

MINUTES OF THE HOUSE COMMITTEE ON EDUCATION.

The meeting was called to order by Chairperson Michael R. O'Neal at 3:30 p.m. on February 16, 1998 in Room 519-S of the Capitol.

All members were present.

Committee staff present: Ben Barrett, Legislative Research Department
Avis Swartzman, Revisor of Statutes
Cindy Wulfkuhle, Committee Secretary

Conferees appearing before the committee:

Bob Vancrum, Blue Valley School District
Sue Chase, Kansas National Education Association
Representative Sue Storm
Bill Medley, South Central Kansas Education Service Center
Jacqueline Hays, Lowman Hill Elementary School
Keith Anglemyer, Kansas Kindergarten Coalition
Jim Yonally, Shawnee Mission School District
Cob Allen, Humboldt School District
Linda Aldridge, David Brewer School, Leavenworth
David Winans, Assistant Superintendent Leavenworth Schools

Others attending: See attached list

Hearings on **HB 2805 - school district finance, definitions of pupil and enrollment, February 20 count, HB 2870 - school district finance, affecting the counting of pupils attending kindergarten, HB 2853 - school districts, fees for maintenance to full day kindergarten classes, and HB 2804 - school district finance, definition of pupil and enrollment,** were opened.

Bob Vancrum, Blue Valley School District, appeared before the committee as the sponsor of **HB 2805**. He commented that school districts such as Blue Valley have a large number of students transferring to the district after the September 20 count. This proposed bill would help fund those extra students. (Attachment 1) He also appeared in support of **HB 2870** because the Blue Valley school district has many two wage earners in each family and that there has been a growing number of parents requesting all day kindergarten. He believes that it is time for the state to provide funding for schools that wish to participate in full day kindergarten. (Attachment 2) Mr. Vancrum also supported **HB 2853** which would allow a school district to charge students who attend kindergarten. (Attachment 3)

Sue Chase, Kansas National Education Association, appeared in support of **HB 2805 & HB 2870**. She stated that by moving the second count to September 20 it would add to the resources for schools and that **HB 2870** would allow those school districts that would like to offer full-day kindergarten programs the ability to do so. Ms. Chase appeared in opposition to **HB 2853** and believes that those students who would benefit most from full-day kindergarten are those who are academically disadvantaged and those are the ones who would not be able to "buy into" the program. She was also opposed to **HB 2804** because all students who are enrolled in the district should be counted for state aid purposes. (Attachment 4)

Representative Sue Storm appeared before the committee as the sponsor of **HB 2870**. She informed the committee that the bill would not mandate every child attend an all day kindergarten or mandate that all districts provide the program but that any child who does attend would be counted for state aid. (Attachment 5)

Bill Medley, South Central Kansas Education Service Center, appeared in support of **HB 2870**. He stated that each school district should be able to provide full day kindergarten and be funded by the state. This bill would provide a good educational start for all children. (Attachment 6)

Jacqueline Hays, Lowman Hill Elementary School, provided the committee with an article entitled *Your Child's Brain*, in which findings show evidence that the extended-day program promotes the acquisition of skills and knowledge, and enhances self-confidence, independence and cooperation. She believes that all day kindergarten programs can go a long way towards providing the kind of language immersion that children need. (Attachment 7)

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON EDUCATION, Room 519-S Statehouse, at 3:30 p.m. on February 16, 1998.

Keith Anglemyer, Kansas Kindergarten Coalition, appeared before the committee as a proponent of **HB 2870**. The state currently offers only 20.4% of kindergarten students the opportunity to participate in full day kindergarten. He suggested that if the state cannot fully fund the program that a 5 year phase in would be an adequate amount of time to get the program running. (Attachment 8)

Cob Allen, Humboldt School District, appeared before the committee in support of **HB 2804**. He favored the first portion of the bill that would allow school districts to use their enrollment count in the preceding year or in the second preceding year, whichever is greater. He believes that this would benefit the smaller school districts. (Attachment 9)

Jim Yonally, Shawnee Mission School District, did not appear before the committee but requested that his written testimony be included in the minutes. (Attachment 10)

Hearings on **HB 2805, HB 2870, HB 2853, and HB 2804** were closed.

Hearings on **HB 2746 - school districts, inservice education funds, allowable expenses**, were opened.

Sue Chase, Kansas National Education Association, appeared before the committee in support of the bill. She explained that this bill would allow inservice funds for salary for time spent outside the regular school contract time. (Attachment 11)

Linda Aldridge & David Winans, Leavenworth School District, appeared before the committee as proponents of the bill. They felt that with the passage of this bill, districts would be able to utilize precious staff development time and dollars, while reducing the reliance upon substitute teachers. (Attachments 12 & 13)

Hearings on **HB 2746** were closed.

The committee meeting adjourned. The next meeting is scheduled for February 17, 1998.

HOUSE EDUCATION COMMITTEE GUEST LIST

DATE: February 14, 1998

NAME	REPRESENTING
Mark Tallman	KASB
Diane Gjerstad	USD 259
Bob Vancouver	USD 229
Janice Sellers	USD 501
David Winans	KSDC
Linda Aldred	USD 453
Carol Ouygen	Harris News Service
Janathy Beckfeller	L & WV
Don Ryan	USD 321 Row valley
Fern Bruno	Allen + Assoc.
Maureen Sharp	USD 501
OPAL BURNETT	USD 501 #
Stacey Farmer	KASB
Sue Chase	KIWEA
Ken Bahr	Hays, USD #489
Jim Langford	DDB
Sheryl Ohm	USD 465
Kristi McLaren	USD 465
Keith Angemyer	Kansas Kindergarten Coalition

TESTIMONY OF ROBERT VANCURUM,
GOVERNMENT AFFAIRS SPECIALIST,
BLUE VALLEY UNIFIED SCHOOL DISTRICT NO. 229

HOUSE BILL 2805 – OPTIONAL SECOND ENROLLMENT DATE FOR GROWING
DISTRICTS

The reason for this bill is fairly simple. Base state aid per pupil which is the bulk of funding provided to school districts, is determined for most school districts based upon one count of students conducted on September 20th of each year.

In a growing school district such as Blue Valley that has averaged well over 800 new students each school year for the last seven or eight years and expects to have the same kind of explosive growth, the count at the very beginning of the year certainly underestimates the operating budget necessary to operate for every year. There are many other growing school districts in the state that are not receiving full headcount reimbursement.

The requested bill would provide that any school district that chooses to do so may request a second count on February 20th. In the event such second count produces a higher number, the increase in enrollment would be counted for reimbursement under the formula for the rest of that year. This would in effect, reimburse the district with a higher number of students for the second semester. This bill would not have impact upon a district with declining enrollment. They would still have the option to use the September 20 count for the present year or the preceding year. In fairness, we should allow growing districts the option to receive the higher of two enrollment counts.

TESTIMONY OF ROBERT VANCUM,
GOVERNMENT AFFAIRS SPECIALIST,
BLUE VALLEY UNIFIED SCHOOL DISTRICT NO. 229

HOUSE BILL 2870 – FULL DAY KINDERGARTEN

Chairman and Members of the Committee:

I represent the Blue Valley USD. One of the policy positions taken by our school board and the Blue Valley Coalition of affiliated groups, is to support all means to expand our kindergarten program to a full day educational program. Studies have consistently shown that the primary years are the most important in a child's educational and intellectual growth, and certainly a good foundation for basic learning skills provided by a full day kindergarten would be a substantial asset to all children.

The Blue Valley community is largely composed of families with two wage earners and there have been increasing requests for the school district to offer full day kindergarten. Unfortunately, under the existing school finance formula, our operating budget has been capped and we have been at full 25% LOB since 1992. No other state or local funding is available for more than a ½ day kindergarten program, unless the school board were to take dollars away from some other child's educational experience in order to provide a full day kindergarten program. This is something the school district and its patrons are unwilling to do.

I believe it is time for the state to allow school districts who want to provide a full day kindergarten program to do so with full funding on a parity with first, second or third grade students. I am aware that this bill carries a substantial fiscal note. There have been some estimates ranging in excess of \$50 million per year.

We believe that educational enrichment for our very youngest children is probably the most efficient expenditure of educational dollars as a matter of actual return for dollars spent. We believe full day kindergarten is extremely important or I would not be here. Our first choice would clearly be for the Legislature to pass and fund this bill or SB498, a similar measure in the Senate. At a minimum, however, we would ask you to pass HB2853, which would allow a voluntary fee-based program. We wish to make it clear, however, that fee based programs will not work in all districts and we would truly prefer that every kindergarten child be given the opportunity to benefit from such a program.

::ODMA\PCDOCS\CWDDOCS\4949\1

TESTIMONY OF ROBERT VANCURUM,
GOVERNMENT AFFAIRS SPECIALIST,
BLUE VALLEY UNIFIED SCHOOL DISTRICT NO. 229

REIMBURSABLE FEES TO
SUPPORT FULL DAY KINDERGARTEN

HOUSE BILL 2853 – FEE BASED FULL DAY KINDERGARTEN

The Blue Valley School District is one of the fastest growing school districts in the State of Kansas because we encompass most of the rapidly developing residential areas in Overland Park and Leawood, Kansas. Most of our families are two wage earners. As such, many of our kindergartners begin instruction in the morning and then go into some kind of day care or private educational facility.

We are certain there is a strong demand for full day kindergarten in our area. Nevertheless, we have no ability to provide full day kindergarten unless the funds are being diverted from some other child's educational experience.

The bill would grant any school district that wanted to provide a full day kindergarten the authority to charge up to their actual costs of providing the program, such fees to be treated as reimbursements to the general fund. The program would be voluntary and fees assessed only if the child participates.

::ODMA\PCDOCS\CWDDOCS\4867\1



KANSAS NATIONAL EDUCATION ASSOCIATION / 715 W. 10TH STREET / TOPEKA, KANSAS 66612-1686

Susan Chase Testimony Before
House Education Committee
Monday, February 16, 1998

Thank you Mr. Chairman and members of the committee. I am Susan Chase and I represent the Kansas National Education Association. I am appearing before you on HB 2805, HB 2870, HB 2853, and HB 2804.

I would first like to address the issue of funding for full-day kindergarten. There are many reasons some school districts are offering or would like to offer full-day kindergarten programs. Parents often favor a full-day program in order to reduce the number of transitions kindergartners experience in a day. Research also shows that many children benefit academically and socially from participating in full-day programs, especially those students who are economically disadvantaged. Students in full-day programs exhibited more independent learning, classroom involvement, productivity in work with peers and reflectiveness, as well as higher academic gains.

It is for this reason that KNEA urges state support of full-day kindergarten programs and supports HB 2870.

It is also for this reason that KNEA does not support HB 2853. As the studies have shown, the students who gain the most from a full-day program are those students who are academically disadvantaged. By allowing districts to charge fees for extended programs, you are making it almost impossible for those students who need the program to take advantage of it. It leaves those districts that most need to offer full-day programs still unable to fund them.

KNEA also supports HB 2805 which allows a second count on February 20. Many districts in Kansas are experiencing growth in student enrollment during the school year. And for some, this growth is drastic enough to cause a significant need for additional resources. These resources would be used for things such as textbooks, equipment, furniture, classroom space, and teachers. By providing the second count on February 20, these districts would have the opportunity to obtain state aid for the necessary expenditures.

House Education
2-16-98
Attachment 4

Finally, I would like to address HB 2804. KNEA does not support the idea of capping the number of foreign exchange students that school districts can count for state aid purposes. We believe that all students who are enrolled in a district should be counted for state aid purposes. My experience as a teacher and host parent for foreign exchange students has proven to me that these students are very valuable to the students in their classroom as well as the school itself. They bring with them a set of experiences and insights that are very different from the rest of the students. The sharing of these is a wonderful learning experience for everyone. By not funding these students, we are sending a message that downplays their contributions to learning. We need to recognize them as an asset to the education in this state.

Thank you for allowing me to speak.



TOPEKA

HOUSE OF
REPRESENTATIVES

COMMITTEE ASSIGNMENTS

MEMBER: BUSINESS, COMMERCE, & LABOR
EDUCATION
HEALTH & HUMAN SERVICES

SUE STORM

REPRESENTATIVE, 22ND DISTRICT
JOHNSON COUNTY

8145 MACKEY

SHAWNEE MISSION, KS 66204

(913) 642-3121

STATE CAPITOL—272-W

TOPEKA, KANSAS 66612

(913) 296-7650

(DURING SESSION: 1-800-432-3924)

TTY 913-296-8430

KC AREA LOCAL CALL 782-5000

February 16, 1998

**Testimony before the House Education Committee
House Bill 2870**

Good afternoon Chairman O'Neal and colleagues. Thank you, Mr. Chairman, for scheduling this hearing on what I believe to be a very important matter worthy of consideration by this committee—that is, full funding for all day kindergarten in those schools which provide such a program. I appear before you today as co-sponsor of this bill.

Under the current school finance formula, a kindergarten student counts as .5, or as one-half a student, regardless of the length of that child's school day. Simply put, if HB2870 were to become law, a kindergartner attending school for a whole day would count as a whole child. Such a position seems logical.

The current formula may have been appropriate in 1992 when relatively few school districts offered all day programs. However, with the growing recognition of the value of early childhood education and, frankly, the needs of our families, practice has changed considerably in the last few years. By the 1995-96 school year, 113 schools, or 14.1%, offered all day kindergarten. In 1996-97, that number jumped to 152 schools, or 18.7%. That represents 6,731 kindergartners or 20.4%. I think we could conclude that more all day programs would be offered if funding were provided.

HB 2870 does not mandate that all children attend all day kindergarten, nor does it require districts to provide all day programs. It simply says that any child who does attend an all day program will be recognized and counted as an all day child.

I will leave it to other conferees to speak to the educational value of all day kindergarten because my expertise and experience are not in this area.

Clearly though, advocates for children realize that early pre-academic and age-appropriate academic programs for young children impact further success in their school lives. To that end, the legislature has supported Head Start, Parents as Teachers, and other early childhood programs and will consider increased funding this session. To then discourage schools from offering all day kindergarten by withholding funding does not appear consistent with our commitment to early childhood education.

I hope you can support House Bill 2870.

**STATEMENT IN SUPPORT OF HB 2870-Education Committee
February 16, 1998-For South Central Kansas Education Service Center**

Chairman O'Neal and Members of the House Education Committee of the 1998 Kansas Legislature, I appreciate very much the opportunity to appear before you this afternoon in support of House Bill 2870.

I am Bill Medley. I retired as a superintendent in 1994 and, since then, have volunteered my time to the members of the South Central Kansas Education Service Center as a legislative liaison. The SCKESC provides services to thirty- seven Unified School Districts ranging in size from Dexter and South Haven to Derby and Goddard.

Each year, the representatives of these USD's discuss possible legislation and develop a statement of legislative priorities. As you can expect, on many issues, members who represent USD's with such a diversity of enrollment will have to make some concessions to reach agreement. When it was suggested that SCKESC include increased funding of full day/every day kindergarten classes in the statement of legislative priorities, there was unanimous agreement.

Research supports that full day/every day kindergarten classes provide many educational benefits for children. We believe that full day/everyday kindergarten should be optional for UDS's and for parents, but that those USD's that provide these programs should have increased funding. We realize that there are many needs for funding of the schools of Kansas and we would support the " phasing in " of this funding over a two year period, if necessary.

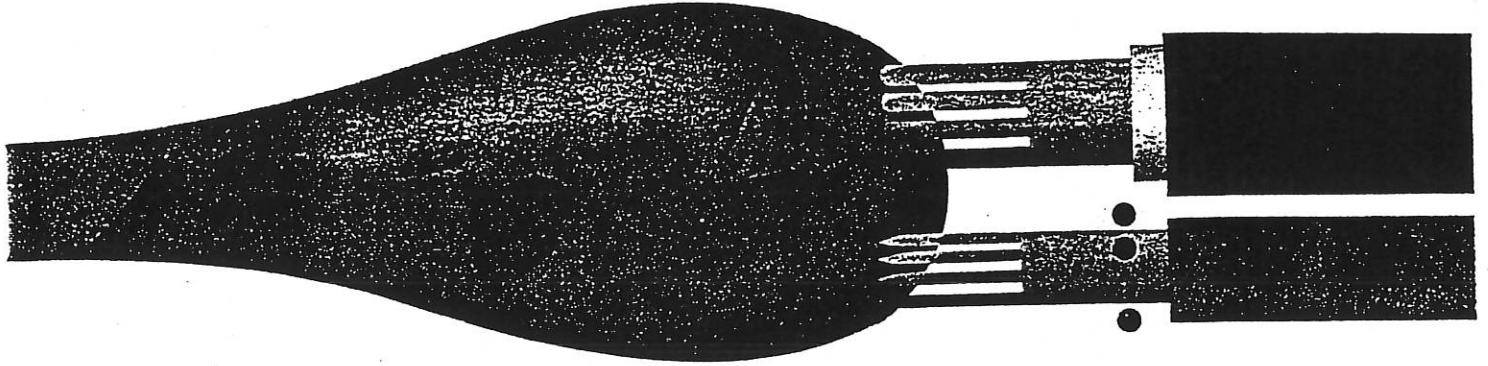
We believe that House Bill 2870 will provide significant opportunities for an enhanced education of children and we urge your approval.

We appreciate your time and your consideration of legislation that will improve the educational programs available for the children of Kansas.

**Bill Medley, Legislative Liaison
South Central Kansas Education Service Center
PO Box 158
Clearwater, KS 67026**

Home Telephone 316-221 9180

A baby's brain is a work in progress, trillions of neurons waiting to be wired into a mind. The experiences of childhood, pioneering research shows, help form the brain's circuits—for music and math, language and emotion.



Your Child's Brain

BY SHARON BEGLEY

YOU HOLD YOUR NEWBORN SO HIS SKY-blue eyes are just inches from the brightly patterned wallpaper. *ZZZt*: a neuron from his retina makes an electrical connection with one in his brain's visual cortex. You gently touch his palm with a clothespin; he grasps it, drops it, and you return it to him with soft words and a smile. *Crackle*: neurons from his hand strengthen their connection to those in his sensory-motor cortex. He cries in the

night; you feed him, holding his gaze because nature has seen to it that the distance from a parent's crooked elbow to his eyes exactly matches the distance at which a baby focuses. *Zap*: neurons in the brain's amygdala send pulses of electricity through the circuits that control emotion. You hold him on your lap and talk . . . and neurons from his ears start hard-wiring connections to the auditory cortex.

And you thought you were just playing with your kid.

When a baby comes into the world her brain is a jumble of neurons, all waiting to be woven into the

ILLUSTRATIONS BY TERRY ALLEN

FEBRUARY 19, 1996 NEWSWEEK 55

House Education
2-16-98
Attachment 7

intricate tapestry of the mind. Some of the neurons have already been hard-wired, by the genes in the fertilized egg, into circuits that command breathing or control heart-beat, regulate body temperature or produce reflexes. But trillions upon trillions more are like the Pentium chips in a computer before the factory preloads the software. They are pure and of almost infinite potential, unprogrammed circuits that might one day compose rap songs and do calculus, erupt in fury and melt in ecstasy. If the neurons are used, they become integrated into the circuitry of the brain by connecting to other neurons; if they are not used, they may die. It is the experiences of childhood, determining which neurons are used, that wire the circuits of the brain as surely as a programmer at a keyboard reconfigures the circuits in a computer. Which keys are typed—which experiences a child has—determines whether the child grows up to be intelligent or dull, fearful or self-assured, articulate or tongue-tied. Early experiences are so powerful, says pediatric neurobiologist Harry Chugani of Wayne State University, that “they can completely change the way a person turns out.”

By adulthood the brain is crisscrossed with more than 100 billion neurons, each reaching out to thousands of others so that, all told, the brain has more than 100 trillion connections. It is those connections—more than the number of galaxies in the known universe—that give the brain its unrivaled powers. The traditional view was that the wiring diagram is predetermined, like one for a new house, by the genes in the fertilized egg. Unfortunately, even though half the genes—50,000—are involved in the central nervous system in some way, there are not enough of them to specify the brain’s incomparably complex wiring. That leaves another possibility: genes might determine only the brain’s main circuits, with something else shaping the trillions of finer connections. That something else is the environment, the myriad messages that the brain receives from the outside world. According to the emerging paradigm, “there are two broad stages of brain wiring,” says developmental neurobiologist Carla Shatz of the University of California, Berkeley: “an early period, when experience is not

required, and a later one, when it is.” Yet, once wired, there are limits to the brain’s ability to create itself. Time limits. Called “critical periods,” they are windows of opportunity that nature flings open, starting before birth, and then slams shut, one by one, with every additional candle on the child’s birthday cake. In the experiments

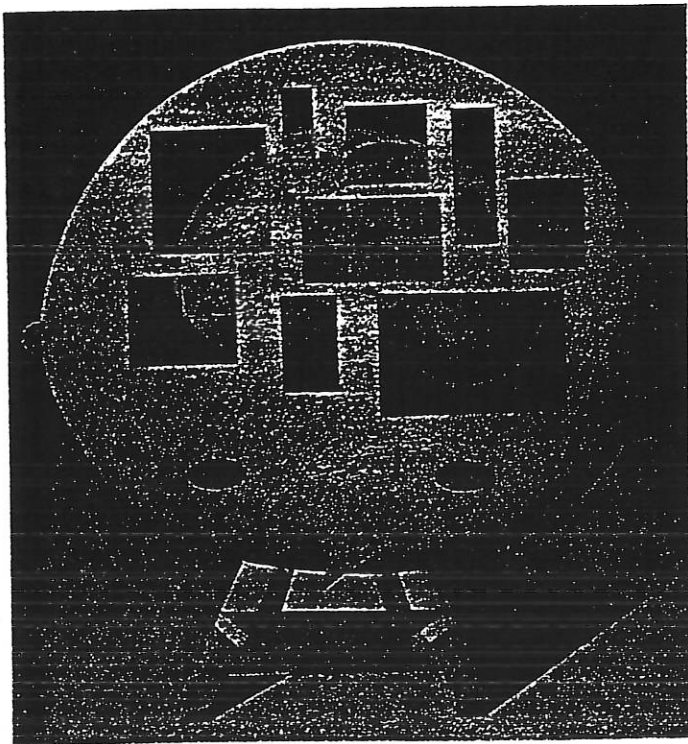
dictates how long they stay malleable. Sensory areas mature in early childhood; the emotional limbic system is wired by puberty; the frontal lobes—seat of understanding—develop at least through the age of 16.

The implications of this new understanding are at once promising and disturbing. They suggest that, with the right input at the right time, almost anything is possible. But they imply, too, that if you miss the window you’re playing with a handicap. They offer an explanation of why the gains a toddler makes in Head Start are so often evanescent: this intensive instruction begins too late to fundamentally rewire the brain. And they make clear the mistake of postponing instruction in a second language (page 58). As Chugani asks, “What idiot decreed that foreign-language instruction not begin until high school?”

Neurobiologists are still at the dawn of understanding exactly which kinds of experiences, or sensory input, wire the brain in which ways. They know a great deal about the circuit for vision. It has a neuron-growth spurt at the age of 2 to 4 months, which corresponds to when babies start to really notice the world, and peaks at 8 months, when each neuron is connected to an astonishing 15,000 other neurons. A baby whose eyes are clouded by cataracts from birth will, despite cataract-removal surgery at the age of 2, be forever blind. For other systems, researchers know what happens, but not—at the level of neurons and molecules—how. They nevertheless remain confident that cognitive abilities work much like sensory ones, for the brain is parsimonious in how it conducts its affairs: a mechanism that works fine for wiring vision is not likely to be abandoned when it comes to circuits for music. “Connections are not forming willy-nilly,” says Dale

Purves of Duke University, “but are promoted by activity.”

Language: Before there are words, in the world of a newborn, there are sounds. In English they are phonemes such as sharp ba’s and da’s, drawn-out ee’s and ll’s and sibilant sss’s. In Japanese they are different—barked hi’s, merged rr/ll’s. When a child hears a phoneme over and over, neurons from his ear stimulate the formation of



The Logical Brain



SKILL: Math and logic

LEARNING WINDOW: Birth to 4 years

WHAT WE KNOW: Circuits for math reside in the brain’s cortex, near those for music. Toddlers taught simple concepts, like one and many, do better in math. Music lessons may help develop spatial skills.

WHAT WE CAN DO ABOUT IT: Play counting games with a toddler. Have him set the table to learn one-to-one relationships—one plate, one fork per person. And, to hedge your bets, turn on a Mozart CD.

that gave birth to this paradigm in the 1970s, Torsten Wiesel and David Hubel found that sewing shut one eye of a newborn kitten rewired its brain: so few neurons connected from the shut eye to the visual cortex that the animal was blind even after its eye was reopened. Such rewiring did not occur in adult cats whose eyes were shut. Conclusion: there is a short, early period when circuits connect the retina to the visual cortex. When brain regions mature

dedicated connections in his brain's auditory cortex. This "perceptual map," explains Patricia Kuhl of the University of Washington, reflects the apparent distance—and thus the similarity—between sounds. So in English-speakers, neurons in the auditory cortex that respond to "ra" lie far from those that respond to "la." But for Japanese, where the sounds are nearly identical, neurons that respond to "ra" are practically intertwined, like L.A. freeway spaghetti, with those for "la." As a result, a Japanese-speaker will have trouble distinguishing the two sounds.

Researchers find evidence of these tendencies across many languages. By 6 months of age, Kuhl reports, infants in English-speaking homes already have different auditory maps (as shown by electrical measurements that identify which neurons respond to different sounds) from those in Swedish-speaking homes. Children are functionally deaf to sounds absent from their native tongue. The map is completed by the first birthday. "By 12 months," says Kuhl, "infants have lost the ability to discriminate sounds that are not significant in their language, and their babbling has acquired the sound of their language."

Kuhl's findings help explain why learning a second language after, rather than with, the first is so difficult. "The perceptual map of the first language constrains the learning of a second," she says. In other words, the circuits are already wired for Spanish, and the remaining undedicated neurons have lost their ability to form basic new connections for, say, Greek. A child taught a second language after the age of 10 or so is unlikely ever to speak it like a native. Kuhl's work also suggests why related languages such as Spanish and French are easier to learn than unrelated ones: more of the existing circuits can do double duty.

With this basic circuitry established, a baby is primed to turn sounds into words. The more words a child hears, the faster she learns language, according to psychiatrist Janellen Huttenlocher of the University of Chicago. Infants whose mothers spoke to them a lot knew 131 more words at 20 months than did babies of more taciturn, or

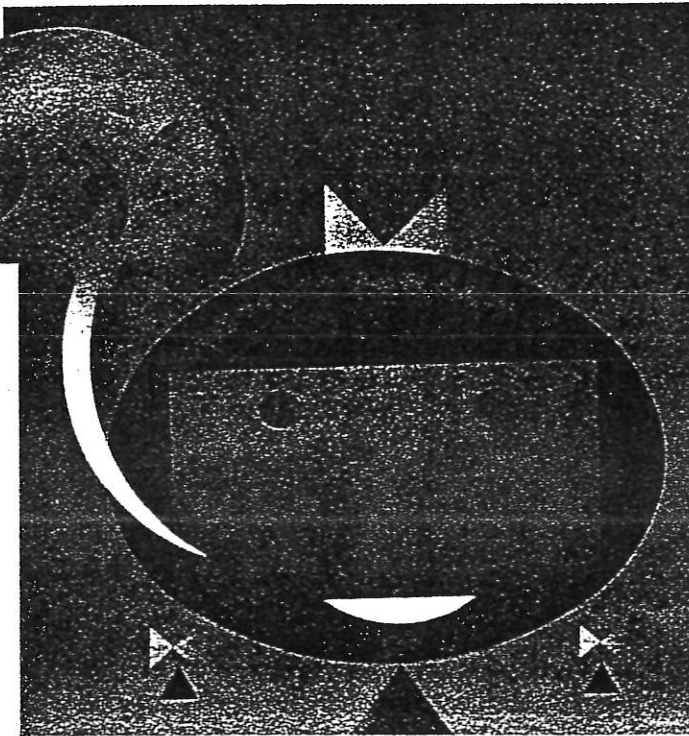
less involved, mothers; at 24 months, the gap had widened to 295 words. (Presumably the findings would also apply to a father if he were the primary caregiver.) It didn't matter which words the mother used—monosyllables seemed to work. The sound of words, it seems, builds up neural circuitry that can then absorb more words,

ing, the amount of somatosensory cortex dedicated to the thumb and fifth finger of the left hand—the fingering digits—was significantly larger than in nonplayers. How long the players practiced each day did not affect the cortical map. But the age at which they had been introduced to their muse did: the younger the child when she took up an instrument, the more cortex she devoted to playing it.

Like other circuits formed early in life, the ones for music endure. Wayne State's Chugani played the guitar as a child, then gave it up. A few years ago he started taking piano lessons with his young daughter. She learned easily, but he couldn't get his fingers to follow his wishes. Yet when Chugani recently picked up a guitar, he found to his delight that "the songs are still there," much like the muscle memory for riding a bicycle.

Math and logic: At UC Irvine, Gordon Shaw suspected that all higher-order thinking is characterized by similar patterns of neuron firing. "If you're working with little kids," says Shaw, "you're not going to teach them higher mathematics or chess. But they are interested in and can process music." So Shaw and Frances Rauscher gave 19 preschoolers piano or singing lessons. After eight months, the children "dramatically improved in spatial reasoning," compared with children given no music lessons, as shown in their ability to work mazes, draw geometric figures and copy patterns of two-color blocks. The mechanism behind the "Mozart effect" remains murky, but Shaw suspects that when children exercise cortical neurons by listening to classical music, they are also strengthening circuits used for mathematics. Music, says the UC team, "excites the inherent brain patterns and enhances their use in complex reasoning tasks."

Emotions: The trunk lines for the circuits controlling emotion are laid down before birth. Then parents take over. Perhaps the strongest influence is what psychiatrist Daniel Stern calls attunement—whether caregivers "play back a child's inner feelings." If a baby's squeal of delight at a puppy is met with a smile and hug, if her excitement at seeing a plane overhead is



The Language Brain



SKILL: Language

LEARNING WINDOW: Birth to 10 years

WHAT WE KNOW: Circuits in the auditory cortex, representing the sounds that form words, are wired by the age of 1. The more words a child hears by 2, the larger her vocabulary will grow. Hearing problems can impair the ability to match sounds to letters.

WHAT WE CAN DO ABOUT IT: Talk to your child—a lot. If you want her to master a second language, introduce it by the age of 10. Protect hearing by treating ear infections promptly.

much as creating a computer file allows the user to fill it with prose. "There is a huge vocabulary to be acquired," says Huttenlocher, "and it can only be acquired through repeated exposure to words."

Music: Last October researchers at the University of Konstanz in Germany reported that exposure to music rewires neural circuits. In the brains of nine string players examined with magnetic resonance imag-

mirrored, circuits for these emotions are reinforced. Apparently, the brain uses the same pathways to generate an emotion as to respond to one. So if an emotion is reciprocated, the electrical and chemical signals that produced it are reinforced. But if emotions are repeatedly met with indifference or a clashing response—Baby is proud of building a skyscraper out of Mom's best pots, and Mom is terminally annoyed—those circuits become confused and fail to strengthen. The key here is "repeatedly": one dismissive harrumph will not scar a child for life. It's the pattern that counts, and it can be very powerful: in one of Stern's studies, a baby whose mother never matched her level of excitement became extremely passive, unable to feel excitement or joy.

Experience can also wire the brain's "calm down" circuit, as Daniel Goleman describes in his best-selling "Emotional Intelligence." One father gently soothes his crying infant, another drops him into his crib; one mother hugs the toddler who just skinned her knee, another screams "It's your own stupid fault!" The first responses are attuned to the child's distress; the others are wildly out of emotional sync. Between 10 and 18 months, a cluster of cells in the rational prefrontal cortex is busy hooking up to the emotion regions. The circuit seems to grow into a control switch, able to calm agitation by infusing reason into emotion. Perhaps parental soothing trains this circuit, strengthening the neural connections that form it, so that the child learns how to calm herself down. This all happens so early that the effects of nurture can be misperceived as innate nature.

Stress and constant threats also rewire emotion circuits. These circuits are centered on the amygdala, a little almond-shaped structure deep in the brain whose job is to scan incoming sights and sounds for emotional content. According to a wiring diagram worked out by Joseph LeDoux of New York University, impulses from eye and ear reach the amygdala before they get to the rational, thoughtful neocortex. If a sight, sound or experience has proved painful before—Dad's drunken arrival home was followed by a beating—then the amygdala floods the circuits with neurochemicals before the higher brain knows what's happening. The more often this pathway is used, the easier it is to trigger: the mere memory of Dad may induce fear. Since the circuits can stay excited for days, the brain remains on high alert. In this state, says neuroscientist Bruce Perry of Baylor College of Medicine, more circuits attend to nonverbal cues—facial expressions, angry noises—that warn of impending danger. As a result, the cortex falls behind in development and has trouble assimilating complex information such as language.

SCHOOLS

Why Do Schools Flunk Biology?

BY LYNELL HANCOCK

BIOLOGY IS A STAPLE AT MOST American high schools. Yet when it comes to the biology of the students themselves—how their brains develop and retain knowledge—school officials would rather not pay attention to the lessons. Can first graders handle French? What time should school

start? Should music be cut? Biologists have some important evidence to offer. But not only are they ignored, their findings are often turned upside down.

Force of habit rules the hallways and classrooms. Neither brain science nor education research has been able to free the majority of America's schools from their 19th-century roots. If more administrators were tuned into brain research, scientists argue, not only would schedules change, but subjects such as foreign language and geometry would be offered to much younger children. Music and gym would be daily requirements. Lectures, work sheets and rote memorization would be replaced by hands-on materials, drama and project work. And

teachers would pay greater attention to children's emotional connections to subjects. "We do more education research than anyone else in the world," says Frank Vellutino, a professor of educational psychology at State University of New York at Albany, "and we ignore more as well."

Plato once said that music "is a more potent instrument than any other for education." Now scientists know why. Music, they believe, trains the brain for higher forms of thinking. Researchers at the University of California, Irvine, studied the power of music by observing two groups of preschoolers. One group took piano lessons and sang daily in chorus. The other did not. After eight months the musical 3-year-olds

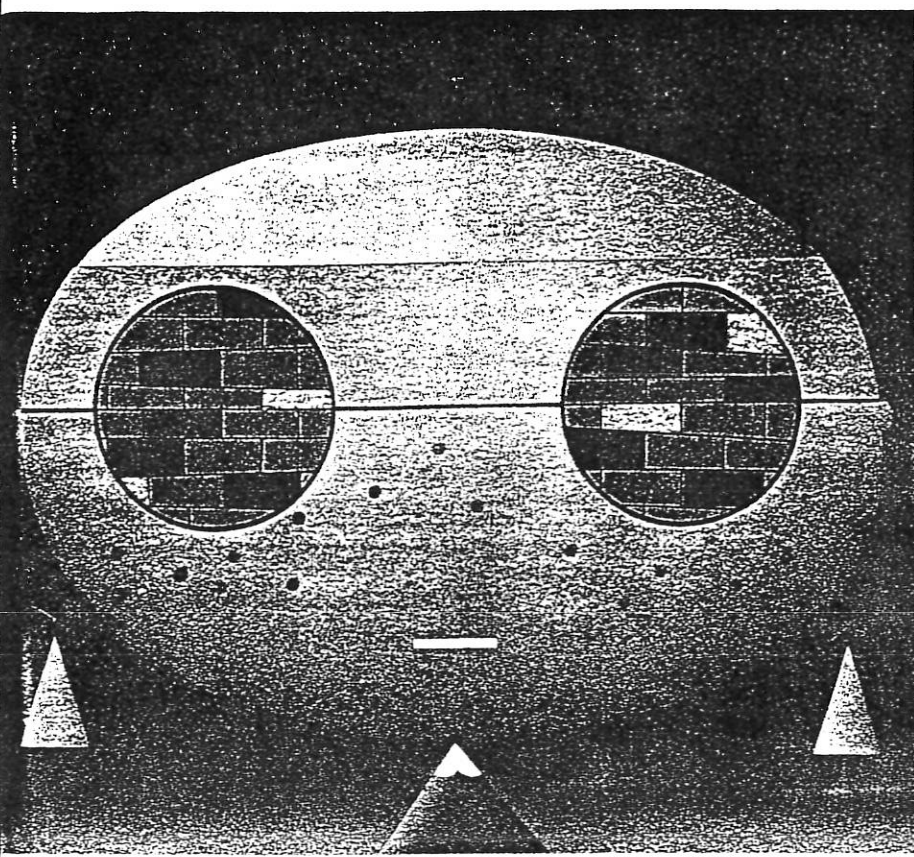
were expert puzzlemasters, scoring 80 percent higher than their playmates did in spatial intelligence—the ability to visualize the world accurately.

This skill later translates into complex math and engineering skills. "Early music training can enhance a child's ability to reason," says Irvine physicist Gordon Shaw. Yet music education is often the first "frill" to be cut when school budgets shrink. Schools on average have only one music teacher for every 500 children, according to the National Commission on Music Education.

Then there's gym—another expendable hour by most school standards. Only 36 percent of schoolchildren today are required to participate in daily physical education. Yet researchers now know that exercise is good not only for the heart. It also juices up the brain, feeding it nutrients in the form of glucose and increasing nerve connections—all of which make it easier for kids of all ages to learn. Neuroscientist William Greer confirmed this by watching rats at his University of Illinois at Urbana-Champaign lab. One group

The Windows of Opportunity

PRENATAL	BIRTH	1 YEAR OLD	2 YEARS	3 YEARS
	Motor development			
	Emotional control			
	Vision			
	Social attachment			
	Vocabulary			
	Second language			
		Math/Logic		
				Music



did nothing. A second exercised on an automatic treadmill. A third was set loose in a Barnum & Bailey obstacle course requiring the rats to perform acrobatic feats. These "supersmart" rats grew "an enormous amount of gray matter" compared with their sedentary partners, says Greenough.

Of course, children don't ordinarily run such gauntlets; still, Greenough believes, the results are significant. Numerous studies, he says, show that children who exercise regularly do better in school.

The implication for

schools goes beyond simple exercise. Children also need to be more physically active in the classroom, not sitting quietly in their seats memorizing subtraction tables. Knowledge is retained longer if children connect not only aurally but emotionally and physically to the material, says University of Oregon education professor Robert Sylwester in "A Celebration of Neurons."

Good teachers know that lecturing on the American Revolution is far less effective than acting out a battle. Angles and dimensions are better understood if children

chunk their work sheets and build a complex model to scale. The smell of the glue enters memory through one sensory system, the touch of the wood blocks another, the sight of the finished model still another. The brain then creates a multidimensional mental model of the experience—one easier to retrieve. "Explaining a smell," says Sylwester, "is not as good as actually smelling it."

Scientists argue that children are capable of far more at younger ages than schools generally realize. People obviously continue learning their whole lives, but the opti-

mum "windows of opportunity for learning" last until about the age of 10 or 12, says Harry Chugani of Wayne State University's Children's Hospital of Michigan. Chugani determined this by measuring the brain's consumption of its chief energy source, glucose. (The more glucose it uses, the more active the brain.) Children's brains, he observes, gobble up glucose at twice the adult rate from the age of 4 to puberty. So young brains are as primed as they'll ever be to process new information. Complex subjects such as trigonometry or foreign

language shouldn't wait for puberty to be introduced. In fact, Chugani says, it's far easier for an elementary-school child to hear and process a second language—and even speak it without an accent. Yet most U.S. districts wait until junior high to introduce Spanish or French—after the "windows" are closed.

Reform could begin at the beginning. Many sleep researchers now believe that most teens' biological clocks are set later than those of their fellow humans. But high school starts at 7:30 a.m., usually to accommodate bus schedules. The result

can be wasted class time for whole groups of kids. Making matters worse, many kids have trouble readjusting their natural sleep rhythm. Dr. Richard Allen of Johns Hopkins University found that teens went to sleep at the same time whether they had to be at school by 7:30 a.m. or 9:30 a.m. The later-to-rise teens not only get more sleep, he says; they also get better grades. The obvious solution would be to start school later when kids hit puberty. But at school, there's what's obvious, and then there's tradition.

Why is this body of research rarely used in most American classrooms? Not many administrators or school-board members know it exists, says Linda Darling-Hammond, professor of education at Columbia University's Teachers College. In most states, neither teachers nor administrators are required to know much about how children learn in order to be certified. What's worse, she says, decisions to cut music or gym are often made by noneducators, whose concerns are more often monetary than educational. "Our school system was invented in the late 1800s, and little has changed," she says. "Can you imagine if the medical profession ran this way?"

With PAT WINGERT and MARY HAGER in Washington

Circuits in different regions of the brain mature at different times. As a result, different circuits are most sensitive to life's experiences

at different ages. Give your children the stimulation they need when they need it, and anything's possible. Stumble, and all bets are off.

4 YEARS

5 YEARS

6 YEARS

7 YEARS

8 YEARS

9 YEARS

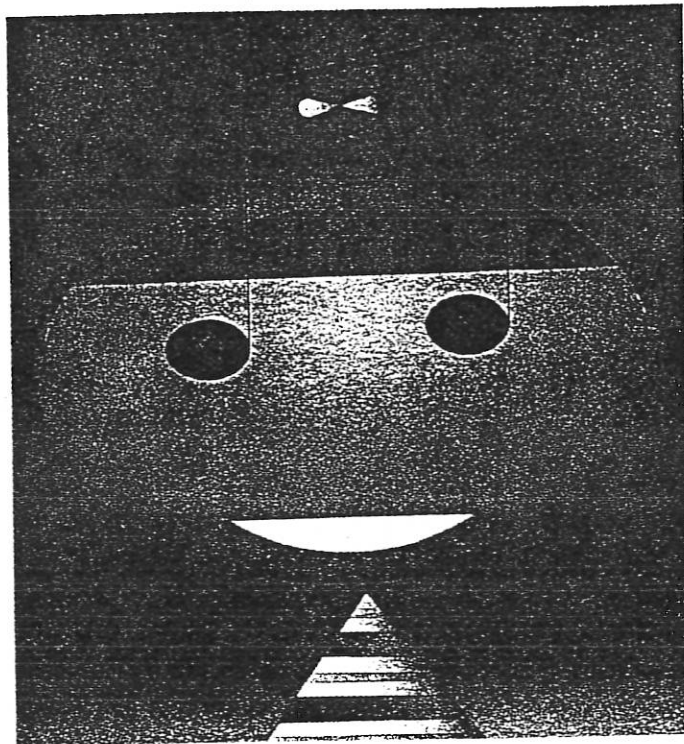
Movement: Fetal movements begin at 7 weeks and peak between the 15th and 17th weeks. That is when regions of the brain controlling movement start to wire up. The critical period lasts a while: it takes up to two years for cells in the cerebellum, which controls posture and movement, to form functional circuits. "A lot of organization takes place using information gleaned from when the child moves about in the world," says William Greenough of the University of Illinois. "If you restrict activity you inhibit the formation of synaptic connections in the cerebellum." The child's initially spastic movements send a signal to the brain's motor cortex; the more the arm, for instance, moves, the stronger the circuit, and the better the brain will become at moving the arm intentionally and fluidly. The window lasts only a few years: a child immobilized in a body cast until the age of 4 will learn to walk eventually, but never smoothly.

do these cells become true neurons. They grow a fiber called an axon that carries electrical signals. The axon might reach only to a neuron next door, or it might wend its way clear across to the other side of the brain. It is the axonal connections that form the brain's circuits. Genes determine the main highways along which axons travel to

baby neurons fire electrical pulses once a minute, in a fit of what Berkeley's Shatz calls auto-dialing. If cells fire together, the target cells "ring" together. The target cells then release a flood of chemicals, called trophic factors, that strengthen the incipient connections. Active neurons respond better to trophic factors than inactive ones, Barbara Barres of Stanford University reported in October. So neurons that are quiet when others throb lose their grip on the target cell. "Cells that fire together wire together," says Shatz.

The same basic process continues after birth. Now, it is not an auto-dialer that sends signals, but stimuli from the senses. In experiments with rats, Illinois's Greenough found that animals raised with playmates and toys and other stimuli grow 25 percent more synapses than rats deprived of such stimuli.

Rats are not children, but all evidence suggests that the same rules of brain development hold. For decades Head Start has fallen short of the high hopes invested in it: the children's IQ gains fade after about three years. Craig Ramey of the University of Alabama suspected the culprit was timing: Head Start enrolls 2-, 3- and 4-year-olds. So in 1972 he launched the Abecedarian Project. Children from 120 poor families were assigned to one of four groups: intensive early education in a day-care center from about 4 months to age 8, from 4 months to 5 years, from 5 to 8 years, or none at all. What does it mean to "educate" a 4-month-old? Nothing fancy: blocks, beads, talking to him, playing games such as peek-a-boo. As outlined in the book "Learninggames,"* each of the 200-odd activities was designed to enhance cognitive, language, social or motor development. In a recent paper, Ramey and Frances Campbell



The Musical Brain

SKILL: Music

LEARNING WINDOW: 3 to 10 years

WHAT WE KNOW: String players have a larger area of their sensory cortex dedicated to the fingering digits on their left hand. Few concert-level performers begin playing later than the age of 10. It is much harder to learn an instrument as an adult.

WHAT WE CAN DO ABOUT IT: Sing songs with children. Play structured, melodic music. If a child shows any musical aptitude or interest, get an instrument into her hand early.

make their connection. But to reach particular target cells, axons follow chemical cues strewn along their path. Some of these chemicals attract: this way to the motor cortex! Some repel: no, that way to the olfactory cortex. By the fifth month of gestation most axons have reached their general destination. But like the prettiest girl in the bar, target cells attract way more suitors—axons—than they can accommodate.

How does the wiring get sorted out? The

of the University of North Carolina report that children enrolled in Abecedarian as preschoolers still scored higher in math and reading at the age of 15 than untreated children. The children still retained an average IQ edge of 4.6 points. The earlier the children were enrolled, the more enduring the gain. And intervention after age 5 conferred no IQ or academic benefit.

*Joseph Sparling and Isabelle Lewis (226 pages. Walker, \$8.95).

THERE ARE MANY more circuits to discover, and many more environmental influences to pin down. Still, neuro labs are filled with an unmistakable air of optimism these days. It stems from a growing understanding of how, at the level of nerve cells and molecules, the brain's circuits form. In the beginning, the brain-to-be consists of only a few advance scouts breaking trail: within a week of conception they march out of the embryo's "neural tube," a cylinder of cells extending from head to tail. Multiplying as they go (the brain adds an astonishing 250,000 neurons per minute during gestation), the neurons clump into the brain stem which commands heartbeat and breathing, build the little cerebellum at the back of the head which controls posture and movement, and form the grooved and rumpled cortex wherein thought and perception originate. The neural cells are so small, and the distance so great, that a neuron striking out for what will be the prefrontal cortex migrates a distance equivalent to a human's walking from New York to California, says developmental neurobiologist Mary Beth Hatten of Rockefeller University.

Only when they reach their destinations

All of which raises a troubling question. If the windows of the mind close, for the most part, before we're out of elementary school, is all hope lost for children whose parents did not have them count beads to stimulate their math circuits, or babble to them to build their language loops? At one level, no: the brain retains the ability to learn throughout life, as witness anyone who was befuddled by Greek in college only to master it during retirement. But on a deeper level the news is sobering. Children whose neural circuits are not stimulated before kindergarten are never going to be what they could have been. "You want to say that it is never too late," says Joseph Sparling, who designed the Abecedarian curriculum. "But there seems to be something very special about the early years."

And yet . . . there is new evidence that certain kinds of intervention can reach even the older brain and, like a microscopic screwdriver, rewire broken circuits. In January, scientists led by Paula Tallal of Rutgers University and Michael Merzenich of UC San Francisco described a study of children who have "language-based learning disabilities"—reading problems. LLD affects 7 million children in the United States. Tallal has long argued that LLD arises from a child's inability to distinguish short, staccato sounds—such as "d" and "b." Normally, it takes neurons in the auditory cortex something like .015 second to respond to a signal from the ear, calm down and get ready to respond to the next sound; in LLD children, it takes five to 10 times as long. (Merzenich speculates that the defect might be the result of chronic middle-ear infections in infancy: the brain never "hears" sounds clearly and so fails to draw a sharp auditory map.) Short sounds such as "b" and "d" go by too fast—.04 second—to process. Unable to associate sounds with letters, the children develop reading problems.

The scientists drilled the 5- to 10-year-olds three hours a day with computer-produced sound that draws out short consonants, like an LP played too slow. The result: LLD children who were one to three years behind in language ability improved by a full two years after only four weeks. The improvement has lasted. The training, Merzenich suspect, redrew the wiring diagram in the children's auditory cortex to process fast sounds. Their reading problems vanished like the sounds of the letters that, before, they never heard.

Such neural rehab may be the ultimate payoff of the discovery that the experiences of life are etched in the bumps and squiggles of the brain. For now, it is enough to know that we are born with a world of potential—potential that will be realized only if it is tapped. And that is challenge enough.

With MARY HAGER



ROB NELSON—BLACKSTAR

Private dancer: Money changes hands at the Cheetah

OLYMPICS

Not Only Divers Work Topless

Fighting over a 'modeling studio'

BY VERN E. SMITH

IN ATLANTA THEY ARE CALLED "LINGERIE modeling studios." In practice, they offer private sessions with young women who, among other things, strut about in their underwear. Most locals pretty much ignore the whole business except when a visitor asks where the action is. This summer, though, the whole world is coming to Atlanta for the Summer Olympics, and this bit of rococo Southern hospitality is embarrassing city officials.

As it so often is when morality and real estate intersect, the problem is one of location. To give Games-goers a place to go in the midday sun, both the Olympic organizers and Coca-Cola have invested millions of dollars to create hospitality parks in the center of town. While all of that was being planned, one enterprising businessman leased space directly across the street from one of these parks with a plan of his own: to open the XCLUSIVE! Lingerie Studio. Ted Parabak has painted the

currently empty building a fetching purple and green and put up a sign and intends to wait for the overflow from the other Games in town.

At first, a city agency dutifully approved his plans. But a highly perturbed Mayor Bill Campbell sent the application back to the city's License Review Board. He argues that the Lingerie Studio violates city zoning, which requires a 1,000-foot buffer between such establishments and public spaces where children may be present. XCLUSIVE is only 400 feet from Centennial Park, says Campbell, who's also concerned that a lingerie joint is not compatible with the area's post-Olympics development.

A jump start: Parabak's lawyer Alan Begner threatens to sue if the license is rejected. Parabak's only public comment suggests he is banking on the Games to help jumpstart his studio, especially with European visitors. "They are very familiar with adult entertainment, if you know what I mean," Parabak told The Atlanta Constitution. "I hope we can stay in business because what they have there is tame in comparison."

That may just be local pride talking. Atlanta ranks third (behind New York and Chicago) as a national convention center, and first in its region in strip joints. Hosting more than 2,000 conventions and major meet-

ings a year, Atlanta's hospitality industry grosses more than \$3 billion annually. Officially, the most popular local tourist attraction is Underground Atlanta, a shopping-dining-entertainment complex that draws 10 million visitors a year. But unofficially, the nearly 50 nude clubs and roughly a dozen lingerie studios have proven a hot draw for visitors. All told, the take from Atlanta's adult-entertainment scene could top \$200 million annually, according to Donald Ratajczak, an economics professor at Georgia State University.

Georgia has tried to close this industry in the past. Before Atlanta hosted the 1988 Democratic convention, the legislature banned nude dancing in places where alcohol was served. To serve that year's conventioners, bar owners put some clothes on their dancers. When the Georgia Supreme Court struck down the law, the pasties came off and nude clubs sprang up in the suburbs, too. This summer they may be giving out medals.

Kansas Kindergarten Coalition

920 Millington, Winfield, KS 67156 • (316) 221-5136 or (316) 221-5155 • kwangle@horizon.hit.net

Testimony to the House Education Committee in support of House Bill 2870

Chairman O'Neal, and members of the House Education Committee:

My name is Keith Anglemyer, and I am an elementary principal at USD 465, Winfield, Kansas. Today, however, I am speaking to you on behalf of the Kansas Kindergarten Coalition, a statewide organization of school administrators, board members, teachers, and parents, whose sole purpose is to support funding for full day/every day kindergarten programs in Kansas. As you know, the current Kansas school funding law reimburses school districts at 0.5 Full Time Equivalency (FTE) for all regular education kindergarten students, regardless of the amount of instructional time they receive. As you can imagine, this makes operating a full day program very cost prohibitive. School districts who choose to operate a full day program under the present funding plan must make sacrifices in other programs and activities in order to provide the necessary personnel and materials to operate it. Many more schools simply cannot afford a full day program; consequently, it is not offered.

Kansas prides itself on being recognized nationally as an educational leader, but on this issue, we are clearly behind. In 1996-97, only 20.4% of Kansas kindergarten students participated in a full day/every day kindergarten program, compared to 47.7% of students across the United States. In fact, 14 states **require** kindergarten programs of at least 5 hours per day. While the Kindergarten Coalition believes it should be the choice of school districts to offer a full day program, the current funding law in Kansas is not giving that choice to many Kansas schools, and more importantly, the students who attend those schools. Passage of HB 2870 would allow schools to choose to offer full day kindergarten without putting other important programs at peril.

The educational and social benefits of full day kindergarten are solidly supported by research. Society for 5 year olds is not nearly the same today as it was when you and I began our schooling. More homes require both parents to work outside the home, which then raises the need for appropriate day care for children. Many parents choose to place their children in pre-schools - in 1994,

House Education
2-16-98
Attachment 8

50% of 5 year old children had attended some type of pre-school program. Naturally, these children are ready to move into a full day program, and continue with the concepts they have begun in their pre-school days. President Clinton has raised the issue of providing quality early childhood care in our society today, and full day kindergarten is a solid solution to this issue.

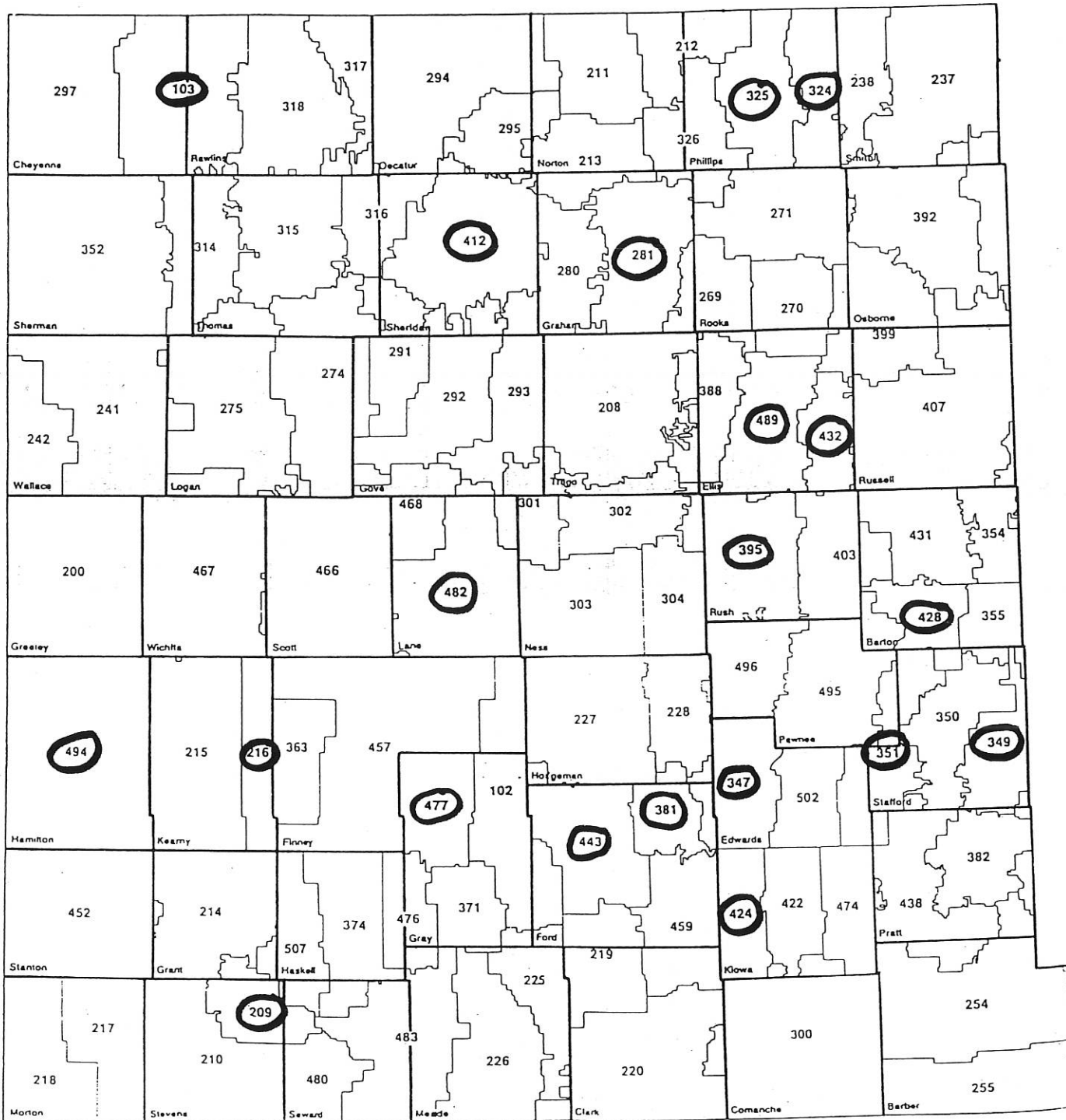
But more important to the members of the Kindergarten Coalition are the educational benefits of the full day program. Students who attend full day kindergarten show high success on readiness tests for first grade. Students in full day programs are less likely to be "at risk" in their education - less likely to be Title I students or special education students. The benefits of full day programs continue on throughout elementary grades - it's not just a one year success story. Full day programs do not necessarily teach more skills to kindergarten students. The benefits come from the increased time spent teaching and reinforcing the skills that are already taught. A full day program provides a solid foundation for students who are beginning their formative educational years.

We could have paraded a large number of college professors, researchers, teachers, principals, superintendents, board members, and parents in front of this committee today to convince you that full day kindergarten is an outstanding early childhood education program. However, all of these people would not have been able to resolve the issue of funding HB 2870, for that is your responsibility. While we find the Budget Department's estimate of full day programs during the first year of funding at 75% to be excessive, we cannot offer any concrete evidence to place the figure lower.

HB 2870 must not die because of funding. If you cannot see to fully fund this legislation in one year, the Kindergarten Coalition would offer you a 5 year phase in plan, which would control the costs of HB 2870 and spread them out over a longer period of time. Our recommendation under this phase in plan would be to fund full day kindergarten at 0.6 FTE in 1998-99, 0.7 FTE in 1999-2000, and continue to raise the FTE by 0.1 until full day kindergarten is fully funded. While we would rather see HB 2870 funded in full in one year, we believe our phase in program to be an acceptable compromise.

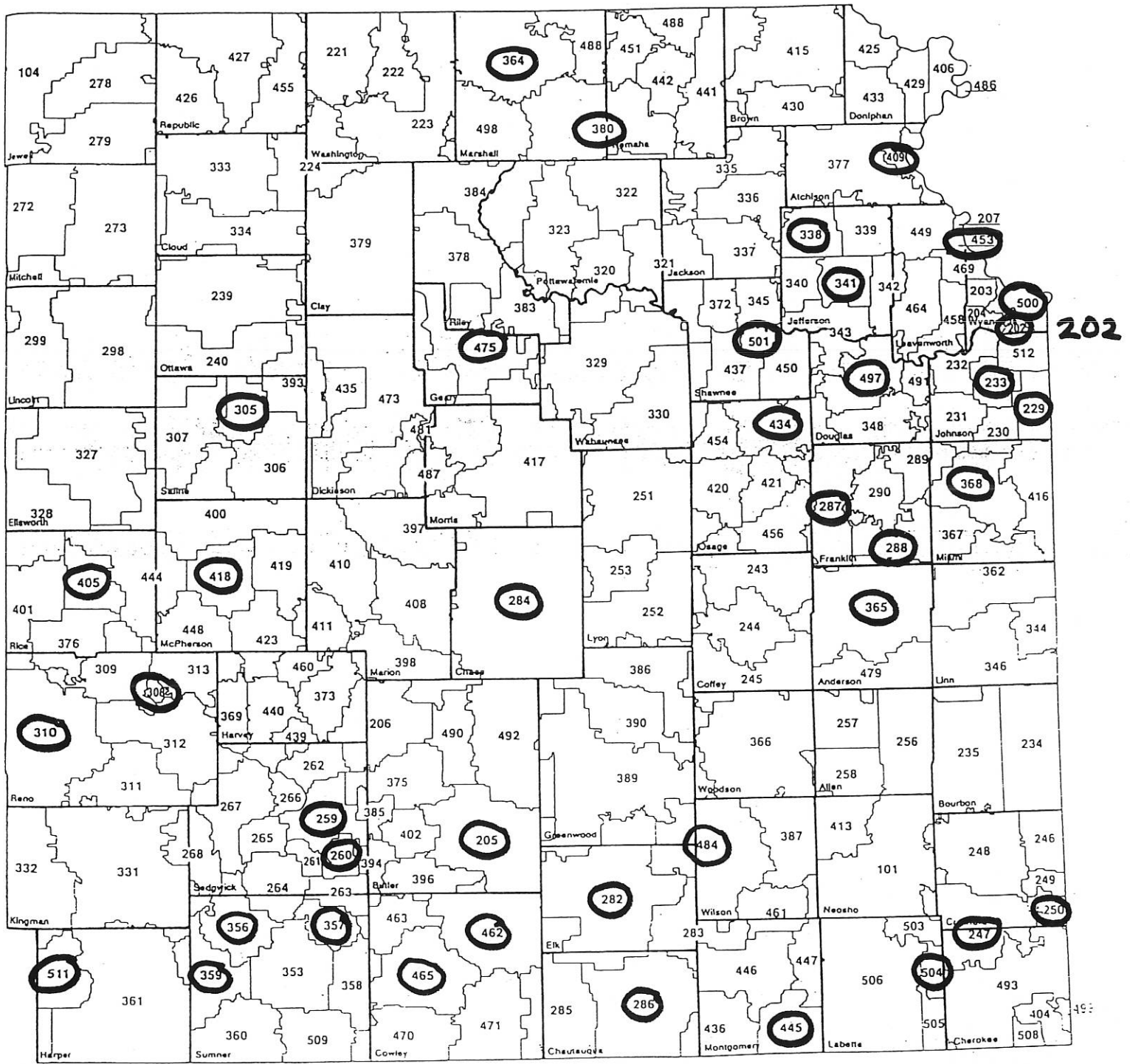
It's time for Kansas to realize that full day kindergarten is an important educational program that Kansas schools should be able to choose to offer. It's time for Kansas kindergarten students to have the same opportunities as their counterparts nation wide. Your passage of HB 2870 will give our kindergarten students the opportunities for success they deserve. Please, support HB 2870 for all kindergarten students in Kansas. Thank you for your time.

KANSAS UNIFIED SCHOOL DISTRICTS



Districts circled have at least 1 full-day/ every day kindergarten program

--EFFECTIVE JULY 1, 1997



1996-97
Figures

TESTIMONY PRESENTED TO THE HEARING COMMITTEE ON HB 2804
Presented by Coy Allen on behalf of Humboldt USD 258
February 16, 1998

I would like to thank you for giving me the opportunity to address you regarding House Bill 2804. My name is Coy Allen. I am here today as a representative of Humboldt Unified School District # 258. I am a patron of this district and a member of the board of education for the district. I have been a school board member for twelve years. I wish to share some information that I hope will encourage you to support House Bill 2804.

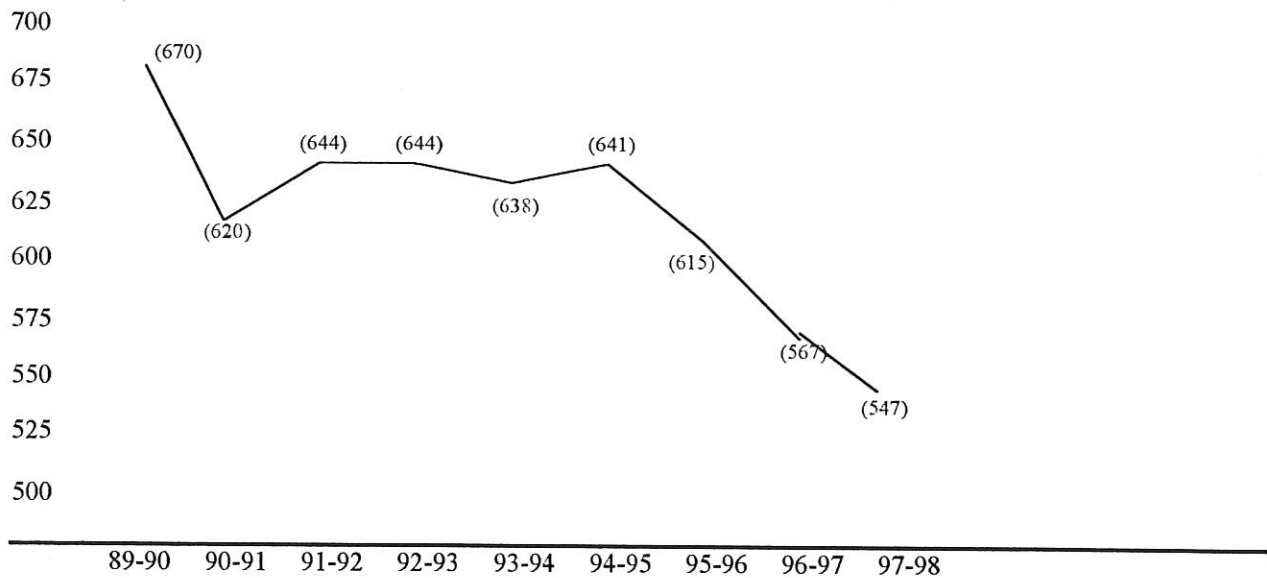
Humboldt USD 258 is a 3A school district located in Allen county, about two hours southeast of Topeka. Our school district is one of three in the county. We have been experiencing significant enrollment losses during the last three years and anticipate continued enrollment decrease for next year. It has had a major impact on our school system.

I would first like to address the portion of HB 2804 which would allow a district to use their enrollment count in the preceding year or *in the second preceding year*, whichever is greater. In order to do this I would like to share some information about my home district.

I would like to share our enrollment history for the last ten years.

	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99 <i>Projected</i>
Headcount	657	670	620	643.5	643.5	637.5	641	615	567	547	527
F.T.E.	630	646.5	604	622.5	621	617.5	625	594	551.5	534	515

Graphically it looks like this:



These figures show that, in the last ten years, our enrollment was at a high in 1989-90 at 670 students. Our low was this year at 547 students but projected to decline farther next year at 527 students. Since 1989-90 we have lost 123 students which is an 18.3% decrease. The most significant decreases have occurred in the last three years and these declines have had a major financial impact on the district. The decreases have generally been the result of larger graduating classes and smaller kindergarten classes.

General fund budgets for the last four years are:

	General Fund <u>Actual Expenditures</u>	<u>Local Option Budget</u>	<u>Total</u>
1994-95	\$3,434,685	\$0	\$3,434,685
1995-96	\$3,410,873	\$0	\$3,410,873
1996-97	\$3,178,088	\$0	\$3,178,088
1997-98	<u>\$3,148,126</u> (Authorized)	\$50,370	\$3,198,496
Net decrease	\$286,559		

**Projected for 98-99
Using current finance**

Formula **\$3,054,541** **resulting in another \$93,585 loss**
(Even with the governor's proposed budget the loss would be \$60,379)

Thus the 98-99 budget would be \$380,144 less than it was in the 1994-95 school year.

This reduction represents an 11.1% decrease in general fund budget for our district in five years. This is a major reduction in a short period of time. The reduction in purchasing power is compounded by the effect of inflation. Not only are there fewer dollars but each dollar buys less.

Measures that have already been employed to compensate for this loss in revenue include:

- Delaying major purchases, like buses.
- Elimination of a full time technology facilitator.
- Reassignment of teachers.
- Controlling salaries through freezing the teachers salary index, no raises for administrators, etc.
- Use of the interactive distance learning to provide courses to students without hiring staff
- Initiation of a local option budget this year. (\$50,370 at a cost of 3.73 mills to local taxpayers).

The natural response to our dilemma is to reduce staff. We have eliminated the position of technology facilitator and have reassigned some professional staff to address this very important area. Further reductions in staff become difficult and will ultimately affect the quality of education available to our students. If you look at the enclosed page, entitled YEAR COMPARISON OF ENROLLMENT BY GRADES FOR UNIFIED SCHOOL DISTRICT #258, you may better understand the problem. Please look at the 96-97 and 97-98 enrollment numbers.

Example: Kindergarten 30 (96-97) and 25 (97-98) ----- A major reduction from 42 but still requires two half-day sessions and thus one full time teacher.

First grade 42 (96-97) and 31 (97-98).....A significant decrease but still requires two sections and thus two teachers.

Second grade 31 (96-97) and 44 (97-98)A significant increase but can still be covered in two sections with two teachers.

Third grade 37 (96-97) and 29 (97-98)..... A decrease of eight but still requires two sections with two teachers.

Middle school (grades 7-8) 94 (95-96), 94 (96-97), 96 (97-98)Enrollment at these levels is still steady and thus are unable to reduce teachers at this level.

High school (grades 9-12) 217 (95-96), 205 (96-97), 192 (97-98)Some decrease but difficult to cut staff without cutting programs. It takes a certain number of staff to offer a comprehensive curriculum and we are already using the Interactive Distance Learning to supplement our program.

In larger school districts there is more flexibility in staffing. If you had four third grade classes of seventeen students you might consider looking at reducing one class and having three classes of about 23. While this may not be a desirable choice, it is an option. We do not have those options unless we want classes of thirty to forty students.

Included in your information is a copy of the current salary schedule. You will note that the beginning salary is probably one of the lowest in the state. For 96-97 the teachers were given their step increase only with no increase in the base. Last year the base was raised from \$19,900 to \$20,150 which does not place us in competition for hiring quality beginning teachers.

Other districts around the state are in similar situations. House Bill 2804 would be a tremendous benefit to Humboldt USD 258 and many other districts. It would relieve us from making approximately \$90,000 worth of cuts next year. We are optimistic that our enrollment will bottom out and start back up. Should that happen soon, we would not have been forced to reduce the quality of education to our students for a short-term problem. Should the enrollment continue to decline, it will delay the pain. It could also facilitate certain cuts, like staff, if the numbers dropped again. Many districts may experience temporary drops in enrollment for a couple of years and then rebound.

I believe that HB 2804 would be good for the kids in our district and other districts who are suffering from the effects of declining enrollment.

The second portion of the bill deals with foreign exchange students. This portion would have little if any direct effect on our district as we have a limited number of foreign exchange students.

A quality foreign exchange program can be beneficial to the exchange student and the students in the school in which he attends. There are some exchange programs which do not spend adequate time in determining proper placement and providing support after placement. It appears that there are some organizations that seem to be in competition for how many students can be placed. I can see where this could be a problem for a school district and certainly at the cost of the state in terms of financial support. I believe that the 1% lid on funding for foreign exchange students is fair and reasonable. I have no idea how many districts would be affected by this portion of the bill but would anticipate it too be quite small. I do believe in the concept that an excessive amount of money should not be spent in educating the foreign visiting students at the expense of our own students.

In closing I would like to make this statement. Certainly we all understand that there is a price tag for this bill. I understand that this is a factor in whether it will pass. I urge you to look at Humboldt and other similar districts that are experiencing major problems due to what we hope is a temporary drop in enrollment. This bill would allow us to bridge over temporary enrollment drops and better address long-term enrollment drops while limiting the decline in the quality of education provided for our students.

9-4

YEAR COMPARISON OF ENROLLMENT BY GRADES FOR
UNIFIED SCHOOL DISTRICT #258

	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-20	20-01	
K	47	32	42	45	40	32	42	30	25				K
1	50	50	35	38	46	41	36	42	31				1
2	48	43	56	36	39	45	43	31	44				2
3	48	47	46	52	40	37	45	37	29				3
4	56	47	49	46	54	40	39	46	38				4
5	63	49	51	50	47	52	41	31	48				5
6	52	59	54	48	47	49	50	42	33				6
7	62	48	63	57	50	47	48	51	41				7
8	49	58	43	63	54	51	46	43	55				8
9	48	46	61	49	65	58	58	44	47				9
10	50	45	43	59	45	64	54	51	43				10
11	42	46	45	44	61	42	62	55	52				11
12	48	38	45	46	42	69	43	55	50				12
SP.ED	7	12	10.5	10.5	7.5	14	8	9	11				SP.ED
Head Count	670	620	643.5	643.5	637.5	641	615	567	547				
F.T.E.	646.5	604	622.5	621	617.5	625	594	551.5	534				

4-5

9-5

HUMBOLDT USD 258

1997-1998 SALARY SCHEDULE

8/12/97

BASE
\$20,150

YRS,EXP.	B.S.		B.S + 10		BS + 20		BS + 50/MS		MS + 10		MS + 20		MS + 30	
	SALARY	INDEX	SALARY	INDEX	SALARY	INDEX	SALARY	INDEX	SALARY	INDEX	SALARY	INDEX	SALARY	INDEX
16													\$38,688	1.92
15													\$38,285	1.90
14											\$36,472	1.81	\$37,479	1.86
13									\$34,658	1.72	\$35,666	1.77	\$36,673	1.82
12							\$32,845	1.63	\$33,852	1.68	\$34,860	1.73	\$35,867	1.78
11					\$31,031	1.54	\$32,039	1.59	\$33,046	1.64	\$34,054	1.69	\$35,061	1.74
10			\$29,218	1.45	\$30,225	1.50	\$31,233	1.55	\$32,240	1.60	\$33,248	1.65	\$34,255	1.70
9			\$28,412	1.41	\$29,419	1.46	\$30,427	1.51	\$31,434	1.56	\$32,442	1.61	\$33,449	1.66
8	\$26,598	1.32	\$27,606	1.37	\$28,613	1.42	\$29,621	1.47	\$30,628	1.52	\$31,636	1.57	\$32,643	1.62
7	\$25,792	1.28	\$26,800	1.33	\$27,807	1.38	\$28,815	1.43	\$29,822	1.48	\$30,830	1.53	\$31,837	1.58
6	\$24,986	1.24	\$25,994	1.29	\$27,001	1.34	\$28,009	1.39	\$29,016	1.44	\$30,024	1.49	\$31,031	1.54
5	\$24,180	1.20	\$25,188	1.25	\$26,195	1.30	\$27,203	1.35	\$28,210	1.40	\$29,218	1.45	\$30,225	1.50
4	\$23,374	1.16	\$24,382	1.21	\$25,389	1.26	\$26,397	1.31	\$27,404	1.36	\$28,412	1.41	\$29,419	1.46
3	\$22,568	1.12	\$23,576	1.17	\$24,583	1.22	\$25,591	1.27	\$26,598	1.32	\$27,606	1.37	\$28,613	1.42
2	\$21,762	1.08	\$22,770	1.13	\$23,777	1.18	\$24,785	1.23	\$25,792	1.28	\$26,800	1.33	\$27,807	1.38
1	\$20,956	1.04	\$21,964	1.09	\$22,971	1.14	\$23,979	1.19	\$24,986	1.24	\$25,994	1.29	\$27,001	1.34
0	\$20,150	1.00	\$21,158	1.05	\$22,165	1.10	\$23,173	1.15	\$24,180	1.20	\$25,188	1.25	\$26,195	1.30

TESTIMONY SUPPORTING HB 2870

TO: Chairman O'Neal and members of the House Education Comm.
FROM: Dr. Jim Yonally, Shawnee Mission School District

I am pleased to appear on behalf of the Shawnee Mission School District, the second largest district in the state, in support of HB 2870. As you know, this bill would provide, for funding purposes, that a kindergarten pupil would be counted as one pupil if the pupil attends school for a school day of not less than six hours.

Currently, in Shawnee Mission, we have 43 elementary schools, all of which offer the traditional half-day kindergarten program. We have available a full day kindergarten program in 21 of those buildings. Six of those are "Title I" schools and the program is free to the parents of those pupils. In the other 15 schools, an additional half-day kindergarten program is available to the parents through a contractual arrangement with another community agency. It's our understanding, that additional half-day programs are offered by the YMCA, YWCA, and the Johnson County Parks and Recreation Department. In some cases, they "share" a kindergarten teacher with the district. Also, they sometimes rent space from us for some of these programs.

One important feature of the bill is that it does not "mandate" full time kindergarten. It simply provides the funding to assist those districts that can, and wish to move in this direction. In our case, we could not, at this time, put a full-time program in all schools because of a lack of classroom space. However, as we continue to need new elementary schools in the growing parts of the district, it will be our plan to consider sufficient classroom space to accomodate a full-time program.

Educationally speaking, we believe the evidence is pretty clear that full-time kindergarten is a definite advantage, and it is our intent to move more and more in that direction in the future. Passage of HB 2870 would assist in funding such an effort, and we urge you to give your favorable attention to this bill.

I would be happy to attempt to answer any questions.



KANSAS NATIONAL EDUCATION ASSOCIATION / 715 W. 10TH STREET / TOPEKA, KANSAS 66612-1686

Susan Chase Testimony Before
House Education Committee
Monday, February 16, 1998

Thank you Mr. Chairman and members of the committee. I am Susan Chase and I represent the Kansas National Education Association. I appreciate this opportunity to speak in support of HB 2746.

One of the most important components of a quality school is professional development for the employees of the district. Unfortunately, expenditures for these programs are too often severely limited. This causes school districts to attempt to find ways to maximize the costs, sometimes to the detriment of the overall program.

With the current restriction of funds, which does not allow districts to spend state inservice funds for stipends or salary for time outside a teachers contract time, many districts are forced to only allow inservice to occur during the regular school calendar. This can limit the type as well as the time spent on inservice. We believe that districts should have as much flexibility as possible in order to ensure quality professional development.

We do however realize that the state's commitment to quality teaching is not met by just providing flexibility. The state must also examine the funding it is currently providing. Currently, Kansas is only funding 46% of its share of inservice costs according to the formula provided by law. This means that local school districts are providing more than two-thirds of the funds for professional development. At a time when the state is continuing to demand high student achievement, continuous improvement and innovative approaches to learning, more emphasis needs to be directed toward quality inservice. The only way to do this is to adequately fund the state's share of inservice money.

KNEA urges the members of this committee to not only allow the flexibility this bill offers but to also place additional funds for inservice in the budget.

Thank you for your time.

House Education
2-16-98
Attachment 11

**Testimony Before the Kansas House of Representatives
Education Committee in Support of House Bill 2746
February 16, 1998**

**Linda Aldridge, Ed.D.
Principal, David Brewer School, Leavenworth, KS**

Mr. Chairman and Honorable Members of the Education Committee:

The amendment before you is supported by the David Brewer School Site Council. This council, composed of parents and staff, is responsible for demonstrating student growth in academic achievement. The council urges your support of this bill for the following reasons:

1. House Bill 2746 allows teachers to be paid from staff development funds for participation in inservice activities occurring during noncontractual time.
2. Interpretation of the current statute governing staff development funds disallows use of such funds to be directly paid to teachers. Schools, therefore, are faced with the choice of scheduling staff development activities during normal school hours or inviting teachers to participate in inservice activities on an unpaid basis. While teachers have been remarkably receptive to invitations to work on an unpaid basis, it is frequently necessary to schedule inservice activities during times when school is in session. This necessitates the hiring of substitute teachers to cover classrooms while teachers participate in staff development activities.
3. During the current school year, substitute teachers have been paid for 51 days of work to create time for staff development activities. This translates into 344 hours of instructional time that was less productive because the regular classroom teacher was replaced by a substitute teacher. In many instances, the classroom teacher would have preferred to receive inservice opportunities during noncontractual time thus yielding the following advantages:
 - Students remain with the teacher who can best respond to their academic and social needs.
 - The teacher does not expend time and resources in preparing for a substitute teacher.
 - Classroom productivity levels remain unchanged.
 - The classroom teacher is directly compensated for professional, noncontractual time spent engaging in critical staff development activities.

As staff development needs are estimated for the coming school year, hours needed for inservice will certainly increase. Inservice time included in the yearly schedule is woefully inadequate to address the explosion in staff development needs experienced in our school. This explosion can be attributed to the following:

- Incorporation of computer assisted instruction into classroom routines requires massive education of staff to develop the necessary knowledge base for selection and utilization of appropriate hardware and software.
- Legislated demands for evidence of increased student learning in multiple academic areas has prompted a need to integrate subject matter to capitalize upon student interest, better utilize academic learning time, and to improve achievement. The process of *curriculum integration* accomplishes these goals, but requires deep change in the nature of instructional activities planned and implemented in classrooms. Such change is driven by staff development opportunities.
- Changes in expected student outcomes in the areas of reading, writing, math, science, and social studies require modifications in instructional approach and assessment techniques. Teachers need staff development opportunities to absorb and implement these modifications.

House Bill 2746 allows the David Brewer Site Council to better utilize precious staff development time and dollars. Students benefit when reliance upon substitute teachers is reduced. Your support of this bill represents a commitment to careful spending of public funds while improving services received by Kansas children.

TESTIMONY BEFORE THE KANSAS HOUSE OF REPRESENTATIVES
EDUCATION COMMITTEE IN SUPPORT OF HOUSE BILL 2746

February 16, 1998

David P. Winans, Ed.D.
President-Elect Kansas Staff Development Council
Assistant Superintendent Leavenworth USD - 453

Mr. Chairman and Honorable Members of the Education Committee:

Though the first glance of this amendment is good reason for its adoption, there is more than meets the eye in this clarifying amendment.

- It should be adopted for the better insight it will provide Kansas lawmakers as to the state's investment in staff development.
- It should be adopted to reveal the lack of conscience currently existing in too many of our school districts.
- It should be adopted for teachers and citizens to better see what can be done differently.
- Most importantly, its adoption will help see to it that boys and girls learn the correct things, better.

The amendment before you brings the support of the Kansas Staff Development Council Executive Board which is proud that since 1983, the state of Kansas has correctly identified through statute the importance of staff development to the success of educating young people. This amendment will keep staff development resources as expenditures for teacher learning. Present regulations seem to prohibit teachers from receiving a stipend for attending inservice workshops or conferences (91-1-146e; ¶b; section 5). Some districts, however, have provided stipends to teachers as consultant fees and honorariums (91-1-146e; ¶a; section 1). To the Kansas Staff Development Council, an approximately 600-member organization representing all parts of our great state, it is clear that school districts and auditors have not interpreted this regulation consistently. Currently, an inequity exists because some districts have paid a stipend to teachers participating in staff development activities while some have not paid teachers unless they prepared a presentation for other teachers. The amendment before you will uphold the intention of statute that staff development expenditures not supplant salary.

There is a short run disadvantage to this amendment. This change could increase the demand for matching dollars from the inservice fund. As you know, the inservice fund is a fixed amount each year, and the amount any one district receives is prorated based upon statewide participation in staff development. This amendment, if enacted, appears likely, in the short run, to cause less support per district for the development of our children's teachers. As this disparity becomes more apparent it would be the hope of KSDC that further refinements in this statute would be made.

In spite of the current statute language, some districts provide resources for inservice programs from funds other than the inservice fund. The language I refer to reads: "All moneys received by the school district from whatever source for inservice education programs established under this act shall be credited to the fund established by this section". By permitting teachers to be paid for attending an inservice program that occurs in non-contract time, this amendment will eliminate one reason for a district to support inservice from its General Fund.

Since some expenditure for staff development originate in funds other than the inservice fund, the state of Kansas can not know with certainty the extent of staff development available to its teachers.

When Marilyn Bates, a staff developer for Instructional Theory Into Practice, spoke to KSDC several years ago she called staff development the conscience of an organization. To expect different, and better, results from students requires a conscientious effort to provide teachers with the opportunity to learn and improve instructional delivery. More poignantly, if you do what you've always done, you'll get what you've always got! An organization would truly be without conscience to expect improvement without the opportunity for learning. The State of Kansas should know the resources that are being utilized for staff development in its public schools and this amendment will encourage more complete reporting of the expenditures by school districts.

We would also hope that passage of this amendment would bring to this committee's attention the apparent lack of staff development that is occurring in Kansas school districts. With limitations already noted, the current statute provides strong incentive for districts to establish an inservice fund that is, at least, equal to one quarter of one percent of the district's general fund. Though it has been diminishing, the incentive is a match for dollars spent up to that level of 0.25%. In the most recent year for which data are available, 177 Kansas school districts had less than this level of expenditure from the inservice fund. (Kansas Association of School Boards 1995-96 compilation of USD expenditures.) The teachers in 58% of our school districts were expected to get different results with their same prior knowledge. Which is, by the way, one of the better definitions of insanity: To expect different results while doing the same thing.

The same data show that the school district inservice fund with the highest proportion of the General fund is only 1.26%. With credit to Montezuma for the better conscience of their organization, consider that estimates of typical investment in staff development range from 6% to 10% of operating expenditures. (Orlich, Donald Staff Development: Enhancing Human Potential. (1989) Allyn and Bacon; p. 99) Jack Welch, CEO of General Electric, rescued this giant from ruin through intense, and extensively funded, staff development of G. E.'s managers. (Tichy, N. and Sherman, S. Control Your Own Destiny, Or Someone Else Will. (1994) Harper Business). No less an effort should be occurring in each of Kansas's school districts. This amendment will remove an excuse for funding staff development from sources other than the Inservice Fund and, in so doing, make more clear the lack of expenditure for staff development in Kansas school districts.

Thank you, Mr. Chairman.