

CRITERIA FOR EVALUATING PHYSICAL FACILITIES  
FOR TEACHING HOME ECONOMICS  
IN SECONDARY SCHOOLS OF ARIZONA

by

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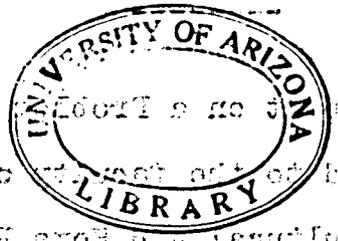
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Report on a Problem

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## PART I

### INTRODUCTION

#### JUSTIFICATION FOR THE STUDY

The school building provides the physical environment for teaching and learning. At the present time in Arizona new school buildings are being built and others are being remodeled. Several factors have produced this building period; among which was the lack of building during the war years. Even prior to the war, space and equipment in many schools was insufficient, worn and outmoded. Arizona has also experienced a great influx of population which necessitates additional schools.

Schools in congested areas are now building and remodeling departments. Plans are being made in many other districts for building and remodeling.<sup>1</sup>

In addition to the factors mentioned above, home economics continues to experience changes in the curriculum and teaching techniques. This has caused the outmoding of equipment, space and arrangement.

Changes in the curriculum and in teaching techniques have made earlier types of homemaking equipment inadequate.<sup>2</sup>

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1. Faye C. Jones, How to Plan Home Economics Departments, Bulletin No. 9, Forward.

2. California State Department of Education, Space and Equipment for Homemaking Education, p. 1.

The physical plant has become of major concern to home economics teachers, supervisors and administrators.

The problem of designing new and remodeled home economics departments is a challenge to all who are participating in the current school building program. They are faced with the task of making decisions which will yield a good environment for the program now and in the future.

Because the planning and equipment of the homemaking department may influence standards for the homes of the community as well as limit or otherwise influence the work of the teacher and because a school building is long-lasting and costly, making decisions about plans is a grave responsibility.<sup>3</sup>

Communities possess certain inherent factors which determine the physical facilities of their school buildings. Likewise, there are certain requirements derived from needs of children, teachers, programs and procedures that are common to many schools. Aids in making decisions concerning the designs of buildings should be beneficial to all who participate. Criteria for evaluating the physical plant for teaching home economics should be helpful in determining the adequacy of existing departments and proposed plans for new and remodeled departments.

#### STATEMENT OF THE PROBLEM

The purpose of this study is to state and present in

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3. Florence E. Blazier, "Planning Homemaking Rooms," Journal of Home Economics; 37:498 (October 1945).

usable form, criteria which may be used to evaluate existing home economics departments, and plans for new and remodeled departments for Arizona secondary schools.

#### OUTLINE OF THE PROBLEM

1. To determine the essential physical facilities for home economics departments used by the secondary schools in Arizona.
2. To state criteria which may be used to evaluate the essential physical facilities for proposed plans and existing departments.
3. To present these criteria in a usable form.

#### FUNDAMENTAL ASSUMPTIONS

Two major assumptions directed the course of this study:

1. Bulletins and articles prepared specifically for planning home economics departments explain the physical facilities to be included. This information should serve as basic data for determining the essential physical facilities for departments in secondary schools.
2. Articles written by professional personnel who have had experience in planning home economics departments express opinions which should be useful in formulating criteria.

#### PROCEDURE

1. A survey was made of the literature written in the past five years on the subject of home economics to determine the present philosophy of the subject and of the physical facilities in which it is taught.
2. Related studies and investigations were reviewed.
3. A form was devised in which to compile and to present the criteria.
4. Data were collected from bulletins and articles, written specifically for the planning of home economics departments, to serve as a basis for determining the essential physical facilities.
5. These data were classified, summarized and organized into general and specific characteristics of the department. The specific characteristics were classified according to ten areas of studies.
6. From the classified and organized data, criteria were stated and compiled in the form of a device which may be used to evaluate the essential physical facilities in home economics departments for the secondary schools in Arizona.

#### RELATED STUDIES AND INVESTIGATIONS

There are three studies related to this problem.

1. O'Reilly, Justine Beyers. Opinions of Home Economics Leaders Concerning Locating, Arranging, and Equipping

Homemaking Departments. Unpublished Thesis, M.S., Oregon State College, 1942. 250 pp. Librarian, Oregon State College.

These opinions which were obtained from teacher trainers and state and city supervisors throughout the United States and Hawaii are valuable. While there was not complete agreement among those who participated there was enough agreement for the writer to arrive at some pertinent conclusions based on the recommendations of these people.

2. Blackwell, Sara E. Development of Instruments for Evaluating Certain Aspects of High School Homemaking Programs. Unfinished Doctoral Dissertation, University of Minnesota.

One of the instruments included in this study pertains to space and equipment. It is being developed for use by school personnel and lay people to evaluate the physical plant in schools. The check list is organized into three levels, described as a rather poor situation, a medium situation and a desirable situation. The evaluator finds the condition of his school by underlining the words which most nearly describe his department. Each level is given a numerical rating so that a score is determined for each item, the perfect score being 7. It is explained:

It is not likely that any one school will ever meet all of the suggested optimum standards, and it would probably be impractical for many schools to try to do so. Most schools, however, will undoubtedly find that they rate themselves

lower on some items than on others, and this discovery may give them a basis for planning improvements which they may wish to make.<sup>4</sup>

3. American Home Economics Association, Committee on Criteria For Evaluating College Programs In Home Economics. Home Economics In Higher Education. American Home Economics Association, Washington, D. C., 1949. 181 pp.

This report provides a basis for evaluating undergraduate programs. It identifies the characteristics of good college departments and formulates standards of excellence. The general characteristics of the physical facilities are treated thoroughly. The physical facilities for the subject matter areas are considered generally. A rating scale is included in the appendix which lists the major criteria found in the report prepared by the committee. The plan for scoring provides for all of the staff members to rate the check list and then discuss the ratings to arrive at a department rating.

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4. Sara E. Blackwell, Check Lists For Evaluating Certain Aspects Of High School Homemaking Programs, Forword.

## PART II

### GENERAL CHARACTERISTICS CONSIDERED ESSENTIAL IN HOME ECONOMICS DEPARTMENTS

#### PHILOSOPHY OF THE HOME ECONOMICS DEPARTMENT

It is believed that the home economics department should provide an optimum physical environment in which to conduct a complete program in ways that are effective for the individuals being served. It is believed also that if the physical plant is not adequate in every respect it limits the effectiveness of the program.

Good use of space and well-selected equipment make possible effective teaching of homemaking, whereas a poorly planned department thwarts the attempts of most teachers.<sup>1</sup>

To determine the characteristics of a serviceable physical plant it is necessary to know what should be taught in the home economics program. "The good department provides the physical facilities needed for the program undertaken."<sup>2</sup>

#### PHILOSOPHY OF HOME ECONOMICS EDUCATION

It is a generally accepted belief that the purpose of

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1. Florence E. Blazier, "Planning Homemaking Rooms," Journal of Home Economics; 37:498 (October 1945).

2. American Home Economics Association, Home Economics in Higher Education, p. 108.

home economics education is to help students achieve satisfaction in personal and family living. The basic needs of individuals must be met if they are to lead satisfying lives. Therefore, the goals are based on the needs of students -- in their personal and family living.

Home economics is concerned with all that affects immediate personal and family living. ... Its emphasis lies on acquiring techniques and skills of living. ... The achieving of a satisfying and functioning philosophy of life with emphasis on personal and family living should be set as the primary purpose of home economics.

#### AREAS OF THE PROGRAM

Since one important purpose of the program is to aid students in living more satisfying personal lives, areas concerned with the person are essential in the program. Consequently, health, food, clothing and personal problems are of great concern to the individual. The individual as a member of a family group broadens her interests to include: relationships, child care and guidance, housing, art related to home living, consumer buying, management and family health. For teaching in Arizona schools the areas are interpreted as: relationships, personal problems, child care and guidance, food, clothing, housing, family health, art related to home and clothing, management and consumer buying.

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3. Ivol Spafford, Fundamentals In Teaching Home Economics, pp. 1-2.

## PHYSICAL FACILITIES NEEDED

Writers agree that the physical facilities play an important part in the accomplishments of home economics students and teachers. Therefore, what physical facilities are needed to conduct effectively a program comprised of the areas mentioned above? A publication of the United States Office of Education <sup>4</sup> includes a Planners Check Sheet which states that the following work centers <sup>5</sup> are needed:

1. Unit kitchens
2. Center for teaching clothing
3. Living center
4. Work center for upholstering, refinishing and renovating furniture
5. Center that may be arranged as a bedroom
6. Discussion center in each room, may also be used for demonstrations
7. Laundry center
8. Planning center
9. Center for arrangement of flowers
10. Center for teaching child development
11. Teacher's work center.

These centers must be included in all departments if they are to provide for teaching all areas of home economics. However, the way of providing these centers will vary because schools needs differ in communities according to the type of vocations, hereditary backgrounds and income levels of the people.

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4. United States Office of Education, Space and Equipment for Homemaking Programs, Miscellany No. 9, p. 63.

5. "Center is the term used to designate space and equipment within the homemaking department where a certain activity is carried on." Ibid., p. iv.

Space and equipment for teaching all aspects of homemaking should be provided in all homemaking departments, but the kinds of provisions made will vary in different schools.<sup>6</sup>

Even though communities, homes and students differ there are certain general objectives common to and attainable by all schools. The requirements common to all are hereof considered as minimum essentials and measurable by criteria. A discussion follows which explains these essentials for the schools and, therefore, points out the physical facilities to be evaluated. An attempt has been made to state the criteria comprehensively so that they may apply to all schools.

#### GENERAL CHARACTERISTICS

By considering the general characteristics of the physical plant first, repetition of features common to all rooms and work centers may be eliminated.

In evaluating these facilities (physical) and in making plans for improving them, attention should focus first on the general characteristics of desirable physical facilities...

#### Location

In locating the department it is of primary importance that it be given equal status with the other departments in

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6. Ibid., p. 4.

7. American Home Economics Association, op. cit., p.106.

the school. The location should provide for the department to be an integral part of the school curriculum.

For the program to be realistically integrated in the thinking of students and others, it is essential for the rooms to be located in a unit. "This seemed advisable as far as unifying the home economics course ..."<sup>8</sup> Rooms which adjoin also aid efficient management and supervision.

For convenience and efficient management it is recommended that the department be located on the ground floor with the rooms arranged as a unit rather than separated by halls or other classrooms.<sup>9</sup>

Home economics educators believe that it is best to locate the department on the ground level or above.

The commentators were in accord in their opposition to putting the homemaking department in the basement. First or second floors seemed best to most of them, since this facilitated delivery of food and supplies.<sup>10</sup>

Good light, comfortable temperature, good ventilation and clean rooms help to create comfortable working conditions. North or south exposure gives the best light for laboratory work for the entire day and is also best for temperature

8. Justine Beyers O'Reilly, "Opinions of Home Economics Leaders Concerning Locating, Arranging, and Equipping Homemaking Departments"; Librarian, Oregon State College, p. 14.

9. California State Department of Education, Space and Equipment for Homemaking Education, p. 2.

10. Justine Beyers O'Reilly, op. cit., p. 14.

control in southern Arizona.

Excellent daylight is of utmost importance ... North exposure has long been considered best for uniform laboratory daylight. The angles of the sun's rays throughout the year are easily controlled on the southern windows by means of venetian blinds, architectural projections on the exterior above the windows, and similar devices.<sup>11</sup>

If mechanical ventilation is not used the rooms must be located for good natural ventilation. Cross ventilation is needed, at least, in the kitchen. It is advisable for the department to be located so that, "Good standards of light, ventilation, and cleanliness can be maintained with a minimum of effort."<sup>12</sup>

It is necessary to provide toilet facilities near the department for children in the play school. "It (play room for children) should be conveniently near a toilet."<sup>13</sup> Therefore, toilets for girls should be located near the department.

An entrance should be easily accessible to adults so that they may use the department for educational purposes.

Schools of the future must be community centered. The homemaking education department in the school must be a place to which adult

11. Anna Belle Robinson and William Hunt Scheick, Principles of Planning the Homemaking Department; Volume XLI, No. 44, pp. 4-5.

12. United States Office of Education, Space and Equipment for Homemaking Instruction, Bulletin No. 181, p. 16.

13. United States Office of Education, Miscellany No. 9, op. cit., p. 68.

members of the family as well as youth can come for help with home problems.<sup>14</sup>

"They (leaders in home economics education) recommend an outside entrance to the department and advise all outside rooms."<sup>15</sup>

When play schools are in session the noise of the small children should not disturb the high school classes. The department's location should provide access to and from the play yard for the children which does not interfere with other class work.

When the department is located so that the noise of the children will not disturb other classes, this part of the program will be accepted more enthusiastically by the school as a whole. If the department is located near a side or rear entrance, the children may enter and go to and from the play-ground without disturbing other classes.<sup>16</sup>

Good management is planned in advance when groceries and supplies may be delivered without interfering with class activity. "A service entrance should be provided for delivery of instructional supplies and equipment."<sup>17</sup>

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14. Edna P. Amidon, "Space and Equipment for Homemaking Instruction," Journal of Home Economics; 37:153 (March 1945).

15. Justine Beyers O'Reilly, op. cit., p. 14.

16. Faye C. Jones, How to Plan Home Economics Departments, Bulletin No. 9, p. 7.

17. California State Department of Education, op. cit., p. 4.

### Space

Sufficient space is needed by the department to provide teaching centers for all subject matter areas. This space must accommodate the necessary equipment, furnishings, storage and students.

Efficient planning means: enough space is allocated to arrange equipment and furniture, permit access to the storage and equipment and allow standing or seating space for each person who is to be accommodated in the area.<sup>18</sup>

Adequate wall space needs to be provided to allow for the placement of equipment and storage.

Adequate unbroken wall space is needed for the placement of various types of equipment, such as wall cabinets, storage cabinets, sinks, and laundry equipment, which of necessity must be placed against the wall.<sup>19</sup>

As work centers for some subject matter areas are needed for short periods of time, it is efficient use of space to provide areas which may be adequately arranged for these centers and yet be kept in continuous use. Examples of such work centers are the center for teaching child development; center that may be arranged as a bedroom; and work center for upholstering, refinishing and renovating furniture.

The maximum use of both (space and equipment) is important, both for the best interests of the department and to keep costs down.

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18. Faye C. Jones, op. cit., p. 42.

19. Commonwealth of Pennsylvania, Department of Public Instruction, Planning the Homemaking Department, Bulletin 324, p. 37.

In small departments multiple uses of both are essential.<sup>20</sup>

A few centers receive more or less continuous class use while other centers are set up for individual work. It is desirable that the latter be reached without disturbing classes in session, especially discussion and demonstration lessons. With careful planning these centers can be located so that they are accessible without disturbing such lessons. The centers which require this type of planning include: the students' planning center, the center for the chapter of Future Homemakers of America, the adult information center, the teacher's center and perhaps the laundry center.

It is possible for diversified activities to go on simultaneously without interfering with each other and yet both can be under the supervision of the homemaking teacher.<sup>21</sup>

#### Equipment and Furnishings

The equipment and furnishings should be adequate and suitable for all the subject matter areas. They should reflect the income levels of the community if instruction is to carry over into the homes. Students are more successful in improving their personal and home living when they put into practice at home the theory that they learn at school.

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20. American Home Economics Association, op. cit., p. 131.

21. Commonwealth of Pennsylvania, op. cit., p. 24.

Unless the teachings of home economics, direct or indirect, can be carried out in the present homes of the students, they will have little, if any, more value than a history or science lesson recited upon in class.<sup>22</sup>

To be suitable for institutional use the equipment and furnishings must be strong and durable as many people use them constantly throughout the day.

All equipment and furniture in a school home-making department, ... should be strong and durable in materials, construction, and finish.<sup>23</sup>

The furnishings and equipment should be well-planned for their use. They should be up-to-date models or effectively serve their purpose. If they can be used for more than one activity it is to the economical advantage of the school as less equipment and space will be required. However, it is not good planning to provide equipment for several uses and have none of the purposes well served.

Flexibility of function is a prime consideration in planning the homemaking department, in choosing the equipment for the department, and in the arrangement of the furnishings.<sup>24</sup>

For students to gain an appreciation of good styles in equipment and furnishings they must have the opportunity to see good examples. Therefore, it is expedient to furnish the department with equipment and furnishings of good design.

22. Ivol Spafford, op. cit., p. 341.

23. United States Office of Education, Miscellany No. 9, op. cit., p. 18.

24. Commonwealth of Pennsylvania, op. cit., Forword.

Space and equipment occupy a unique place in the teaching of home economics, for students develop standards from the materials they see and use.<sup>25</sup>

Variety in furnishings and equipment is desirable to represent the various income levels and to serve as teaching materials. In this way the department can enrich the curriculum.

Variety in quality and type of materials, structures, and finishes used in the department furnishes a basis for developing judgment in making selections for the home.<sup>26</sup>

Variety should not be carried to excess, however, causing the facilities to be difficult for use in class procedure. The first consideration for school facilities is the extent to which they are usable for learning experiences.

... the department must be planned in such a way as to function effectively as a setting for learning experiences.<sup>27</sup>

Safety features should be kept in mind when purchases are made. The following points contribute to safety: rounded corners on cabinets and pieces of furniture which may stand out in the room, avoidance of decorative features with sharp edges, furniture that is strong and not easily tipped and strong legs on chairs and tables.<sup>28</sup>

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25. American Home Economics Association, op. cit., p. 130.

26. United States Office of Education, Miscellany No. 9, op. cit., p. 19.

27. Edna P. Amidon, op. cit., p. 153.

28. United States Office of Education, Miscellany No. 9, op. cit., p. 63.

All equipment and furnishings should be of a type which are easily cared for and be in good repair. Short periods and full day sessions allow little time for cleaning or adjustment of equipment.

### Storage

Many home economists believe that department storage should exemplify good home storage as far as is practical for school use. The amount of space needed will depend upon the number of articles to be stored, including those assigned to definite work centers and those unassigned. Space should be provided for all items that need to be stored and be sufficient to the extent that there is practically no stacking of unlike items.

Although the types and kinds of materials and equipment to be stored may be the same, the amount and arrangement of the storage space will vary in different departments.<sup>29</sup>

Convenience and safety in arrangement is essential for school storage. For convenience all articles should be stored near the place where they are used. For safety in use, top shelves should not be higher than 72 inches from the floor. "The height considered desirable for the top shelf is 72 inches from the floor."<sup>30</sup> Good lighting is also required for safety and convenience of storage spaces.

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29. Ibid., p. 43.

30. Ibid., p. 24.

Ventilation should be provided when needed in storage spaces. Protection from dust in storage provides for better care of articles. All materials and articles need to be protected from insects and rodents. These provisions plus others make for ease in cleaning and it is desirable to make housekeeping as easy as possible.

Adequate storage will be provided to contribute to ease of caring for the department, for protecting supplies and equipment and student materials, and for teaching system and order.<sup>31</sup>

#### Health and Safety

The environment provided for teaching home economics should promote the health of students and provide a comfortable place in which to work. Circulation must be well planned so that students may pass to work centers without interfering with the work or study of others. Aisles should be left wide enough and unencumbered for safe passage around the room and to all exits. All traffic tie-ups should be eliminated, especially in front of storage cabinets.

Good lighting is all important so that eyesight will not be strained. The amount of light required varies with the work to be performed. The light should fall over a shoulder and preferably the left shoulder. All finishes within the rooms, including walls, ceilings, floors, tables and other equipment should be in the least light-absorbing and glare-

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31. Ivol Spafford, op. cit., p. 341.

producing colors and finishes. For these reasons the lighting should be sufficient and properly controlled for glare.

It is important that provision be made for adequate electric and gas service. "It is essential that sufficient circuits be provided to take care of the power required."<sup>32</sup> Planning for safety is included when outlets are located near the place where the appliances are used and at a convenient height for each one. Switches for lighting rooms should be placed at all entrances. All cords, plugs, outlets and appliances must be in good repair.

For best working conditions the temperature in the rooms should be comfortable at all times. Sufficient heat needs to be provided and it should be controlled easily so that the rooms do not become over-heated, especially the kitchen. If optimum conditions are provided in southern Arizona, cooling systems will be installed. The cooled temperature should not be lower than 20 degrees of the outside temperature and drafts should be eliminated. Fresh air is needed in the rooms at all times. "Better working con-<sup>33</sup>ditions will contribute to improvement in quality of work."

Hot water must be available at all times for dishes and laundry or other departmental needs as short periods require the saving of time. Sufficient fire extinguishers must be

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32. United States Office of Education, Miscellany No. 9, op. cit., p. 56.

33. Ivol Spafford, op. cit., p. 351.

provided so that they are accessible, especially in the kitchen.

The floors and floor coverings used in the department should be the ones with the most advantages according to the use and care required. The ceilings should be acoustically treated to keep down noise within the rooms and to prevent sound from traveling to other rooms.

### The Atmosphere of the Department

As the best environment for learning about family life is that of the home, the home economics departments should give the feeling of home atmosphere. With thoughtful planning the interior can be attractive in furnishings, arrangement, color scheme, decorative treatments and have a well-cared-for-look.

The environment best adapted to learning about family life is the home. ... It is logical to suppose then that the homemaking department, whose broad purpose is education for family life, should be as nearly homelike in atmosphere and physical facilities as possible.<sup>34</sup>

In developing an artistic interior furnishings should be in harmony with the architectural design. The style of the furnishings should also harmonize. The furniture arrangements are important as they give a feeling of spaciousness which is desirable. The windows may serve as background

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34. Commonwealth of Pennsylvania, op. cit., p. 3.

for decorative treatment.

Preplanning for artistic arrangements may provide art centers in the rooms which are eye-level or lower. A variety of accessories should be provided to allow for various interesting treatments. A few well-selected pictures correctly framed and hung add interest to rooms and may tie in the color scheme.

Wall hangings, pictures, and bowls for flowers will be considered as essential as the sewing machine and the cook stove.<sup>35</sup>

The color scheme should be individualized for the school.

Where attractive color has been used in painting and furnishing schoolrooms it is interesting to observe the wholesome effect on individuals and groups.<sup>36</sup>

If housekeeping has been kept in mind during the planning, the department may be well-kept with a minimum of effort. To be an example for the community the furnishings must always be in good repair.

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35. Ivol Spafford, op. cit., p. 341.

36. Commonwealth of Pennsylvania, op. cit., p. 30.

### PART III

#### THE SPECIFIC CHARACTERISTICS CONSIDERED ESSENTIAL IN HOME ECONOMICS DEPARTMENTS

##### PROCEDURES FOR CONDUCTING THE PROGRAM

Teaching techniques are important as it is believed that experience is basic to learning. Teachers use a variety of techniques and procedures for class work adapting them to the learning experience desired. "Teaching procedures should be selected in relation to the learning desired."<sup>1</sup> Different teachers use different procedures, therefore, it is desirable for the physical plant to provide physical facilities which allow teachers to use the techniques and procedures which they think most suitable.

The form used for a particular learning unit should be the form best suited to the kind of experiences used and most useful for that particular teacher.<sup>2</sup>

##### Center for Conducting Procedures for a Total Class

In making provision for using the various teaching procedures, a center is needed for each teacher in which

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1. American Home Economics Association, Home Economics in Higher Education, p. 83.

2. Ivol Spafford, Fundamentals In Teaching Home Economics, p. 265.

she may conduct total class activity. Such a center provides for class discussion, class study, class planning, demonstrations, and use of audio-visual aids.

Demonstration, discussion, experimentation, projects, and the use of audio-visual materials are some of the methods used in modern homemaking instruction. Adequate space and equipment are essential for all of these activities.<sup>3</sup>

Comfortable seating and writing space is needed in this center for each student. It is desirable to have the space and equipment somewhat flexible so that different arrangements can be provided for each procedure.

Many teachers prefer to arrange tables and chairs in a U shape or to arrange chairs in a semicircle so that each pupil can face the discussion leader and the chalkboard.<sup>4</sup>

Teaching aids needed include chalkboard, bulletin board, and provisions for using illustrative and reference materials and audio-visual aids. The reference materials need to be accessible to students. Proper lighting must be provided for reading and the use of the teaching aids. Storage is needed for students' personal property which they carry to class so that the writing space will not be limited.

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3. California State Department of Education, Space and Equipment For Homemaking Education, p. 2.

4. United States Office of Education, Space and Equipment for Homemaking Programs, Miscellany No. 9, p. 40.

5. "Because of the modern trend to use colors for writing boards other than black the term 'chalkboard' is used by many school building supervisors and school architects." Loc. cit.

Center for Teaching Food

The subject matter area<sup>6</sup> of food includes the phases<sup>6</sup> of nutrition, meal planning, marketing, storage, preparation, serving, conservation, preservation and selection and care of equipment. For work experience in the area of food, unit kitchens modeled after home kitchens and equipped for four students are generally recommended.

To insure effective functioning in the home of in-school instruction dealing with foods, equipment must be provided which will facilitate the transition from school to home.<sup>7</sup>

A group of four pupils was indicated as being advisable by a large majority of the educators.<sup>8</sup>

The minimum equipment needed in a unit kitchen includes a stove, sink, counter work space, storage space and equipment for meal preparation, serving and cleaning up. A home-size stove with four burners and a good oven is efficient. The stoves should be the types which utilize the fuels used in the homes of the students.

Fuel for cooking should be of the type used in the majority of homes in the community. More than one fuel may be provided in the meal preparation area, thus giving the student an opportunity

6. "Area is a major topic in the subject matter of homemaking education, such as child development; phase is a subdivision of the major topic, as physical care of children." Ibid., p. iv.

7. Justine Beyers O'Reilly, "Opinions of Home Economics Leaders Concerning Locating, Arranging, and Equipping Homemaking Departments"; Librarian, Oregon State College, p. 153.

8. Ibid., p. 176.

to become familiar with different fuels.<sup>9</sup>

It is desirable to provide a variety of sinks throughout the unit kitchens. The minimum size of sink provided should be 18 by 18 inches.<sup>10</sup>

The reasons given for advising variations in equipment within the units indicate that such a plan provides additional variety of experiences in using, studying, and evaluating the different kinds of equipment through rotation of activities; it gives the pupils more opportunity for comparison in consumer buying studies; it provides situations in which different standards of equipment may be exhibited; and differing conditions in the homes may better be exemplified.<sup>11</sup>

The amount of counter work space allowed must be adequate to provide for four students to be working at the same time.

The amount of running counter work surface preferred for each pupil in a unit kitchen is 30 inches.<sup>12</sup> ... Each unit kitchen should have from 8 to 10 linear feet of work surface exclusive of the sink and stove.<sup>13</sup>

Color may be brought into the unit kitchens in the finish

9. California State Department of Education, op. cit., p. 13.

10. United States Office of Education, op. cit., p. 64.

11. Justine Beyers O'Reilly, op. cit., p. 182.

12. United States Office of Education, op. cit., p. 24.

13. Ibid., p. 64.

of the counter surfaces. A resilient surface will reduce dish breakage and noise.

Since the unit kitchens are equipped for four individuals, small equipment and utensils should be provided for meal preparation, serving and cleaning-up for four people. Home economics educators agree upon family size utensils as the experience taught is preparation of family meals.

The unit kitchen should be comparable to the kitchens of the community, and all equipment should be in family sizes.<sup>14</sup>

The material of the utensils may vary among the unit kitchens to give the students experience in working with a number of materials.

Each kitchen may be equipped identically with a variety of wares... Another suggestion would be to have each kitchen furnished in a different ware. ... Some conclusions could then be drawn as to both good and bad points of the various wares, which would be of interest not only to the students in the class but to the homemakers in the community as well.<sup>15</sup>

Home economics educators agree that meal serving should be included in the unit kitchens. "Meal service facilities should be available with each preparation unit."<sup>16</sup> In seating four students a minimum table size of 30 by 48 inches<sup>17</sup>

14. Justine Beyers O'Reilly, op. cit., p. 168.

15. Anna Belle Robinson and William Hunt Scheick, Principles of Planning the Homemaking Department; Volume XLI, No. 44, p. 28.

16. Justine Beyers O'Reilly, op. cit., p. 64.

17. United States Office of Education, op. cit., p. 65.

is recommended. Chairs should be comfortable and allow for good posture. The meal service includes dishes, glassware, silver and linens for four people.

The minimum equipment for a kitchen includes a suitable means of caring for garbage. This will vary from school to school but should always be sanitary and out of sight.

Storage to be adequate must provide for all articles to be stored. This will depend upon the amount of equipment in each unit kitchen.

The storage space in each unit kitchen should be adequate for the utensils, dishes, linens, and staple food supplies commonly needed by a group of pupils preparing and serving meals.<sup>18</sup>

Of special importance in schools is the care of the dish towels. Hanging space for wet dish towels which is out of sight and away from dust is desirable. If consecutive classes use the kitchen it is necessary to provide for quick drying of the dish towels.

The problem of storing towels while they are drying needs careful consideration. This is especially necessary for large departments because the same towels repeatedly laundered are used by a number of classes and little time elapses between their use.<sup>19</sup>

Storage is needed outside of the unit kitchens for large equipment that is less frequently used and for supplies.

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18. Ibid., p. 23.

19. Ibid., p. 47.

In addition it is necessary to provide sufficient general storage for extra supplies of food and equipment.<sup>20</sup>

Storage for students provides space for leaving personal property brought to class and for aprons and other property used in the food area.

Pupils' belongings include: books, notebooks, wraps, and purses... Since aprons may be damp after use, the storage space should be well ventilated. It should be of a height that permits hanging aprons from the shoulder strap. If the girls wear smocks, a wardrobe cabinet will be satisfactory storage space.<sup>21</sup>

The unit kitchens must be arranged for efficiency for four people in preparing and serving of meals. It is generally agreed that the width inside of the unit kitchens should be 5 feet.

The floor space between base cabinets in a unit kitchen should be at least 5 feet, but 5½ feet is preferable.<sup>22</sup>

The order of working as generally accepted for right handed people is from right to left but the unit kitchens in a school must be arranged for efficient use of space as well as equipment.

The equipment in each unit kitchen should be arranged so as to save steps and motion. The usual direction for working is from right to left.<sup>23</sup>

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20. Ibid., p. 45.

21. California State Department of Education, op. cit., p. 23.

22. United States Office of Education, op. cit., p.22.

23. Loc. cit.

Two sides of the range should be exposed to allow working space for more than one person.

If more than one pupil is to use a range during a class period, it should be placed so that it can be approached from two sides.<sup>24</sup>

At least 18 inches of counter work space must be provided between large pieces of equipment for space in working.

A minimum of 18 inches of counter space between each piece of kitchen equipment (stove, sink, and refrigerator) is desirable to prevent crowding around a center of activity and to provide counter space for placing utensils needed at the center.<sup>25</sup>

This division of counter space also allows for the storage to be located so that utensils and cutlery may be stored at the place of first use. "Items should be stored in that part of the kitchen where they are first used."<sup>26</sup>

Desirable depths of the counter work space run from 22 to 25 inches.<sup>27</sup> The counter space next to the range should be the depth and height of the range. "It is desirable to have the cabinet adjacent to the range the same depth of the range."<sup>28</sup>

Working heights which are comfortable for students vary with the height of the student and with the activity

24. Ibid., p. 27.

25. Ibid., p. 24.

26. Small Homes Council, Cabinet Space For the Kitchen C5.31, University of Illinois Bulletin; Volume XLVI, No. 43, (February 1949) p. 4.

27. United States Office of Education, op. cit., p. 23.

28. Ibid., p. 64.

performed. Thirty-six inches is considered standard height for most base cabinets.

...the counter or base cabinet on each side of the sink may be 36, 37, or 38 inches high which are comfortable heights for jobs that require standing and are usually done at the sink.<sup>29</sup>

A lower height should be provided for the mixing center.

The part of the work surface used as a mixing center may well be 30 to 33 inches, good heights for mixing, kneading, and the like.<sup>30</sup>

For comfort in working toe space is allowed for all equipment and cabinet bases. "Toe space should be about 3<sup>31</sup> inches deep and 3½ to 4 inches high."

The amount of space needed between the wall cabinets and the counter surfaces varies according to the use made of the counter space and the depth of the wall cabinet. The space needed for laying out supplies is 12 inches; for hand action, 14 inches;<sup>32</sup> and for an electric mixer, 16 inches.<sup>33</sup> Space allowed should be correct for the use made of the counter surface and the depth of the cabinet.

29. Ibid., p. 23.

30. Loc. cit.

31. California State Department of Education, op. cit., p. 14.

32. United States Office of Education, op. cit., p.24.

33. Small Homes Council, Planning The Kitchen C5.3, University of Illinois Bulletin; XLIII, No. 8 (September 19, 1945) p. 4.

One unit kitchen should be conveniently arranged for a demonstration center. "Any type of food demonstration requires the use of a sink, a range, counter space, and equipment."<sup>34</sup>

A space of 3 feet is needed around the dining tables to allow for service.

A space of 3 feet should be allowed around a dining table for chairs and to enable a person to get around the table to pass food when the family group is seated.<sup>35</sup>

Space is also needed for the tables and chairs when they are out of use. If the chairs may be pushed under the tables when not in use space will be saved. "The tables should be designed so that chairs may be pushed under the table when they are not in use."<sup>36</sup>

Cold storage is needed for perishable food. As for all storage it should be sufficient in amount and the type used in the community.

In departments in which from four to six unit kitchens are used by three or more classes, one refrigerator to every two or three kitchens should provide adequate storage space and experience for pupils in care of refrigerators.<sup>37</sup>

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34. Anna Belle Robinson and William Hunt Scheick, op. cit., p. 22.

35. United States Office of Education, op. cit., p. 29.

36. Faye C. Jones, "Planning Unit Kitchens," Kitchen Reporter, (November 1947) p. 2.

37. United States Office of Education, op. cit., p.21.

If home freezers are used in the community the students should learn their use. Therefore, the type of refrigeration varies according to the curriculum taught.

Space and furnishings have no value in themselves but only in relation to meeting the objectives of a particular program.<sup>38</sup>

A student business center may be located in the food center. "It is used for planning and checking menus, preparing and checking grocery order, and keeping bills and records."<sup>39</sup> A desk arrangement is needed with storage space for books, recipes, notebook, paper, pencil, pen, grocery bills and receipts and records. As a telephone is needed for ordering groceries it may be located here or in the teacher's center. Students may want to use this center throughout the day hence it should be located so as not to disturb classes at work. "Such a center usually is located in a part of the space for unit kitchens."<sup>40</sup>

In the over-all arrangement of the food center the unit kitchens should be grouped for ease in class supervision. It is desirable for the teacher to see into all of the unit kitchens from any point in the room.

To keep the traffic moving freely and to save steps the traffic lanes need to be well planned. No retracing

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38. American Home Economics Association, op. cit. p.2.

39. United States Office of Education, op. cit., p. 39.

40. Loc. cit.

of steps is necessary if the arrangement allows for procedures in the order in which they are needed.

The space for receiving and dispensing of food should be accessible to a sink, food storage and cold storage as some foods must be washed before storing and perishable foods need cold storage. It is convenient to have some type of counter space accessible to the refrigerator.

It is desirable to have a work table or some type of counter space near the refrigerator on which containers may be placed when more than one article of food is removed from the refrigerator at one time.

The refrigerator is usually located near an entrance to the foods room, accessible to all unit kitchens...<sup>41</sup>

The home freezer should be located in or near the unit kitchens.<sup>42</sup>

To care quickly for cuts and burns first-aid supplies should be provided in the kitchen.

For sanitary measures and to be an example in the community the kitchen windows and doors need to be screened. It is desirable for the windows of the entire department to be screened.

It is essential to provide the intensities of light which are adequate for the various work activities.

Serving meals to guests is a desirable learning experience for home economics students. Consequently, it

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41. Ibid., p. 22.

42. Ibid., p. 28.

is desirable to provide physical facilities for such procedure.

### Center for Teaching Clothing

The subject matter area of clothing includes the phases of selection, purchase, care, renovation, construction, related art, textiles, and storage. The work experiences conducted to reach goals in this area require: work tables, cutting surface, sewing machines, pressing facilities, fitting facilities and storage for student and department materials. "It is essential that they (space and equipment) be adequate for girls to work under good learning conditions."<sup>43</sup>

A minimum of work table space 20 inches deep by 30 inches wide is required for each student.<sup>44</sup> This table space should be of a comfortable working height. Comfortable chairs which promote good posture are a must. The chair seats should be of good height for high school pupils and for the table height considering the width of the apron.

Chairs should be conducive to good posture, provide comfort, ease, and freedom from undue tension and fatigue for individuals of varying heights and proportions.<sup>45</sup>

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43. Ivol Spafford, op. cit., p. 343.  
 44. United States Office of Education, op. cit., p. 30.  
 45. California State Department of Education, op. cit., p. 15.

At the beginning of a unit in clothing construction more space is needed for cutting than is available in the average department. Consequently it is wise to provide temporary cutting surface which is sturdy and of correct height.

Since it is impractical to provide enough cutting tables for several pupils to cut out garments at the same time, cutting tables are practically never justified from the standpoint of expense and use. In most schools auxiliary cutting surfaces should be provided.<sup>46</sup>

Sewing machines are needed for at least every four students to avoid waste of time in waiting. To assist the carry over of sewing into the homes the machines should be the types which the students have in their homes.

When electric current is available in the community it is practicable to have at least half of the machines electric.<sup>47</sup>

It is essential that machines be kept in good working condition to save class time. Therefore good maintenance service should be available.

As pressing is an important procedure in clothing construction pressing facilities must be provided. The minimum number of ironing boards recommended is one for every<sup>48</sup> eight students. These boards should be types which are easy to use, of a comfortable height and located

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46. United States Office of Education, op. cit., p.31.

47. Ibid., p. 32.

48. Ibid., p. 33.

conveniently to work tables and sewing machines. A sleeve board also aids in pressing. It is essential to provide an iron for each ironing board. The irons must be kept in good working condition for efficient use. A steam iron is desirable for pressing certain fabrics. Suitable storage should be provided for the irons near the ironing boards.

Each center for pressing and ironing should include an ironing board, an iron and safe storage for it, a pan for water, and a pressing cloth. A sleeve board and a shoulder form for pressing are also useful. The number of pressing centers should be sufficient to avoid waste of time through pupils waiting for an ironing board.<sup>49</sup>

Fitting is another important step in clothing construction. A good full-length mirror which allows for the students to view themselves from all sides is essential.

Full-length mirrors, approximately 24 by 54 inches, either set in a door or framed and hung on the wall at a convenient height, are satisfactory.<sup>50</sup>

Privacy must be provided for the students to change clothing.

In any space provided for clothing study some provision must be made for assuring privacy to pupils while changing clothes for fitting garments.<sup>51</sup>

Hands always need to be washed before working on materials, so time is saved by providing such facilities

49. Loc. cit.

50. Ibid., p. 31.

51. Loc. cit.

in the clothing center. Water must also be obtained for pressing and preshrinking.

For convenience in use of water for pressing and for washing hands, it is desirable to have a small sink or lavatory in or accessible to the center or room used for clothing construction.<sup>52</sup>

Light is more important in the clothing center than any other work center because of the close work required. It is most important that both natural and artificial light be adequate. "... good lighting, both natural and artificial, must be safeguarded."<sup>53</sup>

For efficient class procedure students' work materials and equipment are kept in the clothing center. It is important that this storage be adequate, suitable and convenient, both to save class time and to teach students good storage procedure. It is an advantage to use an arrangement so that the table work surface is not cluttered.

In every homemaking education department provision should be made for hanging garments, both finished and partly finished, near the clothing work center.<sup>54</sup>

Good storage should also be provided for department supplies, equipment, and illustrative material.

In order to make good use of illustrative material in teaching clothing it is wise to have

52. Ibid., p. 33.

53. Ibid., p. 49.

54. Ibid., p. 47.

such material stored where and in a way that it is easily available and convenient for use.<sup>55</sup>

A convenient lay-out for all teaching centers provides for ease in supervision and convenient use by the students. A minimum of 5 feet is recommended between work tables in the clothing center.

There should be a minimum of 5 feet of space between tables to permit pupils to pull out chairs on both sides and be seated without bumping into each other.<sup>56</sup>

It is recognized that this space is recommended when tables are provided which allow for students to be seated on both sides. A minimum of 3 feet is recommended for each sewing machine and chair.<sup>57</sup> "The lavatory in a combination clothing room may be recessed in the wall or closed in a cabinet and concealed with doors."<sup>58</sup> Floor space for three people is needed in the fitting area; the teacher, the student being fitted and her working partner.

#### Grooming Center

A grooming center is advisable for teaching the students personal care. A dressing table is needed for the girls to practice grooming, hair arrangement, and applying make-up. It also furnishes good facilities for learning

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55. Ibid., p. 50.

56. Ibid., p. 31.

57. Ibid., p. 65.

58. Ibid., p. 34.

becoming lines and colors. Daylight is important for the girls to see the colors accurately hence daylight type lighting should be provided if the natural light is not sufficient.

A center for personal grooming may be included in the clothing area. It should have a large dressing table with mirror and stools so that several pupils may participate in grooming activities at the same time. The center may also be used for demonstration purposes.<sup>59</sup>

#### Living Center

A living center is desirable in all home economics departments. It is needed for teaching several subject matter areas including relationships, housing, management and the hospitality unit in the area of food.

A living center is included in homemaking departments when facilities for a comprehensive well-rounded program are provided.<sup>60</sup>

The minimum living center consists of a grouping of home-type living-room furnishings. Good light is needed for reading. The location should be accessible to the rest of the department.

The living area should be located where it can be of most service to all the activities of the department. The space should allow for

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59. California State Department of Education, op. cit., p. 16.

60. United States Office of Education, op. cit., p. 19.

attractive arrangement of furniture and furnishings.<sup>61</sup>

Storage space for cleaning equipment and supplies is needed in a convenient location. The size will depend upon the articles to be stored.

The size of the cabinet and the number needed, will be determined by the type and number of articles to be stored.<sup>62</sup>

### Bedroom Center

A bedroom center is needed for teaching the area of family health and the phase of house care in the management area. As this center is needed for a period of short duration, it is advisable for facilities to be provided for assembling when needed rather than permanently located. Space should be available for a class to watch a demonstration with a student in bed. Facilities are needed for students to practice caring for a patient in bed and a bedroom. For the storage to be appropriate special planning will be needed for the type of equipment used.

The area for instruction in home care of the sick needs to be of sufficient size to allow space for a bed and additional space for pupils to observe demonstrations and to practice bed making and caring for the patient in bed.

Home nursing equipment, such as a bed, sheets, blankets, pillows, rubber sheeting, hot

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61. Ivol Spafford, op. cit., p. 350.

62. United States Office of Education, op. cit., p.52.

water bags, thermometers, and other things of which many might be improvised should be provided for instruction in this phase of homemaking. 63

### Laundry Center

The type of laundry centers provided vary among schools according to the program planned. Home economics educators agree that home laundering should be taught in secondary schools, therefore appropriate equipment is desirable.

Although the extent to which laundering is done in the home varies in communities..., it is generally accepted as a home responsibility. It is important, therefore, that training be provided for home laundering and that facilities be made available to offer the kind of experience that will set good standards for home laundering as well as for the location and the type of equipment to be used. In planning the laundry facilities in the homemaking department, the laundry needs of the department should also be considered.<sup>64</sup>

A laundry center which includes equipment for washing, drying, ironing, and the storage of laundry supplies should be provided.<sup>65</sup>

### Center for Teaching Child Care and Guidance

The subject matter area of child care and guidance has an equal place in the school curriculum with the longer established areas.

63. California State Department of Education, op. cit., p. 20.

64. United States Office of Education, op. cit., p.34.

65. California State Department of Education, op. cit., p. 20.

Nursery schools lasting from four to six weeks during a semester are rapidly becoming a part of the home economics program. The setup need not be a permanent part of the layout, but arranged when needed.<sup>66</sup>

The space provided for the length of time needed allows for students to observe and participate in the care of children. Both an outdoor and indoor play space is needed.

"A good nursery school has ample space indoors and outdoors."<sup>67</sup>

The activities for which provision should be made include active outdoor and indoor play, quiet outdoor and indoor play, directed group activity, and rest period.

When the play group is in session only a short time each year, the amount of equipment purchased should be kept to a minimum. This minimum will usually include the required number of small-size tables and chairs, mats or cots to rest on, glasses for juice, dishes for lunch if lunch is provided, an easel or two, books, records, blocks, crayons, some doll furniture and consumable supplies such as drawing paper, paper towels and cleaning tissues.<sup>68</sup>

If child size equipment is not provided, provisions must be available for adapting the high school equipment for the childrens' use.

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66. Faye C. Jones, How to Plan Home Economics Departments, Bulletin No. 9, p. 7.

67. National Association for Nursery Education, Some Ways of Distinguishing A Good Nursery School, p. 1.

68. United States Office of Education, op. cit., p. 37.

The school must demonstrate to students, to parents and to the community only the most acceptable standards for the care and guidance of young children.<sup>69</sup>

The amount and type of storage space needed will depend upon the program planned. The space should be sufficient and suitable for each item stored and located for convenience in using and replacing the items.

### Teacher's Center

Each teacher must have a center of her own in which to do her planning, take care of school records and hold conferences. The equipment and arrangement which make this an efficient center are a desk, desk chair, conference chair, adequate light, sufficient storage for materials used and a location which provides for a minimum of disturbance while working.

The teacher's work center is usually located in one of the department rooms. ... The need for privacy in conferences with pupils should be considered. ...

It is important that provisions be made in the teacher's work center for convenient filing and storage facilities for those materials which a teacher uses frequently. ...<sup>70</sup>

Provision needs to be made for the teacher's personal belongings as well as for her personal records.<sup>71</sup>

69. Ibid., p. 36.

70. Ibid., pp. 38-39.

71. Ibid., p. 54.

### Business Center

#### Future Homemakers of America

Since most home economics departments have a chapter of Future Homemakers of America, it is advisable to provide an appropriate business center for the officers and other members. A small desk arrangement is needed with storage space for records. A bulletin board space for posting notices and news is convenient. This center is usually located in the living center.

### Adult Information Center

Home economics educators agree that the home economics program should carry over into the homes of the students. They also recommend that adults come to the department for information and help with home problems. To aid this interchange of information an adult center would be convenient. Such a center could be set up in the living space. An easy chair with good light for reading and provision for reference materials nearby would save time both for the teacher and the adults. Storage space for wraps of the adults and guests of the department would be appropriate.

... comfortable chairs and lamps in the living room set-up would provide an excellent location for the Home Economics Information Center.<sup>72</sup>

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72. Faye C. Jones, op. cit., p. 34.

### Provisions for Interpreting Department Procedures

Exhibit areas in a department serve to create interest, give information, exhibit work and to interpret department activities. An exhibit case provides an effective setting for these procedures if it is well planned and used properly.

Whether portable or built into the wall, an exhibit case that is used only for exhibits is an accepted addition to the department when the use justifies the expense. It provides a means for exhibiting work completed by pupils in various homemaking classes and offers an opportunity to display educational exhibits valuable for the whole school.<sup>73</sup>

Bulletin board space is also used for the explained procedures. Space is needed for every class and for the department as a whole.

The need for this space (bulletin board) in home economics departments justifies a section for each class using the department.<sup>74</sup>

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73. United States Office of Education, op. cit., p. 42.

74. Faye C. Jones, op. cit., p. 26.

#### PART IV

### A CHECK LIST OF CRITERIA FOR EVALUATING THE PHYSICAL FACILITIES OF HOME ECONOMICS DEPARTMENTS

#### THE FORM OF THE CHECK LIST

Having determined the characteristics of the home economics physical plant for evaluation the next step in this problem was to state criteria by which these points might be evaluated and to devise a usable form for presentation. The form was determined so that the device could be assembled as the criteria were stated. The writer liked the form used in the check list appearing in the appendix of Home Economics in Higher Education<sup>1</sup>. She felt that this form is usable and that it has the recommendation of well known home economics educators.

The major criteria proposed in the report, Home Economics in Higher Education, are grouped with a number of items listed under each criterion. The marking of each item helps to indicate the degree to which the criterion is met by the home economics department being appraised. The writer used this form; dividing the physical facilities

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1. American Home Economics Association, Home Economics in Higher Education, pp. 141-177.

into two sections, general and specific. The general section includes the criteria for the characteristics which are common to the whole department. The specific section includes the physical facilities needed for using different teaching procedures in relation to the subject matter areas. The criteria are given in each section with items and in some instances sub-items listed under each criterion.

( ) A. **CHECK LIST**

**Section I. General Characteristics of the Physical Plant**

- ( ) A. The location contributes to a good environment.
- ( ) 1. The location insures that the department is an integral part of the school plant.
  - ( ) 2. The rooms are located in a unit.
  - ( ) 3. The unit is on ground level or above.
  - ( ) 4. The location provides for good standards of:
    - ( ) a. Lighting
    - ( ) b. Temperature control
    - ( ) c. Ventilation
    - ( ) d. Cleanliness
  - ( ) 5. Toilets for girls are near the department.
  - ( ) 6. An entrance is accessible from a parking space if the department is used by adult classes.

- ( ) 7. The location provides access to the yard for children so that other classes are not disturbed.
  - ( ) 8. A service entrance is accessible for deliveries and removal of waste.
- ( ) B. Sufficient space is allowed to provide for all procedures and activities of the program.
- ( ) 1. Space in centers is ample to accommodate classes at work without crowding.
  - ( ) 2. Unbroken wall space is sufficient for the placement of the various types of equipment and storage cabinets.
  - ( ) 3. Space is available which may be adapted for the areas in the program that need specific requirements for short duration.
  - ( ) 4. Centers planned for use by individuals can be reached without disturbing classes in session.
- ( ) C. Equipment and furnishings are adequate for the program.
- ( ) 1. Equipment and furnishings are the type which students from all homes in the community find a stimulus to good work at school with home application.

( ) 2. Equipment and furnishings are suitable

in that they are:

- ( ) a. Strong and durable
- ( ) b. Functional
- ( ) c. Safe
- ( ) d. A good example of their kind
- ( ) e. Flexible in use as far as is practical
- ( ) f. Of good design
- ( ) g. The type used in homes as far as possible
- ( ) h. is practical for school use
- ( ) i. Suited to the surroundings
- ( ) j. Examples of variety
- ( ) j. Easy to care for
- ( ) k. In good repair

( ) 3. If the furniture is to be moved fre-

quently by students it is light in weight.

- ( ) D. Sufficient storage is arranged and located for greatest efficiency.
- ( ) 1. Storage space is ample throughout the department.
  - ( ) 2. It exemplifies good home storage as far as is practical for school use.
  - ( ) 3. The storage is made suitable to the size and shape of each item although maximum flexibility is provided.
  - ( ) 4. It is convenient and safe in arrangement for obtaining and replacing articles.
  - ( ) 5. The maximum height of cabinets is 6 feet.
  - ( ) 6. The location of the storage is in close proximity to the place where the items are used.
  - ( ) 7. Sufficient light is provided for the purpose of the storage space.
  - ( ) 8. Ventilation is suitable for the type of storage.
  - ( ) 9. Storage is insect and rodent proof.
  - ( ) 10. The storage is as dustproof as possible.
  - ( ) 11. Storage spaces are easily cleaned.

- ( ) E. The department is physically safe and healthful.
  - ( ) 1. All centers and areas are accessible to entrances and passageways.
  - ( ) 2. Traffic lanes are well routed throughout the department.
  - ( ) 3. The kind and amount of light is sufficient for the total visual areas and for the type of work in each center.
  - ( ) 4. Sources of light are controlled for suitable reduction of glare.
  - ( ) 5. All surfaces within the rooms are finished in the least light-absorbing and glare-producing finishes and colors.
  - ( ) 6. The heat is adjusted readily.
  - ( ) 7. A minimum amount of floor and wall space is used for the heating units.
  - ( ) 8. The cooling is comfortable.
  - ( ) 9. The ventilation provides fresh air at all times and removes food odors.
  - ( ) 10. Department ceilings are treated suitably for acoustics.

- ( )11. Sufficient electricity is provided to meet the needs for outlets and special appliances.
- ( )12. All outlets are located near the place where appliances are in use.
- ( )13. Switches are located so that rooms may be conveniently lighted upon entrance.
- ( )14. All electrical cords, plugs and outlets are safe.
- ( )15. The hot and cold water supply is sufficient for departmental needs.
- ( )16. Sufficient fire extinguishers are accessible.
- ( )17. The floors and floor coverings are suitable being:
  - ( ) a. Resilient
  - ( ) b. Quiet
  - ( ) c. Durable
  - ( ) d. Safe
  - ( ) e. Attractive
  - ( ) f. Easily kept clean
  - ( ) g. Appropriate for background.

( ) F. The department provides an informal, cheerful atmosphere; one that is homelike and attractive.

( ) 1. The furnishings are in harmony with the architectural features.

( ) 2. The furnishings are examples of good combinations.

( ) 3. The equipment and furnishings are arranged to give a feeling of spaciousness.

( ) 4. The types of window treatments are decorative and functional for the use of the space and the type of building.

( ) 5. A variety of wisely chosen accessories are available.

( ) 6. Eye-level spaces or lower are provided in all rooms for art centers.

( ) 7. Pictures which harmonize with the surroundings are correctly framed and hung.

( ) 8. Color gives a harmonious effect.

( ) 9. The department is an example of good house-keeping maintained with a minimum of effort.

( ) 10. The complete physical plant is in good repair.

Section II. Specific Physical Facilities for Departmental  
Procedures and Activities

- ( ) A. A center for conducting procedures for a total class is adequate in space, equipment, storage and layout for each teacher.
- ( ) 1. Comfortable seating and writing space is provided for each student.
  - ( ) 2. A minimum of 8 by 4 linear feet of non-glare chalkboard is provided.
  - ( ) 3. A minimum of 3 by 4 linear feet of bulletin board space of material which does not show thumb tack perforations is provided.
  - ( ) 4. Good light falls on the chalkboard and bulletin board and 30 to 40 foot-candles is provided in the reading area.
  - ( ) 5. Provision for using reference materials includes accessibility to suitable storage as bookshelves, bulletin cases, drawers, file cabinets and cabinet space.
  - ( ) 6. Provision for using illustrative material includes devices for hanging charts and posters and suitable storage.

- ( ) 7. Provision for using audio-visual aids includes a movable table 48 inches high for the projector, proper lighting, electric outlets and space for a radio, recording instrument and a loud speaker.
  - ( ) 8. A demonstration work space is accessible.
  - ( ) 9. A compact arrangement allows for free circulation and for each pupil to face the others as well as the leader, the chalkboard and the bulletin board.
  - ( ) 10. Storage suitable for personal property of students such as wraps, purses and books is provided.
- ( ) B. A food center is adequate in space, equipment, storage and layout.
- ( ) 1. A unit kitchen is provided for four students with a maximum of six units.
  - ( ) 2. The minimum equipment provided for each unit kitchen includes:
    - ( ) a. A 4-burner range with oven utilizing fuel available in the community
    - ( ) b. A sink, 18 by 18 inches
    - ( ) c. Eight linear feet frontage of counter space exclusive of sink and range

- ( ) d. Counter space that is resilient, easy to clean and attractive
  - ( ) e. Equipment and utensils for meal preparation, serving and cleaning up
  - ( ) f. Meal service for four including dishes, glassware, silver and linens.
  - ( ) g. A dining table 30 by 48 inches
  - ( ) h. Four dining chairs which promote good posture
  - ( ) i. Suitable provision for garbage disposal which is out of sight
- ( ) 3. The storage for each unit kitchen includes sufficient and suitable space for all articles stored including:
- ( ) a. Family size utensils
  - ( ) b. Staple food supplies
  - ( ) c. The meal service
  - ( ) d. Cleaning supplies
  - ( ) e. Hanging of dish towels
- ( ) 4. The layout for each unit kitchen is efficient for class preparation and serving of meals.
- ( ) a. A minimum width of 5 feet is allowed within the unit kitchens.

- ( ) b. The large equipment is placed for efficiency in use by four students.
- ( ) c. Two sides of the range are exposed.
- ( ) d. A minimum of 18 inches of counter space is provided between large equipment.
- ( ) e. The storage is located so that each article is accessible at the place where it is first used.
- ( ) f. The minimum depth of the counter space is 22 inches.
- ( ) g. The counter space adjacent to the range is the depth and height of the range.
- ( ) h. The working heights are comfortable for the majority of students.
- ( ) i. The clearance between wall cabinets and work surfaces is sufficient for the use of the work space.
- ( ) j. Toe space of from 3 to 4 inches is allowed for all equipment and cabinet bases.
- ( ) k. One unit kitchen is arranged conveniently for a demonstration center.
- ( ) l. A space of 3 feet is allowed around the tables when in use.

- ( ) 5. The amount and type of refrigeration is sufficient for the food program.
- ( ) 6. A suitable counter space is provided for use by the refrigerator.
- ( ) 7. Suitable counter space is provided for receiving and dispensing of food.
- ( ) 8. If the food center is in continuous use provision is made out of sight for quick drying of dish towels.
- ( ) 9. General storage includes suitable space for extra equipment and supplies.
- ( ) 10. Student storage includes suitable space for books, purses, wraps, aprons and recipe boxes.
- ( ) 11. An adequate business center for students is provided which includes:
  - ( ) a. A desk arrangement
  - ( ) b. Filing space sufficient for recipe files, books, grocery accounts, bills and records
  - ( ) c. A telephone located here or in the teacher's center
  - ( ) d. Located so that students may use it without disturbing classes

- ( )12. An efficient layout for the food center is provided including:
- ( ) a. The unit kitchens grouped for ease in supervision
  - ( ) b. Sufficient space to store tables and chairs out of use without interfering with traffic
  - ( ) c. Traffic lanes well planned
  - ( ) d. The refrigerator located so that it is accessible to the unit kitchens and for storing of delivered foods
  - ( ) e. General storage is located conveniently for storing and dispensing of supplies
  - ( ) f. Student storage is located near the entrance
  - ( ) g. A space of 4 feet in front of storage cabinets used by the students
- ( )13. First-aid supplies for cuts and burns are provided.
- ( )14. Well-fitting screens are provided for the windows and doors.

- ( ) 15. The amount of light provided includes:
  - ( ) a. 10-20 foot-candles for general work
  - ( ) b. 20-30 foot-candles for close work at counters and sinks
  - ( ) c. 30-40 foot-candles for close work at business center
  
- ( ) C. A dining center adequate for guest meals is provided.
  
- ( ) D. A clothing center is adequate in space, equipment, storage and layout.
  - ( ) 1. The equipment provided includes:
    - ( ) a. A minimum of 20 inches deep by 30 inches wide of comfortable construction table space for each student
    - ( ) b. Comfortable construction table heights of from 27 to 29 inches
    - ( ) c. Construction tables without drawers and of same height if used for more than one purpose
    - ( ) d. Sufficient auxiliary cutting surface which is 36 to 39 inches in height
    - ( ) e. A chair which promotes good posture for each student plus one at each sewing machine

- ( ) f. A minimum of one sewing machine for four students
- ( ) g. Both foot power and electric machines to the degree in which they are used in the homes
- ( ) h. Sewing machines for which service and parts are accessible
- ( ) i. A full-length mirror which allows for the figure to be viewed from all sides
- ( ) j. A sufficient number of ironing boards so that eight students are the maximum number to use one board
- ( ) k. Ironing boards which are non-warping and easy to use
- ( ) l. Ironing boards which are 33 inches in height
- ( ) m. A sleeve board
- ( ) n. An iron for each ironing board
- ( ) o. Irons of the type which facilitate clothing construction
- ( ) p. Suitable provision for washing hands and obtaining water

( ) 2. The light provided includes:

- ( ) a. 100 or more foot-candles for sewing fine needlework on dark material
- ( ) b. 50-100 foot-candles for prolonged average sewing
- ( ) c. 20-50 foot-candles for prolonged sewing on light material
- ( ) d. 20-30 foot-candles for ordinary sewing on light material
- ( ) e. 20-50 foot-candles at ironing boards
- ( ) f. 20-50 foot-candles at mirror

( ) 3. Storage provided includes sufficient space for:

- ( ) a. Students' work materials and equipment
- ( ) b. Hanging of partially completed garments
- ( ) c. Portable ironing boards, if used
- ( ) d. Irons
- ( ) e. Small equipment
- ( ) f. Teaching materials including:
  - ( ) 1) Swatches of materials
  - ( ) 2) Charts
  - ( ) 3) Charts and models of clothing construction steps
  - ( ) 4) A roll of wrapping paper mounted on a frame with a cutting edge

- ( ) 4. An efficient layout is provided including:
- ( ) a. A minimum of 5 feet between construction tables when students are seated on both sides
  - ( ) b. A minimum of 3 feet for each sewing machine and chair
  - ( ) c. The tables and sewing machines arranged so that the light falls over the left shoulder of the students
  - ( ) d. Privacy for changing clothing
  - ( ) e. Floor space for three people in the fitting area
  - ( ) f. 30 to 36 inches between ironing boards
  - ( ) g. The ironing boards located for convenient use
  - ( ) h. A space of 4 feet in front of storage cabinets used by the students
  - ( ) i. An arrangement which insures ease of supervision

- ( ) E. A grooming center is adequate in space, equipment, storage and layout.
- ( ) 1. A suitable dressing table is provided with space for several students.
  - ( ) 2. Stools are provided for each place.
  - ( ) 3. Mirror space the length of the dressing table is provided.
  - ( ) 4. Good daylight is provided over the mirror.
  - ( ) 5. Suitable storage for teaching materials is available in the center or in a general teaching materials storage cabinet.
- ( ) F. A living center is adequate in space, equipment, storage and layout.
- ( ) 1. Adequate space is allowed for the use made of this center.
  - ( ) 2. Home-type living-room furniture is provided.
  - ( ) 3. The furniture is arranged in functional groups.
  - ( ) 4. Light provided for reading is from 20 to 30 foot-candles.
  - ( ) 5. The center is located conveniently for the program in operation.
  - ( ) 6. Storage for cleaning equipment and supplies is located conveniently for use in the department.

- ( ) G. A bedroom center may be adequately arranged and is sufficient in space, equipment and storage.
  - ( ) 1. Sufficient space is available for a class to watch a demonstration with a student in bed.
  - ( ) 2. Appropriate equipment to learn to care for a sick person in bed is available including:
    - ( ) a. A home-type bed with blocks available for raising the height
    - ( ) b. Small equipment needed to make the patient comfortable
    - ( ) c. First-aid supplies
  - ( ) 3. Sufficient storage is provided for equipment and supplies.
  
- ( ) H. A laundry center is adequately arranged and equipped for the use made of the center.
  - ( ) 1. Appropriate equipment is provided for the kind and amount of washing that is done.
  - ( ) 2. Either a suitable drying space or an automatic dryer is provided.
  - ( ) 3. A pressing center is accessible.
  - ( ) 4. Sufficient floor space to use the equipment is allowed.
  - ( ) 5. Sufficient storage for small equipment and supplies is provided.

- ( ) I. A center for teaching and applying child care and guidance may be adequately arranged and is sufficient in space, equipment and storage.
  - ( ) 1. An appropriate outdoor play space is provided for children in a play school.
  - ( ) 2. A suitable indoor space may be arranged when needed.
  - ( ) 3. Sufficient equipment and play materials are available which foster physical development and social and creative play including:
    - ( ) a. Active outdoor and indoor play
    - ( ) b. Quiet outdoor and indoor play
    - ( ) c. Directed group activity
    - ( ) d. Rest period
  - ( ) 4. Provisions are provided for adapting adult equipment for children's use.
  - ( ) 5. Space is provided for a class to observe the children without interfering with their activities.
  - ( ) 6. Sufficient storage is provided for equipment and materials.

( ) J. A center for each teacher is adequate in space, equipment, storage and layout.

( ) 1. The equipment includes:

( ) a. A flat-top, office-size desk

( ) b. A desk chair and a conference chair

( ) 2. Light provided is from 30 to 50 foot-candles.

( ) 3. The storage includes:

( ) a. Two desk height files or a four-drawer file with at least one drawer that may be locked

( ) b. Sufficient storage cabinets for teaching materials

( ) c. A storage cabinet for the teacher's personal property

( ) 4. The storage of records and materials are located conveniently to the desk.

( ) 5. The center is located so that the teacher can work with a minimum of disturbance.

- ( ) K. An adequate business center for the chapter of Future Homemakers of America is provided.
- ( ) 1. A desk arrangement is provided.
  - ( ) 2. Bulletin board space is convenient.
  - ( ) 3. Light provided is from 30 to 40 foot-candles.
  - ( ) 4. Storage space is sufficient for records.
  - ( ) 5. The center is located so that the students may use it without disturbing classes.
- ( ) L. An adult information center is adequate in space, equipment, storage and layout.
- ( ) 1. The equipment includes:
    - ( ) a. An easy chair
    - ( ) b. Provision for reference materials
  - ( ) 2. Light provided is from 20 to 30 foot-candles.
  - ( ) 3. Appropriate storage for wraps is conveniently located.
  - ( ) 4. The center is located so that it is accessible to adults without interfering with the classes at work.

( ) M. Adequate provisions are provided for interpreting departmental activities.

( ) 1. An adequate exhibit case is provided which is:

( ) a. Large enough for the things that will be exhibited but not so large as to require a large amount of material for effective arrangement

( ) b. Well lighted

( ) c. In a location that is convenient for students to arrange the exhibits and in a prominent place where the largest number of students are able to view it

( ) 2. Adequate bulletin board space is provided for:

( ) a. Each class studying a different subject matter area and different levels of the same areas.

( ) b. Department activities

## PART V

### SUMMARY AND RECOMMENDATIONS

#### SUMMARY

The home economics department provides the physical environment in which to conduct the program offered in this department. An adequate environment provides for the scope of the program, procedures for conducting the program and space for effective sized classes. Needs of students, hence programs and methods of instruction, are so similar that certain characteristics are common to the majority of departments. The writer believes that those requirements generally considered necessary to efficient instruction should be regarded as essentials. In order that the findings of this study might be applicable to the majority of schools only these essentials were used as the source of criteria.

A further consideration of essentials for a department indicated that some requirements were concerned with characteristics that influence the teaching of all areas in the program and other characteristics pertained to individual areas. Characteristics influencing the instruction of all areas were grouped as general characteristics and

those pertaining to individual areas as specific characteristics.

The writer was aware of the essential general characteristics that follow. The location is such that the department may be an integral part of the school curriculum. The rooms are located in a unit, on ground level or above and near a toilet for girls. The location provides for good standards of lighting, temperature control, ventilation, and cleanliness. Convenient entrances are provided for students, adults, children, deliveries and removal of waste. Space is ample to provide for the equipment, furnishings, storage and students for each center as prescribed by the program. The equipment and furnishings are adequate and suitable for the program. The storage space provides adequately and conveniently for the articles to be stored. The department is safe and healthful. An informal atmosphere of charm and beauty is created.

The writer interpreted the specific characteristics for the individual areas and related uses of the department into the following work centers.

A center for each teacher to conduct procedures in which the total class may participate. This center requires comfortable seating and writing space for each student. It should include also a chalkboard, bulletin board, provision for using and storing teaching materials, student texts

and reference books, and provisions for using audio-visual aids.

The center for teaching the area of food provides space and equipment for the work experiences concerned with preparation and serving meals. Unit kitchens equipped for four students are recommended, each of which is comparable to a home kitchen with the exception of refrigeration. It is recommended also that a serving table and chairs be adjacent to the unit kitchen.

The clothing center provides space and equipment for the work experience in clothing. Work tables, temporary cutting surface, chairs, sewing machines, pressing facilities, fitting facilities and student and department storage are needed.

A grooming center is needed for teaching personal care. It should include a dressing table which seats from two to four students.

A living center is needed by all departments. A group of living-room furnishings is minimum.

The bedroom center should provide facilities for students to practice caring for a patient in bed.

The laundry center provides for teaching home laundering.

The center for child care and guidance provides space and equipment for students to observe and participate in the care of pre-school-age children. Provision should be

made for quiet and active play indoors and out, as well as directed group activity and rest period.

A center is needed by each teacher for her planning, conferences and record keeping. This center should include a desk, two chairs, good light and sufficient storage.

The officers of the chapter of Future Homemakers of America need a business center which includes a desk, storage space and room to seat a small group.

An adult information center is advisable which includes comfortable reading facilities adjacent to reference materials.

Space is needed for interpreting the department program and activities such as an exhibit case and bulletin boards located so that they may be seen from main passageways.

These characteristics determined as essential were stated as criteria. The criteria were compiled in a device for use in evaluating the adequacy of both existing home economics departments and proposed plans for new and remodeled departments.

#### RECOMMENDATIONS

1. Only experienced home economics personnel should use the check list to evaluate existing departments and proposed plans as the rating depends upon the judgment of the evaluator.

2. The entire department, rather than a selected part, should be evaluated at one time.

3. The check list could be used as a guide in determining requirements for proposed departments.

4. This device could be used to determine the adequacy of existing departments.

5. The study could be used to orient pre-service teachers in studying a good environment for the program.

## APPENDIX

### SCORING OF THE CHECK LIST

To score the check list the writer liked the scoring method used by Herbert B. Bruner in "Criteria for Evaluating Course-of-study Materials."<sup>1</sup> He lists the criteria with Arabic numerals under sub-sections lettered with capital letters. A gross scale of four points is allowed for the course as a whole, for each of the four large sections and for each of the sub-sections. The four points include: excellent, good, fair, poor and not in the course. The scale is employed by writing in the appropriate symbol. The order of rating is cumulative, that is, the evaluator rates the items following the Arabic numerals first, then forms a composite rating for the various sub-sections, then, in turn, for the four main sections and, finally, for the entire course. In each case the rating depends upon the judgment of the evaluator.

The writer suggests an adaptation of the above scoring method. The two sections, general and specific, are numbered with Roman numerals, I and II. In each section the criteria

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1. Herbert B. Bruner, "Criteria for Evaluating Course-of-study Materials," Reprint from Teachers College Record, Vol. 39 No. 2, 107-120 (November 1937).

are numbered with capital letters, A, B, C, etc. The items listed under each criterion are numbered with Arabic numerals, 1, 2, 3, etc. Where sub-items are used they are numbered with small letters, a, b, c, etc. The items and sub-items are to be checked by Arabic numerals - 0, 1, 2, 3, or 4 - representing the words non-existent, poor, fair, good and excellent. After the sub-items and items have been checked they may be totalled and a score determined for the criterion. A perfect score for each sub-item, item and criterion is 4. Four multiplied by the number of sub-items gives a perfect score for the item and likewise for the criterion.

#### AN EXAMPLE OF SCORING

( ) A. A criterion.

( ) 1. An item.

( ) a. A sub-item.

( ) b. " "

( ) c. " "

( ) 2. An item.

( ) 3. " "

The score of the sub-items might be:

( 2 ) a. -----

( 3 ) b. -----

( 4 ) c. -----

Total 9

The perfect score for the sub-items would be  $4 \times 3 = 12$ . The score is  $9/12$  or  $3/4$  of the perfect score so the score for the item is 3.

The score of the items might be:

( 3 )	1.	-----
( 4 )	2.	-----
( 1 )	3.	-----
Total		<u>8</u>

The perfect score for the items would be  $4 \times 3 = 12$ . The score is  $8/12$  or  $2/3$  of the perfect score so the score for the criterion is 2.6.

(2.6) A. Criterion

( 3 )	1.	Item
	( 2 )	Sub-item
	( 3 )	"
	( 4 )	"
( 4 )	2.	Item
( 1 )	3.	"

The scores of the criteria numbered with the capital letters may also be cumulative. Thus a perfect score for the department could be the number of criteria (19) multiplied by 4 (76). Evaluators may determine weak spots in a physical plant by glancing at each criterion. A perfect score, likewise, may be determined for each teaching center and compared with the evaluated score so that the strength of each teaching center may be checked.

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