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Educational leaders must begin to look ahead, not just to next year, but into the future, and they must begin to plan accordingly.

# Predicted national, state, and educational issues derived from a modified Delphi study for the formulation of long-range educational policies

by Robert R. Simmons and Nancy E. Kaldor

Over the past two decades, leaders of the educational community in most states, and Kansas is no exception, have had the opportunity to be involved with what has come to be called the administration of growth. In the next two decades this will change. Leaders trained to deal with issues relating to the administration of growth will now be confronted with a new set of problems unique to the administration of decline. Educational leaders must begin to look ahead, not just to next year, but into the future, and they must begin to plan accordingly. "Looking ahead is not just a matter of curiosity. It is also a matter of effective adaption—Hegel once wrote that 'Hell is truth seen too late.' Looking ahead is also a matter of leadership, of trying to seize hold of the future and to guide it, and not just to react to what otherwise will happen" (Carnegie Council, 1980).

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Two of the greatest periods of programmatic advancement in education have also been periods of growth, 1870 to 1890 and 1960 to 1980. The period 1982 to 2001 may well be another turning point in education, programmatic advancement in a declining environment. The world of the year 2000 seems likely to be far more different from the world of 1980 than the world of 1930 was from that of 1910.

Never in the history of education have administrators had to deal with the multitude of problems which are now arising. Enrollment decline, inflation, soaring energy costs, aging facilities, and shifting financial support are just a few of the many problems which are facing the educational community. All of the above problems are affecting or will affect education not only in Kansas but throughout the country.

Kansas is at a major crossroads in education. Population changes, decline in birth rates, depletion of natural resources, and the changing economy are challenging the very basis of state educational offerings and their funding. Traditional concepts of institutional autonomy, enrollment-based funding, and competition among institutions can no longer adequately cope with the educational circumstances being faced. Competition and demand work well when there is affluence to support multiple approaches. With inflation, a changing economy, technological modifications and different social values, a more programmatic approach appears essential which stresses instructional performance and an integrated set of institutional roles (Lujan, 1976).

Every state must realize the necessity for immediate action, for short-range options and long-range planning concerning education. States are emphasized because more and more of the total responsibility for education will fall under the auspices of the state as we approach the twenty-first century. It is one of the purposes of this article to act as an 'early warning' system to the Kansas educational community.

In the past, educational institutions needed only to predict how to grow and what to do with their rapidly expanding facilities and increasing enrollments. Now many factors are impacting on our educational process which could have a detrimental effect.

Since the USSR launched its SPUTNIK in 1958, the federal government has been a prime mover in education. The National Defense Education (1958), John Kennedy's "New Frontier," the Cooperative Research Program through the Office of Education (1960), the Elementary and Secondary Education Act (1965), the Higher Education Act (1965), and a continuous chain of other federally related activities have all aided the unparalleled expansion of the educational system.

Now as the federal government withdraws financial support, as the economy fluctuates, as interest rates remain unstable, as enrollments decline, and as unemployment rises, state educators and policy makers need up-to-date, predictive information. This predictive information need not be a scenario of things to come but rather an informative assessment of trends that may continue as well as arise in the foreseeable future.

The need exists for continuous exploration into the probable economic and social climates of the state of Kansas and, with these predictions in mind, forecast what the educational environment might be on an ongoing basis. To this end, this article plus additional continuing studies can give educators, legislators, and the general interested populace of Kansas some of that information.

Continuing research into the educational climate of Kansas for the year 2001 and beyond will not only be beneficial to all levels of the educational community, but will also be of paramount importance. Maintaining and improving the Kansas educational system over the next twenty years will require a multitude of related decisions involving a broad base of participation both within and without the system. Given the task of maintaining and improving the system, predictive information on what the educational climate will be in the future is needed. With this information the decision processes can be improved.

Traditionally education follows the 'crises' pattern, needing impending disaster before action is taken. In the past these 'crises' situations often meant a temporary setback and the system could recover on its own. If we are to plan more intelligently for the future and assume the leadership role that seems appropriate, it is imperative that we begin thinking about the changes that are to come and not rely on 'crisis' decision making (Spitzer, 1971).

In Shane's new book, *Educating for the New Millennium*, the point is made that "the knowledge generated in the 20th century exceeds that accumulated from all previous centuries" (1981). Since the establishment of the Kansas educational system, traditionalists have considered the future of education as a continuation of the past and have therefore concerned themselves with a study of past procedures and proven policies. Slowly, the academic world is beginning to understand the importance of what lies ahead. The future is seen not simply as a continuation of the past, but as an "effect" of past and present "causes" (Owings, 1978). Bell asserts that the world is coming to realize that "the world of the year 2000 has already arrived, for the decisions we make now . . . the future is committed . . . the future . . . begins in the present" (Bell, 1974). If our 'present perceptions' are to be valid and accurate as well as useful, we need to glimpse the possibilities of the future.

### The Study

The instrument utilized in this study was a three-round Modified Delphi. As a result of this Delphi survey, a set of empirically derived national, state, and education-related issues were identified as pertinent in the formulation of long-range policies for education, primarily in the state of Kansas.

Random samples were drawn from four major populations: the Kansas Banking Association, the Kansas Higher Education Community, the Kansas Chamber of Commerce, and School Principals from the State of Kansas.

In the initial round of the Modified Delphi, participants were asked to rate 150 prepared statements of trends or events which might affect Kansas or Kansans by the year 2001 as to the appropriateness for further study. In addition, each respondent was requested to generate any other concise statements of events which he or she believed might occur. The statements were divided into three major areas: national, state, and educational concerns, with 50 events in each area.

Upon return of the first round, the twenty-five items in each major area receiving the highest "Most Appropriate" classification were assembled. Due to the lack of interest in respondent-generated statements, this section was eliminated from the study.

The second round consisted of the seventy-five statements chosen in Round I. Each respondent was asked to rate each statement on a five-point, Likert-type scale, indicating (1) the impact the statement might have on the fu-

ture of Kansas, and (2) the impact the statement might have on education. Upon the return of the second round, the ten items in each major category receiving the highest combined total were selected for the final third round.

In Round III, participants were asked to assign a time frame of occurrence for each of the items, utilizing a five-year graduated scale, from 1982 through 2001, plus Never.

The following items were selected as predictions of future events by at least three of the four groups represented as being of paramount importance to education in the next twenty years.

1. The national debt of the U.S. will be, proportionate to the Gross National Product, larger than it is now.
2. Interest rates will be stable at less than a double-digit amount.
3. The U.S. dollar will no longer be the standard of the world economic market.
4. New fields of endeavor and discoveries will result from the use of manned satellites and space shuttle aircraft.
5. The federal government will be operating on a balanced budget.
6. An economic crash similar to 1929 will have occurred during the period between 1983 and 2001.
7. A higher percentage of women will be in the work force.
8. The major source of public school finance support will switch from local property taxes to a state base of support.
9. A large number of new industries will locate in the state.
10. The water table in Kansas will be depleted.
11. Natural gas resources within the state will have been exhausted.
12. Social Security will go bankrupt placing many Kansas residents in need of state aid.
13. An exodus of young people from the state will continue at about current rates.
14. Oil reserves within the state will have been exhausted.
15. Rural population of Kansas will have declined.
16. Education at all levels will find it increasingly difficult to compete with industry in retaining talented personnel.
17. There will be a shift of orientation in secondary school toward more vocational and other job-related courses and classroom experiences.
18. A greater percentage of college age youths will decide not to attend college.
19. Education at all levels will become more accountable for ensuring student achievement and performance.
20. More community technical/vocational colleges will exist.

It should be evident that all of these items will, if they come to pass, have a decided effect upon Kansas education. As John Galsworthy once said, "If you do not think about the future, you cannot have one."

Since the end of the last century, the basic organization of higher educational institutions has not changed appreciably.

"Education in this highly complex, rapidly changing world must also change. Learning, regardless how it is acquired, can no longer be conceived as a mechanical process. It is not something that can be put together as plumbers, carpenters and masons put a house together. Social change and the prospect of a society characterized by dynamic contraction in the use of resources and by developments in microelectronics and robotics simply do not lend themselves to the rigidity of traditional approaches to the curriculum" (Shane, 1981).

Educators, administrators, legislators, parents and students must be aware of the need for lifelong education, both formal and informal, extending and available from the earliest years of childhood to advanced maturity. They must also be aware of the forthcoming problems which higher education must face in the near future, not the least of which will be enrollment. Higher education operates in an enrollment-driven system which works far better in a period of expansion than in a period of contraction. In expanding periods, excellence was the theme—with contraction it is survival. Thinking in the higher educational community must shift from quantitative growth to qualitative growth.

Several areas of concern unique to Kansas are emerging. In the area of natural resources, it is possible that, even though tax incentives will be instituted for the exploration of gas and oil, the natural reserves of gas and oil may be exhausted or severely depleted by the year 2001. In terms of the educational community, this means a possible redistribution or loss of population in broad areas of the state. Some institutions will not have enough students to maintain existence; others may well be overcrowded. This will also mean a decided loss of income in the state in revenues from the sale of the products, from wages to employees, and from decreasing property values in the affected areas. Inasmuch as the finance of public education is based in part upon a property tax, and the finance of higher education institutions is based in part on enrollment, this redistribution or loss of population will seriously affect the educational institutions in selected areas of the state. Conversely, the migration of this population to areas, probably in the eastern part of the state, will crowd the existing educational facilities.

It is possible that, at the present rate of consumption, the water table in Kansas will be depleted or seriously lowered before 2001. The probability exists that the western half of the state would or could be devastated. At a replenishment rate of an estimated one-fourth inch per year in the water table compared with a predicted usage rate of about two and one-half inches per year, the result is a continued deficit of approximately two inches annually. With the lowering water table and with 95 percent of the land in Kansas in agricultural use, our major resource, grain, would be severely affected. Again, an exodus of population either from the state or from the west to the east would seriously affect the educational community. Even with the water table relatively intact, there continues to be an exodus of families from rural to urban areas, as the

number of family farms decrease and the population in rural areas decreases accordingly.

Kansas educational problems do not just lie within the boundaries of the state. More and more national trends and decisions affect our educational system. It may be worthy to note that in this study, 47% of the bank presidents and 46% of the Chamber of Commerce predict an economic crash similar to 1929 to occur before 2001; 65% of the bank presidents, 59% of the professors and 59% of the Chamber of Commerce predict that by 2001 the U.S. dollar will no longer be the standard for the world economic market. The majority of all four groups predicts that interest rates will stabilize at less than a double-digit amount.

Not selected in this survey but considered to be of major importance is the upcoming older, tenured faculty. "The percentage of older faculty members with tenure keeps rising as the rate of new hirings goes down. The last heavy period of faculty hiring was from 1960 to 1970; the next will be from 2000 to 2010. The modal age of tenured faculty members in four-year institutions in 1980 was 36 to 45; in 2000 it will be 56 to 65. In the year 2000 there will be far more faculty members 66 and over than there are faculty members 35 and under. An older faculty is a higher paid faculty—adding costs; less resilient in adjusting to new fields and farther removed from the age of the students" (Carnegie Council, 1980).

With the myriad number of problems now facing the educational community and with the prediction of even more to come, vast amounts of information of this type will be required to make valid decisions pertinent to the future of education.

To glean this required information for the educational community, specialized studies such as a Directed Delphi should be conducted on many of those specific events.

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