The objectives of this study are to determine the relationship of curriculum development and inservice activities in British teacher centers under real and ideal conditions, the effects of selected organizational variables on centers, and the degree of teacher involvement in programs. Data were collected from 58 teacher center directors and from visits to 18 centers. Priorities for curriculum and inservice activities differed significantly under real and ideal conditions. Work with individual teachers or schools was favored over national projects. Teacher involvement was related to certain center characteristics and other factors. Implications for the United States are discussed. (Author)
Background

British teacher centers had their beginnings first in the curriculum reform movement in the early 1960's and, later in the decade, out of the need to assure teacher involvement in school reorganization. Assistance to beginning teachers particularly in urban areas was also a factor in the establishment of many centers (Thornbury, 1974). The original centers were special purpose in nature, i.e., devoted to a particular discipline and to a particular curriculum development program such as Nuffield Mathematics. Their principal purpose was to serve as centers for field testing and revision of new materials based on feedback from practicing teachers. It was noted by the curriculum developers and by other observers, however, that the teacher centers not only were vehicles for achieving curriculum objectives, but that they also served to encourage the general professional development of teacher participants.

Our of this experience and with the encouragement of the Schools Council (1970; 1973) Local Education Authorities begun to set up teacher centers of a general purpose type. These differed from the earlier specialist centers in that their charge involved the needs of teachers across the entire span of the curriculum, particularly at the primary (elementary) level. A third type of British center, the resource center, can also be distinguished. The

function of the resource center is to provide special assistance in the design
and development of audio-visual materials, teaching aids and print materials
and to serve as a distribution point for commercially available references
and materials too expensive to be kept regularly in individual schools. The
resource centers tend to be general purpose in terms of the breadth of subject
areas served, but their functions in curriculum development and in-service may
be more limited and specialized than those of the general purpose centers.

Teacher centers, particularly of the general purpose type, have enjoyed
a remarkable growth in Britain over the last decade. Starting with a few
centers in 1964 it is estimated that there are now 650 to 750 such centers
scattered throughout the country. Their principal stated functions are cur-
riculum development and in-service education with particular emphasis on
teacher involvement in identification of needs and design of programs. Other
functions of the centers include providing information services through news-
letters and other means to schools and teachers in their geographic area and
serving to some degree as social centers and meeting places for teachers. The
extent of this latter function may depend on the size of the center, its loca-
tion in a heavily populated area, and the degree to which the teachers' union
is involved in the center's program and activities.

British centers of all types receive their basic support in the form of
staff, facilities, and budget from Local Education Authorities. Center wardens
(directors) are responsible in a nominal fashion to an official of the LEA,
but they enjoy a great deal of freedom in designing the program and activities
of their center. Budgets for centers are quite limited. As a result, the
extent of the program and the attractiveness of the center itself depends more
on the ingenuity of the warden, staff, and teachers than on the availability of funds to be expended.

Teacher centers have been viewed by American observers (Bailey, 1971; Rogers, 1976) as new vehicles to at least complement and perhaps in some instances, replace graduate work and school-based in-service education as means to continued professional growth among teachers. Centers seem to meet a need for continued professional development of the teacher over the entire span of his career and for encouraging teachers to be self-directed and involved in their own professional growth. Despite the extent of interest in teacher centers and the development of a substantial number of centers in the United States, there is precious little empirical research regarding the nature of curricular and in-service programs in either British or American centers. Thornbury (1974) lists a few Masters level theses dealing with various aspects of the work of British centers, but Lickona and Hasch (1976) indicate that research on center impact "appears to be non-existent." Most studies of American centers (Chittenden, et al., 1973; Scheers, 1974) focus on the effects of centers whose programmatic effort is directed toward a general mode of education characterized as open or non-traditional. Devaney and Thorn (1975) however, have described 22 American centers which they studied in considerable depth.

Since curriculum development and in-service education are seen as the principal vehicles for the professional development of British teachers, and since these activities are integral to many American centers, it seems appropriate to attempt to delineate more accurately what the curriculum development emphases are in British centers and what are the relative priorities for
in-service education and curriculum development. In Britain there were, at the time of this study, more than 600 centers founded over a time span of ten years and ranging in size from those serving less than 200 teachers to those serving several thousand teachers. Therefore, it was thought that the variables of curriculum development emphasis and curriculum development/in-service education priorities should be examined in relation to centers size, represented by number of teachers served, and stage of development as represented by date of founding of the center. Further, since British centers have been described by one teacher center warden (Gough, 1975) as only at the "cottage industry" phase of development, an attempt was made to examine the variables of curriculum development emphasis and in-service education as they are perceived under present conditions (real) and as they might be perceived under optimum conditions (ideal).

Objectives

The specific objectives of this study then may be stated as follows:

1. Under real conditions, are there significant differences in the curriculum development emphases preferred by teacher center wardens (directors)?

2. Under ideal conditions, are there significant differences in curriculum development emphases preferred by teacher center wardens (directors)?

   Corollary: Is the developmental stage of teacher centers as defined by their age a factor in preferred curriculum emphasis under either real or ideal conditions?
3. What is or would be the most preferred curriculum development emphasis under various levels of support?

4. What are wardens' perceptions of priorities for in-service education activities and curriculum development activities in teacher center programs, and do these priorities differ under real and ideal conditions?

Procedure

General - The study was part of a more detailed examination of British teacher centers conducted over a period of seven months using a combination of: (1) participant observer techniques in a teacher center located in a city of moderate size; (2) a questionnaire administered to 58 wardens attending the National Conference of Teacher Center Wardens at Exeter University in 1974; and (3) on-site structured interviews and program observations conducted in 18 centers selected from six different local education agencies. The data reported here is limited to findings from the questionnaire but a few impressions gained from participation, interviews, and observations in teacher centers are included in the interpretive section of the report.

Questionnaire - The questionnaire was developed and field tested using a sample of nine teacher center wardens from one local education authority. It elicited information via Likert-type items regarding wardens' perceptions of four curriculum development emphases identified as follows:

A. National-P: Presentation of national curriculum projects
B. National-M: Modification of national curriculum projects
C. School-based: (See Appendix A)
D. Teacher-based: (See Appendix A)
The definitions of the four emphases as used in the questionnaire are presented in Appendix A.

All subjects rated each curriculum development emphasis on a five point scale to indicate the extent of each curriculum emphasis in the existing programs of their centers and the extent to which each curriculum emphasis would be preferred under ideal conditions. Priorities were also determined for in-service activities vs. curriculum development activities in present center programs and in programs conducted under ideal conditions of support. Information was also collected regarding such variables as the age and type of center, the number of teachers served, the relationship of the center to colleges, universities and institutes of education, and the factors considered important in curriculum development.

Data Analysis - Responses regarding curriculum emphases and priorities for curriculum development versus in-service education were treated using an analysis of variance repeated measures program. Differences among means, where significant, were examined using the Newman Keuls procedure. Certain other data secured from the questionnaire is reported descriptively.

Characteristics of the Sample - Fifty-four of the fifty-six respondents to the questionnaire classified their centers as primarily general purpose in nature. In size, centers ranged from those serving 500 teachers or less (N = 10) to those serving over 2000 teachers (N = 16). The center at the median point among the fifty-six respondents served 1325 teachers. As to the dates when programs were begun, the centers in this sample were rather evenly distributed over the years 1967 or before (N = 10) through 1973 (N = 9).

Wardens with experience as primary teachers (N = 18) and administrators (N = 15) were outnumbered by those with experience as secondary teachers (N = 24) or administrators (N = 28). Wardens whose experience was limited to teaching represented a minority (17%) of the total sample. Most wardens had previous administrative experience, usually as head of a subject department or deputy headmaster before assuming responsibility for a teacher center. Eighty-five percent of the wardens reported that their positions were of a full-time nature.

The sample used in this study represented approximately ten percent of the general purpose centers operating in England at the time of the study and was representative in terms of size, date of establishment, and educational levels of the wardens.

Findings

Data for the extent to which various curriculum emphases were preferred under both real and ideal conditions was analyzed with the sample divided into three groups; centers founded in 1967 and 1968, centers founded in 1969 and 1970, and centers founded in 1971, 1972, and 1973. This procedure was followed on the assumption that the developmental stage of the center as represented by date of establishment might interact with preferred
curriculum emphasis. Due to missing information, questionnaires from a few centers were discarded reducing the total N to 54 (18 per cell) for analysis of the real condition and to 45 (15 per cell) for analysis of the ideal condition.

Table 1 summarizes the result of the analysis of variance for curriculum emphases preferred under the real condition. There was a difference significant at the .01 level between the four curriculum emphases. Developmental stage of the center as represented by age was not a significant factor nor was there any significant interaction between age of center and the extent of preference for any curriculum emphasis. Means for the four curriculum emphases were examined using the Newman-Keuls procedure to identify significant gaps among means. It was found that both the school based and the individual teacher emphases differed from the National-M emphasis.

Means for the various curriculum emphases and the results of the Newman-Keuls analysis are presented in Table 2.

The results of the analysis of variance regarding how wardens perceived each curriculum emphasis should apply (ideal condition) is summarized in Table 3. Differences significant at the .01 level were found among curriculum emphases under the ideal condition. The developmental stage of the center did not prove significant nor was there a significant interaction between
developmental stage (age of center) and preferred curriculum emphasis. Using the Newman-Keuls procedure it was determined that both the school based and individual teacher emphases differed significantly from the National-P and National-M emphases as is shown in Table 4.

Insert Table 4 about here

Responses to another item in the questionnaire provided additional information as to preferred curriculum emphasis. Wardens were asked to select the one most preferred curriculum emphasis under three conditions of support:

- a) with staff, fiscal and program support at present levels;
- b) with moderate increases in staff and support;
- c) with major increases in staff or support.

Responses to this item from 47 wardens are summarized in percentage form in Table 5.

Insert Table 5 about here

Only with major increases in staff or support, a highly unlikely eventuality, does curriculum work with individual teachers begin to approach school based curriculum development as a favored emphasis among wardens in this sample. Column C in Table 5 shows the preference for school-based work.

Wardens were asked to rate in-service education defined as "imparting the results of successful curriculum development" (Schools' Council, 1973) in comparison to curriculum development activities under real and ideal conditions. A four point scale, "much more important than," "more important than," "about as important as," and "less important than," was used. Since it was hypothesized that size of center might interact with rating of in-service and
curriculum development priorities, the data was treated via ANOVA using three levels of centers, large, medium and small and two conditions, real and ideal. The results of the analysis of variance are presented in Table 6. Differences in priorities between the real and ideal conditions were significant at the .01 level. Under the ideal condition in-service education was seen as less important than curriculum development. Under the real condition in-service education was rated as more important. A summary of the mean scores for in-service and curriculum development priorities is presented in Table 7.

Subsidiary findings - From descriptive items in the questionnaire it was noted that wardens rated "involvement and support of primary heads" (principals)...of secondary heads," "greater fiscal support," "more curriculum development activities in secondary schools," and "special courses for center staff" as the five most important factors affecting program development. The rankings were quite similar for wardens of small, medium or large centers and for "older" and "younger" wardens. Wardens who held advanced degrees ranked "better interpretation and explanation of research findings" as "more important" and special courses "less important" than the total sample.

As to relationships with universities, colleges or institutes of education, slightly over a quarter of the wardens responding (N = 15) had established ties to the point where there was regular exchange of staff with
these institutions, formal staff affiliation, or college or university representation on governing boards. Twenty-seven centers had college, university or institute staff represented on advisory committees and 41 centers reported having established working relationships with individual staff members from institutions of higher education. Only nine centers, 15% of the sample, reported "no ties of an informal or formal nature" with colleges or universities.

Discussion

Under both "real" and "ideal" conditions, the finding that school-based and teacher-based curriculum emphases were preferred over other approaches is not particularly surprising in view of the rationale usually presented for teacher centers. In the real condition, the failure to find significant differences between school and teacher-based emphases and the national presentation approach may reflect the actual state of affairs in many British centers. The centers do tend to respond both to needs of individual teachers and schools and to priorities expressed on national levels. With the minimal staff and budget assigned to most centers, presentation of national curriculum projects would be feasible whereas their modification to meet local needs might require resources and time commitments well beyond that possible for most center resources. It can be assumed also that the type and quality of teacher and school interventions conducted under real conditions and those contemplated under ideal conditions would be substantially different.

Under ideal conditions the curriculum emphases focusing on the individual teacher and the school would be preferred to a significant degree over either
topics as, "Wardens and Schools," "Objectives and Evaluation," "Methods for In-Service Education," and "Leadership in Groups," also suggests a continuing interest in school-based curriculum development in British Centers.

The failure to find differences regarding curriculum emphases among centers in terms of their stage of development may reflect the selection of an inappropriate variable for measurement purposes. It could also suggest that teacher center wardens, regardless of the age or development status of their centers, share for the most part a common set of priorities as to what are current curriculum development emphases and what these emphases should be.

The findings regarding in-service education vs. curriculum development would indicate that in all centers, regardless of size, in-service education is a more important activity than curriculum development. Other observers have noted that "the major activity is the traditional course and that it tends in the center context, to be short in duration and very practically based [Burrell, 1976]." The emphasis on practically oriented in-service education courses is quite understandable in terms of the staffing patterns for centers, the large number of teachers served by typical general purpose centers, and the procedures used to plan center activities. Under ideal conditions wardens would prefer to emphasize curriculum development to a significant degree over in-service education. This could present a dilemma, however, as serious curriculum development, except in those few large centers with a staff of specialists of their own, could require a degree of expertness and outside help which might in turn be a threat to the managerial role of wardens and teacher advisory bodies. The advisory staff of
specialists in each local education authority might be a source of such expert help but their position of authority in the schools organization might tend to dampen the extent of teachers' voluntary participation in center activities.

In some of the literature about teacher centers there is a suggestion that the centers represent an alternative to the overly theoretical approach of teacher preparatory institutions, both undergraduate and graduate. Some have suggested that "it is better to introduce teachers to disciplines such as psychology, philosophy and sociology when they have had some continuous experience in the classroom [Burrell, 1976]." (See also Judge, 1974, Chapter 6) As mentioned previously, most in-service courses in British centers tend to be very practically based, causing one to speculate as to when or whether there will be a satisfactory integration of practice and theory in teacher center programs. On this question the descriptive data regarding cooperation and communication between British centers and teacher education institutions is reassuring. Only a minority of the centers in this sample isolate themselves from resources available in higher education. The plan for revised teacher education procedures in Britain outlined in the James Report with its emphasis on the development of professional centers and career follow-up of beginning teachers in their initial teaching assignments may represent an effective approach to appropriately combining considerations of theory and practice. Teacher centers were described by one British educational sociologist as "at the interstices of the politics of curriculum in Britain," thus, simultaneously reacting to and interacting with the local Education Authority, headmasters,
teachers, the Schools Council, the Department of Education and Science and teacher preparatory institutions. Whether attention can continue to be given to the individual teacher while simultaneously developing more programmatic approaches combining practice and theory may be the on-going dilemma for such centers; and perhaps for American teacher centers as well.

The research reported here was conducted with support from Bucknell University. The cooperation of the Cambridgeshire Local Education Authority and especially of Mr. Charles Beresford, Warden of the Cambridge Curriculum Development Center, and of all the wardens who participated in the study, is gratefully acknowledged. Appreciation is extended to Dr. Cathy C. Dennis for her assistance with statistical analysis of the data.
### TABLE 1

**SUMMARY OF ANALYSES OF VARIANCE, REAL CONDITION CURRICULUM DEVELOPMENT EMPHASES AND AGE OF CENTER.**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (SW Groups)</td>
<td>.0656</td>
<td>2</td>
<td>.0328</td>
<td>.0145</td>
<td>N.S.</td>
</tr>
<tr>
<td>Curriculum Emphases</td>
<td>115.47</td>
<td>51</td>
<td>2.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curr. x Age</td>
<td>13.59</td>
<td>3</td>
<td>4.53</td>
<td>6.53</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Curr (SW Groups)</td>
<td>106.08</td>
<td>153</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 2

**NEWMAN KEULS ANALYSIS OF CURRICULUM DEVELOPMENT EMPHASIS MEANS (REAL CONDITION)**

<table>
<thead>
<tr>
<th>Source</th>
<th>National-M</th>
<th>National-P</th>
<th>School-</th>
<th>Teacher-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Emphasis</td>
<td>2.43</td>
<td>2.74</td>
<td>2.91</td>
<td>3.12</td>
</tr>
</tbody>
</table>

NOTE: Significant differences are designated by double arrows (→→), Newman Keuls Analysis p < .05.
### TABLE 3
SUMMARY OF ANALYSES OF VARIANCE FOR IDEAL CONDITION
CURRICULUM EMPHASES AND AGE OF CENTER

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (SW Group)</td>
<td>1.0799</td>
<td>2</td>
<td>.54</td>
<td>.70</td>
<td>N.S.</td>
</tr>
<tr>
<td>Curriculum</td>
<td>36.84</td>
<td>3</td>
<td>12.28</td>
<td>25.11</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Curr. x Age</td>
<td>4.52</td>
<td>6</td>
<td>.75</td>
<td>1.54</td>
<td>N.S.</td>
</tr>
<tr>
<td>Curr. (SW Group)</td>
<td>61.63</td>
<td>126</td>
<td>.49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 4
NEWMAN KEULS ANALYSIS OF CURRICULUM DEVELOPMENT EMPHASIS MEANS
(IDEAL CONDITION)

<table>
<thead>
<tr>
<th>Source</th>
<th>National-M</th>
<th>National-P</th>
<th>Teacher-</th>
<th>School-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Emphasis</td>
<td>3.20</td>
<td>3.29</td>
<td>4.02</td>
<td>4.24</td>
</tr>
</tbody>
</table>

Note: Significant differences are designated by double arrows (←→), Newman Keuls analysis p < .05.
**TABLE 5**

MOST FAVORED CURRICULUM EMPHASIS AT VARIOUS LEVELS OF SUPPORT (In Percents)

<table>
<thead>
<tr>
<th>Level of Support</th>
<th>Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>With staff, fiscal and programme support at present</td>
<td>National</td>
</tr>
<tr>
<td>levels</td>
<td>17.0</td>
</tr>
<tr>
<td>With moderate increases in staff and support</td>
<td>12.8</td>
</tr>
<tr>
<td>With major increases in staff or support</td>
<td>4.2</td>
</tr>
</tbody>
</table>
TABLE 6
ANALYSIS OF VARIANCE OF IN-SERVICE AND CURRICULUM DEVELOPMENT PRIORITIES UNDER REAL AND IDEAL CONDITIONS AS A FUNCTION OF SIZE OF CENTER

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1.62</td>
<td>2</td>
<td>.81</td>
<td>.85</td>
<td>N.S.</td>
</tr>
<tr>
<td>(SW Groups)</td>
<td>34.23</td>
<td>36</td>
<td>.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Priorities</td>
<td>17.55</td>
<td>1</td>
<td>17.55</td>
<td>33.53</td>
<td>&lt; .01</td>
</tr>
<tr>
<td>Size x priorities</td>
<td>1.09</td>
<td>2</td>
<td>.55</td>
<td>1.06</td>
<td>N.S.</td>
</tr>
<tr>
<td>Priorities (SW Groups)</td>
<td>18.85</td>
<td>36</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 7
MEAN SCORES: IN-SERVICE CURRICULUM DEVELOPMENT PRIORITIES

<table>
<thead>
<tr>
<th>Size of Center</th>
<th>Real Condition</th>
<th>Ideal Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>2.54</td>
<td>1.92</td>
</tr>
<tr>
<td>Medium</td>
<td>3.00</td>
<td>1.92</td>
</tr>
<tr>
<td>Small</td>
<td>2.69</td>
<td>1.54</td>
</tr>
<tr>
<td>All Centers combined</td>
<td>2.74</td>
<td>1.80</td>
</tr>
</tbody>
</table>

NOTE: The lower the mean score the less in-service education would be emphasized as compared to curriculum development activity.
REFERENCES


APPENDIX A
Definitions of Curriculum Emphases

A. Curriculum development is the process whereby groups of teachers at LEA or school level, develop methods and materials for achieving their curricular objectives and revise these methods and materials on the basis of trial in the schools.

B. Curriculum development is the process whereby nationally developed courses of study are modified in objectives, materials or methods for local use by groups of teachers, working with the assistance of centre staff, either in the centre or in the schools.

C. Curriculum development is for teacher centres a process whereby nationally developed courses of study are presented and interpreted to local groups of teachers for possible use in their classes.

D. Curriculum development involves attempts to work with individual teachers to improve the quality of the child's learning experiences in their classrooms.

*Local Education Authority