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ABSTRACT

In 1989, the Federal Interagency Committee on Education (FICE) developed an agenda for research on rural education that included 6 priority topics containing 44 areas of research and development. In an effort to validate, update, and expand the contents of that agenda, a three-round modified Delphi study was carried out with 29 members of the Rural Education Special Interest Group of the American Educational Research Association. In the first two rounds, participants rated FICE areas of research and development and suggested new areas. In the third round, participants reviewed those areas with the highest ratings, assigned them an order of priority, and allocated a hypothetical \$5 million research budget. Of the original 44 FICE research areas, 31 were retained; 23 new areas were suggested, and 16 of these were retained. The broadest major topic in the new agenda was the overall effectiveness of rural schools; this topic contained 13 areas for research and development and was given the highest priority and the largest budget allocation. School and community partnerships on behalf of rural schools was ranked second, followed by financial support for governance for rural schools, human resources for rural schools, use of technology in rural schools, and curricular provisions in rural schools. (SV)

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Priorities for Research on Rural, Small Schools:
Results of a Delphi Study With a Panel
of Rural Researchers

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ABSTRACT

Two years ago at a business meeting of the Rural Education Special Interest Group (RE/SIG) of the American Educational Research Association (AERA), the members decided to try a project that would facilitate members being in touch more between their annual get-togethers. One vehicle that all agreed should be a forum for members is the group's newsletter; the other was this study. Therefore, the chair and some of his colleagues at AEL designed this study and conducted it over a two year period (1992-93).

The rationale for the study was that An Agenda for Research and Development on Rural Education received little comment or discussion in professional circles after it was developed in 1989 and disseminated in 1991. Here was an opportunity to involve a concerned professional group in an exercise that would produce reflective commentary that could validate, update, and extend the contents of the original agenda.

SUMMARY

The Delphi study was conducted with selected members of the RE/SIG of AERA. The focus of the Delphi study was the Federal Interagency Committee on Education (FICE) Subcommittee on Rural Education's 1989 examination of the state of rural education. This study was designed to expand upon the FICE's six priority topics for research. Also, the study investigated how the same panel of researchers would allocate an additional research center budget of \$5,000,000 among the priority topics (a recent study of the nation's R & D centers concluded that \$5,000,000 is the basic annual funding needed to operate a national R & D center). Studying the range of allocations should assist in understanding the panel's prioritization of the six topics.

Procedures Used

AEL staff implemented a modified Delphi study with a purposeful sample of 29 RE/SIG members. (Originally, 30 RE/SIG members were selected for the Delphi study. One selected member did not return AEL calls and did not participate in the study. Therefore, the sample for all three rounds of the Delphi study was 29). The purposeful sample was selected by the authors to provide a representation of the United States.

Round One

Items on the first round of the Delphi study included the six priority topics and the research and development areas as generated by the FICE Subcommittee on Rural Education. These six topics were:

- Major Topic 1: The Overall Effectiveness of Rural Schools
- Major Topic 2: Curricular Provisions in Rural Schools
- Major Topic 3: School and Community Partnerships on Behalf of Rural Schools
- Major Topic 4: Human Resources for Rural Schools
- Major Topic 5: Use of Technology in Rural Schools
- Major Topic 6: Financial Support for Governance for Rural Schools

The Delphi participants were asked to examine each research and development area under the specific topics and indicate the degree to which they agree this area should be researched. Participants were provided with the following five-point scale: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. Also, participants were asked to suggest other areas for research and development within the six specific topics. Finally, participants were asked to nominate other priority topics and areas.

Items for the first round were retained if 90 percent of the respondents Strongly Agreed, Agreed, or were Neutral with/toward the item.

Round Two

The second round of the Delphi study contained the priority topics and areas for research and development participants provided in Round One as write-ins. Participants were asked in Round Two to review these newly suggested topics and areas of research and development and indicate the degree to which they agree these areas should be researched. The same five-point scale as in Round One was used. Also, participants were asked to provide areas of research and development under the newly suggested priority topic.

Items for Round Two were retained if 90 percent of the respondents Strongly Agreed, Agreed, or were Neutral with/toward the item.

Round Three

The third round of the Delphi study contained the major topics and suggested areas of research and development retained from Rounds One and Two. Participants were asked to review these topics and areas and complete two parts for the third round.

Part A of Round Three asked participants to prioritize the major topics in the order of priority they believed the topics should be researched.

Part B of Round Three asked the participants to develop a budget to address the major topics retained in the earlier rounds. Participants were asked to assume the role of a director of a newly formed national R & D center for rural educational research. In this role, they have a \$5,000,000 budget to allocate for rural educational research. Participants were given 10 blue stick-on dots. They were instructed to think of each dot as 10 percent--\$500,000--of their research and development budget. Participants were asked to allocate their research and development budget across the six major topics in any way they deemed necessary.

Preliminary Findings

These findings represent preliminary work done on the data collected from the Delphi study. Further analysis is currently being conducted.

- o In the 1989 FICE agenda, there were six major topics and 44 areas of research and development within those topics.
- o Delphi participants retained 31 (70%) of the original 44 research and development areas suggested by FICE.
- o Delphi participants contributed 23 new research and development areas to the study; 16 (70%) of those were retained.
- o One major topic was suggested by RE/SIG members, but it wasn't retained.
- o The final Delphi instrument contained six major topics (those generated by FICE) and 47 areas of research and development (31 or 66% were generated by FICE and 16 or 34% were generated by RE/SIG members.)
- o Following is a breakdown of the research and development areas per each major topic. This breakdown indicates the number of areas generated by the FICE Subcommittee and the number of areas generated by the Delphi participants.
 - o Major Topic 1 contained 13 research and development areas on the final instrument. Six of these areas (46%) were generated by the FICE Subcommittee on Rural Education and seven (54%) were generated by the RE/SIG members.
 - o For Major Topic 2, three areas were retained for Round Three. One area (33%) was generated by the FICE Subcommittee on Rural Education and two (67%) were generated by the RE/SIG members.
 - o Nine research and development areas were retained under Major Topic 3 for the third round. Of these areas, eight (89%) were generated by the FICE Subcommittee on Rural Education and one (11%) was generated by the RE/SIG members.
 - o Seven research and development areas were retained for Major Topic 4. Of these areas, six (86%) were generated by the FICE Subcommittee and one (14%) was generated by the RE/SIG members.

- o For Major Topic 5, nine research and development areas were retained for the final instrument. Of these areas, six (67%) were generated by the FICE Subcommittee and three (33%) were generated by the RE/SIG members.
- o Under Major Topic 6, six research and development areas were retained. Of these areas, four (67%) were generated by the FICE Subcommittee and two (33%) were generated by RE/SIG.
- o The following table displays the ranking of the six major topics, as found in the third round of the Delphi:

Table 1

| Major Topic | Total Point Value | Ranking |
|-------------|-------------------|------------|
| #1 | 102 | 1 |
| #3 | 36 | 2 |
| #4, #6 | 12 | Tied for 3 |
| #2, #5 | 6 | Tied for 4 |

- o The following tables display the budget allocations for the six major topics, as found in the third round of the Delphi. Table 2 displays the frequencies and Table 3 displays the mean scores:

Table 2

| Major Topic | Frequencies of Dots | | | | | | | | | | Missing |
|-------------|---------------------|----|---|---|---|---|---|---|---|----|---------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1 | 10 | 7 | 6 | 4 | 1 | | | | | | 1 |
| 2 | 15 | 5 | | | | 1 | | | | | 7 |
| 3 | 14 | 9 | 4 | | | | | | | | 2 |
| 4 | 11 | 14 | | 1 | | | | | | | 3 |
| 5 | 10 | 13 | 5 | | | | | | | | 1 |
| 6 | 13 | 9 | 6 | | | | | | | | 1 |

Table 3

| Major Topic | Mean |
|-------------|-------|
| 1 | 2.250 |
| 2 | 1.522 |
| 3 | 1.630 |
| 4 | 1.654 |
| 5 | 1.821 |
| 6 | 1.750 |

Further data analysis is currently being conducted.

DELPHI STUDY

Areas for Research and Development on Rural Education
(*Original items, generated by the FICE Subcommittee, retained)

Major Topic 1: The Overall Effectiveness of Rural Schools

- *Area A: Improve access to educational opportunity in isolated rural communities.
- *Area B: Identify the problems unique to the delivery of education in isolated rural communities in the following special populations: handicapped, disadvantaged, and gifted.
- *Area C: Identify characteristics of effective rural schools.
- *Area D: Conduct evaluation studies of student achievement in rural schools.
- *Area E: Assess the federal role in rural education.
- *Area F: Assess the impact of educational reform and rural schools.
- Area G: Assess the degree to which rural schools are educating students for participation in a national economy vs. a local economy.
- Area H: Assess SEA role in rural education.
- Area I: Assess teacher education institutions' role in rural education.
- Area J: Assess student expectations--view of the future.
- Area K: Assess the ways in which rural school culture breaks down class distinctions or promotes increased cultural understanding.
- Area L: Assess the role of rural schools in an "integrated services" approach to meeting community needs.
- Area M: Understand the change process and extent to which change initiated in one part of school can encourage change throughout school culture.

Major Topic 2: Curricular Provisions in Rural Schools

- *Area A: Provide adult literacy improvement in isolated rural communities.
- Area B: Assess satisfaction of students, teachers, administrators, parents, and community leaders with current curriculum and instruction.
- Area C: Assess how state and federal curriculum development projects consider the needs of rural schools.

Major Topic 3: School and Community Partnerships on Behalf of Rural Schools

- *Area A: Identify effective school/community/private sector partnerships.
- *Area B: Assess how federal/state/local policies are impacting rural schools and rural communities.
- *Area C: Review legal procedures and issues pertaining to school and community partnerships on behalf of rural schools.
- *Area D: Examine the factors of rural community economies that influence rural students' decisions to remain in school and graduate.
- *Area E: Assess if Native American communities, or their learning environments, differ from other rural communities.
- *Area F: Assess the role of the rural school in promoting employability.
- *Area G: Identify effective alternative schooling programs in the rural communities.
- *Area H: Identify the social and cultural issues of isolated rural communities that impact rural education.
- Area I: Assess level of parental and community involvement in rural area.

Major Topic 4: Human Resources for Rural Schools

- *Area A: Identify successful strategies for the recruitment of qualified personnel to rural schools.
- *Area B: Identify successful strategies for the retention of qualified personnel in rural schools.
- *Area C: Identify strategies that have been successful for releasing rural teachers from their classrooms for professional development.
- *Area D: Identify successful leadership styles of effective rural school administrators.
- *Area E: Identify the strategies used by administrators to comply with the state certification mandates.
- *Area F: Assess the impact of recent state certification mandates on teacher availability in rural schools.
- Area G: Identify effective beginning teacher mentoring programs for rural schools.

Major Topic 5: Use of Technology in Rural Schools

- *Area A: Identify rural schools that have demonstrated effective use of advanced interactive instructional technology.
- *Area B: Assess the impact of the advanced technology on rural school curriculums.
- *Area C: Assess the effect of advanced technologies on traditional rural values of closeness, connection, or personal relationships in learning interactions.
- *Area D: Assess the implications for instructional staff and support personnel who are implementing advanced technology in rural school communities.
- *Area E: Identify the staff development strategies that have been most successful in helping schools, teachers, and support personnel embrace and integrate advanced technologies into their overall rural school system.
- *Area F: Identify rural schools that successfully have implemented distance education via telecommunications.
- Area G: Conduct technology cost effectiveness studies.
- Area H: Assess level of private support for use of technology in rural schools.
- Area I: Identify innovative, low-cost alternative programs to those delivered via telecommunications.

Major Topic 6: Financial Support for Governance for Rural Schools

- *Area A: Analyze the policies of school finance in rural communities.
- *Area B: Identify alternatives to school consolidation for rural school communities.
- *Area C: Assess how federal and state fund distribution formulas have impacted rural schools in their operations and course offerings.
- *Area D: Assess the impact on rural schools of state school reform policies on course quality, diversity of course offerings, and student outcomes.
- Area E: Look at ways to equalize salary levels for teacher/administrators in rural schools compared to salary levels for those in large communities.
- Area F: Compare and contrast the roles and strategies of rural interest groups in the several school finance court cases in the states.