34.8 |
| 5 - 6 | 73 | 13.2 |
| 7 - 8 | 27 | 4.9 |
| more than 8 | 6 | 1.1 |

Table 2: Percent of teachers estimating frequency of externally-imposed classroom interruptions by school type (N=557).

| Grade Level | Estimated Number Daily Interruptions | | | | | | |
|--------------------|--------------------------------------|-----|------|------|------|-----|-----|
| | None | <1 | 1-2 | 3-4 | 5-6 | 7-8 | >8 |
| | % | % | % | % | % | % | % |
| Primary (K-3) | 2.1 | 4.8 | 41.3 | 36.6 | 13.1 | 2.1 | 0.0 |
| Elementary (4-8)* | 2.0 | 5.4 | 36.8 | 38.7 | 11.3 | 3.9 | 0.4 |
| High School (9-12) | 1.0 | 3.9 | 40.0 | 29.3 | 15.1 | 7.9 | 2.0 |

* Includes three middle schools (grades 6-8).

Table 3: Most common origin of externally-imposed classroom interruptions and number of times identified by surveyed teachers (N=557).

| Origin of Interruption | Number of Time Identified | Percent of Teachers Identifying |
|-------------------------------|----------------------------------|--|
| Intercom | 450 | 80.2 |
| Message delivery | 207 | 36.9 |
| Unspecified visitors | 178 | 31.7 |
| Other teachers | 91 | 16.2 |
| Other students | 82 | 14.6 |
| Parents | 64 | 11.4 |
| Telephone | 61 | 10.9 |
| Administrators | 46 | 8.2 |
| Student council activities | 37 | 6.6 |
| Assemblies | 31 | 5.5 |
| Student services | 25 | 4.5 |
| Extra-curricular activities | 21 | 3.7 |
| Fund-raising | 20 | 3.6 |
| Tardy students | 19 | 3.4 |

Appendix A: Summary listing of externally-imposed classroom interruptions as identified by the 557 randomly-selected teachers.

Sources of Externally-Imposed Classroom Interruptions

| | |
|----------------------------|-----------------------------|
| intercom | message delivery |
| unspecified visitors | other teachers |
| other students | parents |
| telephone | administrators |
| student council activities | assemblies |
| student services | extra-curricular activities |
| fund-raising | tardy students |
| fire drills | attendance sheets |
| bus safety drills | recycled paper pick-ups |
| hallway noise | deliveries |
| specialists | field trips |
| nurse/dentist visits | social workers |
| school photos | caretaker |
| driver education | power failures |
| flouride program | lunch orders |