ABSTRACT
          This paper, in an attempt to develop a meaning for
the term "competency" as it relates to education, begins with a brief
review of the literature of competency. The authors then offer their
definition: a competency is a rational performance which
satisfactorily meets the objectives for a desired condition and can
be categorized as (a) basic, or essential to the preservation of
life; (b) common, possessed "in common" by a social group; (c)
technical, generally associated with a job or hobby; or (d)
professional, which involves responsibility for decision making. A
teaching competency can be divided into several components: (a) the
subject component, which refers to instructional objectives or the
subject to be taught; (b) the professional component, which relates
to the principles, strategies, and techniques used to meet the
instructional objective; (c) the process component, which contains
thought-processing elements that enable the accomplishment of a
teaching competency; (d) the adjustment component, which refers to
the individual's adaptation of his personal characteristics to the
performance of the competency; (e) the attitudes component, which
refers to the values and feelings necessary to the performance of a
competency; and (f) the professional component, which refers to the
observable behavioral element of the performance associated with the
teaching competency. (HMD)

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A MEANING FOR COMPETENCY

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If there is any significance to the name <u>Competency</u>

<u>Based Education</u>(CBE) it must lie in the word <u>competency</u>.

It is this word that appears to identify the unique

or at least different feature of this type of educational

program. A review of current educational literature

however reveals that little serious attention has been

given to this particular concept. For the most part

the reference made to <u>competency</u> are brief partial def-

initions or explanatory notes limited to one or two sen-

tences in an entire paper.

In reviewing the literature, two searches were

made of the materials listed in the Educational Research

Information Center(ERIC). The first used the descrip-

tors: <u>teaching skill</u>, <u>teacher competencies</u>, <u>teaching</u>

<u>competencies</u>, and <u>competency based teacher education</u>.

Articles which seemed relevant to the quest of the

authors were selected on the basis of the ERIC key

words and were reviewed. This first ERIC search re-

vealed a few references which attempted to define com-

petency but did not provide any more detailed treatment.

Thus, a second search using the terms <u>competence</u>, <u>com-</u>

<u>petencies</u>, and <u>competency</u> was initiated. It is in-

teresting to note that the <u>Thesaurus of ERIC Descriptors</u>

(1972) does not list any of these words as descriptors.

It was, therefore, necessary to make a title search.
Articles were selected from the second search which
seemed pertinent from the key word descriptions and
these too were reviewed. A further search was made
in the Education Index for articles published since
1967 relevant to the authors' purpose. In addition,
the personal CBE libraries of the authors were searched.
None of these searches provided what the authors re-
garded as an adequate treatment of the concept com-
petency. Because current professional literature has
seemingly failed to define competency, and because the
concept is fundamental to CBE, the authors have pre-
pared this paper which briefly reviews some of the
pertinent literature and presents what they find to
be a sound, useable conceptual definition for competency.

A Review of Selected References

In a publication of the American Association of
Colleges for Teacher Education (AACTE) on the subject
of Performance Based Teacher Education (PBTE) (AACTE
considers PBTE synonomous with CBE in teacher edu-
cation.) Elam, (1971), refers to competencies as
knowledge, skills, and behaviors to be demonstrated

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by learners which are, "derived from explicit con-
ceptions of teacher roles, so stated as to make pos-
sible assessment of a student's behavior in relation
to specific competencies and made public in advance " (p.6).

Cooper and Weber (1973) define competencies as,
"attitudes, understandings, skills and behavior that
facilitate intellectual, social, emotional and physical
growth in children" (p.15). Napier's (n.d.) definition
of competencies as, "those attitudes, understandings,
skills and behaviors which are thought to facilitate
intellectural, social, emotional, and physical growth
in children" (p. 8) is similar to the definition pre-
sented by Cooper and Weber.

Dodl (1972) in the introduction to Catalog of
Teacher Competencies says, "The term competency is
applied in these materials to statements descriptive
of functional abilities which teachers must exercise
in the conduct of their job related activities. The
knowledge considered foundational to the field of ed-
ucation is not included in this project. The focus
instead is on specification of competency in terms of
what teachers can do (p. 2)."

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Cook and others (1972) with reference to this term point out that the distinction between performance and competency is elusive. They claim the literature and even groups actually working on competency-related projects are unable to provide a definition. They offer the following definition of a competency which they regard as functional: "A competency is knowledge, skills, and judgment which the student will demonstrate on a predetermined proficiency level before initial and/or continuing certification (p. 2)". Johnson and Shearron (1971) observed the confusion regarding the term competency. They wrote, "This term is variously defined. In some instances it is used with reference to what has been defined as a teaching objective and in other instances it is used with reference to teaching behaviors (p. 8)."

Houston and Howsam (1972) write that competence is "adequacy for a task;" or "possession of required knowledge, skills, and abilities (p. 3)."

Other writers appear to use the term "performance" interchangeable with "competence". Elfinbein (1972) defines performance as "behavior to be exhibited at the completion or output by the product; a meaningful

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unit of performance relevant to the performance con-
ditions and critical for instruction (p. 91)."
McDonald (1972) defines teaching performance as "a
complex of knowledge and teaching skill, extending over
time, involving many specific items of knowledge, and
usually involving several specific skills (p. 60)."

A Definition

The authors define a competency as <u>a rational
performance which satisfactorily meets the objectives
for a desired condition</u>. The key words in this defi-
nition which must be given consideration if adequate
communication is to occur are: rational, performance,
satisfactorily, objectives and desired condition.
<u>Rational</u> here means that the performer has direction
and purpose. He knows precisely why he is doing what
he is doing. He may have even developed and considered
many alternative strategies before he chose to implement
the one which he uses.

<u>Performance</u> is more than observable behavior.
It includes much that cannot be observed such as the
manipulation of ideas and the making of judgments and
decisions.

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In the phrase, "satisfactorily meets the objectives"
the word <u>satisfactorily</u> is used to indicate that a
competency need only be adequate or sufficient. By
using this word the definition avoids the implication
that a competency is a highly proficient act. At the
same time, it suggests that factors associated with
efficiency cannot be overlooked. In this same phrase
the term <u>objectives</u> is synonomous with specifications
or any other such term which indicates that the hoped
for outcomes have been defined in fairly detailed terms.

A <u>desired condition</u> is a state of existence in
which some specific need or want is satisfied. This
need or want might be the changed behavior of some
individual or group, a tangible product or idea, an
answer to a question, a means of resolving a problem,
or a plan or strategy to accomplish some mission.

Some Kinds of Competencies

Whenever a person systematically and rationally
goes about to get what he needs or wants and is suc-
cessful in doing so he has performed a competency.
The number of competencies performed by human beings

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would therefore be a seemingly endless list. In
order to view this whole field of competence with
some system and order, it is helpful to assume that
all competencies may be generally sorted into various
broad categories. Here the terms <u>basic</u>, <u>common</u>, <u>tech-</u>
<u>nical</u> and <u>professional</u> will be used. However, one
cannot afford to be exacting when competencies are
sorted into such categories. This will become evident
when it is noted that what to one person or group may
be considered to be a <u>common</u> competency may to another
person or group be a <u>technical</u> or even perhaps a <u>pro-</u>
<u>fessional</u> competency.

Basic competencies are defined here as those
essential to the preservation of life. They have to
do with man meeting his needs for existence in his
environment. For the most part they are associated
with the basic needs. Illustrative of basic competencies
are: He maintains an adequate diet. He secures suf-
ficient rest and sleep. He communicates with others
in his social group.

Common competencies are those which are "possessed
in common" by social group. That is, each person ex-
pects nearly all others in his immediate social ingroup

to have them. They are over and above the basic
competencies, but as social groups develop many of these
become more and more essential as distinguished from
merely desirable. Competencies common to the everyday
activities in particular social groups of the United
States include: He drives an automobile. He makes
long distance telephone calls. He keeps records of
family expenditures. He plays tennis. He rides horse-
back.

Technical competencies are usually performed in
connection with a job or hobby. The focus of attention
is upon the word technical which in this case relates
to technique or technology. It is a skill or way of
doing something. Normally we think of someone who is
performing a technical competency as a practionner.
He knows that the skill or technique which he is using
will lead to the desired end and it may be of little
consequence whether or not he understands the philo-
sophical, sociological or scientific rationale for
his performance. Often in military, medical and in-
dustrial activities the technical employee is expected
to know only how to perform a given competency. If
he makes any judgments in carrying it out they relate

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to the safety of the environment, the efficiency of performance and perhaps the selection of the specific tools most likely to assist the performer in carrying out instrucions.

Teachers are required to perform many technical competencies in carrying out their professional responsibilities. Some of these are: He operates a motion picture projector (or any other piece of normally used equipment such as an overhead projector, mimesgraph machine or opthalmograph). He scores standardized tests (as instructed). He requistions instructional materials and equipment (with procedures which are in keeping with administrative policies). He prepares equipment inventories (or any other report such as fiscal reports, attendance records, health records, pupil achievement records etc.) as directed.

Professional competencies differ from the others in that they carry with them the responsibility for decision making. Normally, they demand analysis and synthesis of ideas or the kinds of activities which we normally associate with problem solving. These competencies are much more likely to call upon our accumulation of knowledge and experience, our thought

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processes and our creativity than do the others. In

teaching, professional competencies include such per-

formances as: He identifies the learner's needs. He

prescribes suitable learning activities. He guides

the learner toward social adjustment with his peer

group. He assists the learner in determining the

nature of his own values. He creates and maintains

an environment condusive to learning.

The Uniqueness of a Competency

In preparing the definition the authors have

deliberately avoided any suggestion that all competencies

are uniform or stereotyped performances. It is their

thesis that most if not all competencies may be carried

out in numerous ways. With some competencies especially

professional competencies the performer's manner may dif-

fer markedly from one person to another.

Although the case is made that performers should

differ one from another in carrying out certain com-

petencies. It is perhaps even more to the point to

say that seldom if ever can certain competencies be

performed twice in the same manner. In most life

situations there are too many variables which change

too rapidly to allow this duplication. An activity

can seldom if ever be implemented twice with the same

persons because the persons involved in the first imple-

mentation are changed as a result of it. If one should

attempt to duplicate a first performance it would be

unlikely that one could obtain sufficiently similar

subjects for the activity to be duplicated as a perfect

reflection of the original activity. Indeed if nothing

else were changed, the performer himself would have

been changed as a result of carrying out the first

performance. Herein lies a cue to the creative and

artistic nature of performing a competency. For the

authors this cue along with what is said later about

the individual's uniqueness in implementing a pro-

fessional teaching competency helps dispel some of the

concern expressed by the erroneous assumption that by

specifying competencies for objectives we produce robots

for teachers.

The Components of Competence

In the review of literature it was found that

when authors discussed or attempted to analyze compe-

tencies they used such terms as _performance_, _knowledge_,

skills, _processes_ and _attitudes_. However, one may not

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conclude from these writings that such terms in and

of themselves represent different kinds of competencies.

That is, a competency cannot be simply any peice

of stored or storageable knowledge about some process,

idea or thing. Nor can it be simply any attitude or

feeling for which no particular object has been identi-

fies. The term competency implies action in relation

to an objective. Thus, without clear indication of

an objective and the implication of impending action

there can be no competency.

The component parts for either a technical or

a professional teaching competency are the same,

but the contents for these components differ in

number and kind for each competency and for each

individual. The content of the components elements

are called enablers. An enabler is an assisting

element. It could be an item of knowledge, a skill,

a process or a feeling or attitude.

The components or component parts for a teaching

competency which have been identified thus far by

the authors are: the performance enablers component,

the instructional objective enabler's component,

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the professional enablers component, thought processing

enablers component, the individual adjustment enablers

component, and the attitudinal enablers component.

Hopefully to simplify communication these components

will be called the performance component, the (teaching)

subject component, the (teaching) professional com-

ponent, the (thought) process component, the (personal)

adjustment component, and the attitudes component.

It may be observed that these various components

of a competency contain elements that are constantly

in interaction. None of the components or elements

is easily identified as a part of a particular com-

petency when it is separated from the competency

itself. However, once in its "proper" place the

logic of its relationship to the competency can usually

be justified by the person who makes the association.

Figure 1 depicts these components graphically in

their approximate relationship each to the others.

The Performance Component

Performance is shown at the peak of the figure.

Performance here is on-the-job action. It consists

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Performance Component

Subject Component | Professional Component | Process Component | Adjustment Component

Attitudes Component
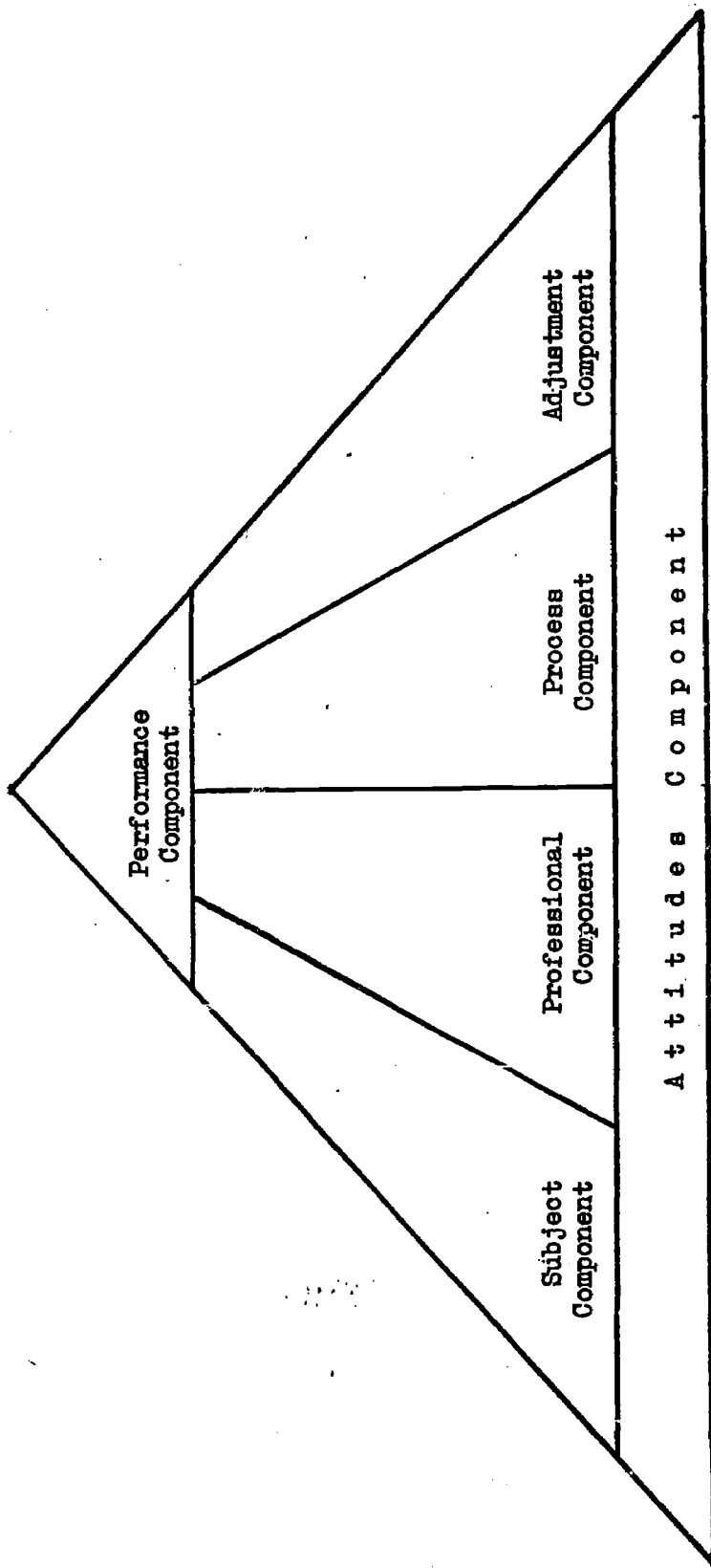
Performance component contains observable behavioral elements of the performance associated with the teaching competency.

Subject component contains elements of the competency directly associated with the instructional objectives or subject to be taught which enable performance of the competency.

Professional component contains elements of the competency associated with professional education which enable performance of the competency such as principles, strategies, and techniques.

Process component contains thought processing elements which enable the implementation of the teaching competency.

Adjustment component contains elements essential to the individual's adaptation of his personal characteristics to the performance of the competency.

Attitudes component contains enabling elements of attitudes, values and feelings essential to the performance of the teaching competency.

Fig. 1 The Components of a Competency

of many identifiable behaviors being performed in

concert, and calls forth elements from the performers

total background of knowledge, skills, processes and

values to make decisions so as to perform individually

in such a fashion as to satisfy the target instructional

objectives.

To evaluate this component one must assess the

observed performance against given performance cri-

teria and note the effect on the environment in re-

lation to the instructional objectives.

Checklists utilizing performance criteria for

mastery at some specified level of proficiency are

seen to be the most feasible means of assessing per-

formance today. The effects of the professional per-

formance on the learner may also be used to provide

evidence of its effectiveness. This is determined by

assessing the before and after behavior of learners

and by examining the products of their learning efforts.

The Subject Component

The contents of the subject component are enablers

associated with the instructional objectives. For

example, if subject matter teaching is the concern

then these enablers have to do with the subject matter

being taught. This means the facts, ideas, principles,

concepts, values, processes and/or skills which the

teacher helps the learner acquire. If the competency

has to do with the teaching of the natural sciences

then the enablers are the elements of subject matter,

values and skills about the natural sciences which

the teacher must possess in order to perform the

teaching competency. Similarly if the subject area

is mathematics then the enabling elements are drawn

from the field of mathematics.

Subject component elements are for the most part

evaluated by conventional means of assessment. That

is, once essential elements have been identified those

tests commonly used in college classes to determine

whether or not a student has sufficient knowledge,

can perform a skill or manipulates selected elements

of a process, can be used to determine whether or not

the learner has sufficient background in the subject

to perform the competency.

The Professional Component

The contents of the professional component include

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definitions, facts, principles, skills, and processes
associated with professional education. Its basic
source is a massive collection of information which
theorists and practioners in Education refer to as
professional knowledge. It includes the subject mat-
ter of the profession classified under such titles as
educational psychology, developmental psychology,
educational sociology, philosophy of education,
curriculum, tests and measurement, methods and tech-
niques, management of instruction, educational media
and many more.

Insofar as any particular competency is concerned
however the professional component contains only those
enabling elements which are essential to the performance
of the teaching competency. This includes such in-
formation as how the competency is carried out, why
it is important and the conditions under which it
can be successfully implemented.

Evaluation of this component consists of deter-
mining what is desired as evidence of the extent to
which the teacher possesses the essential facts, def-
initions, principles or skills. Conventional paper
and pencil tests which represent a reliable sample of

of the essential information along with some suitable

checklists for skills are usually thought to be adequate.

The Process Component

Here, the term process is used as a referent for

a class of human techniques by which we produce ideas,

create designs and strategies, make decisions and eval-

uate progress. These processes are the tools by which

we aspire, idealize and create exemplary models. We

use them to compare ideas, to redesign strategies, and

to produce means of resolving problems.

In carrying out any competency we must use processes.

However, some competencies require different kinds of

processes and to a greater or lesser extent than do

others. For example, the processes required to thread a

motion picutre machine are different and for most people

less complex than the processes required to design a

learning activity for a particular learner acquire a

specific objective.

The content of this component operates interactively

with that of those previously mentioned. One should not

usually teach about a subject unless he has knowledge

and skills in that subject. Also, to be effective one

should know what is said about how teaching should be

carried out and know the rationale which supports

the theory.   On the other hand. no

amount of knowledge, skill or feeling about the subject

matter being taught or about professional education can

be a value unless the teacher processes this information

in such a manner as to help the learner reach the de-

sired objectives.

Processes may be evaluated by the products of either

real or simulated activities. For example, if we are

interested in knowing how well a teacher diagnoses a

learner's needs we can provide that teacher with either

a case study of a pupil or a "real live" pupil and ask

the teacher to determine his learning needs. There are

two products of this activity which may be evaluated.

One is the list of pupil needs which were produced and the

other is what the teacher reveals to be the process by

which the list evolved. Both products could be evaluated:

in the former case by inquiring of specialists (or cri-

teria) the extent to which the list of needs are ac-

ceptable and in the second case by asking specialists

(or criteria) the extent to which the processes which

were appropriate. In the first case only the suitability

of the immediate list (the sample one) is revealed, but

in the second case because process is being evaluated the

evidence reveals the extent to which this teacher is likely to be successful in determining the needs of other pupils.

The Adjustment Component

Personal characteristics or qualities in and of themselves are not teaching competencies. However, they are important concerns in examining a teaching competency since they determine the manner in which the competency will be carried out by any individual. For example, an elementary teacher who is helping children acquire number concepts will use music if that teacher is skillful in music. Another who is skillful in graphics is more likely to use the media of art. Still another might stress dance or some other form of body movement because that teacher possesses aptitude in this area. For another illustration let's look at enthusiasm. All teachers should probably show enthusiasm, but certainly not all of them should do so in the same manner. What is appropriate for one teacher may be totally inappropriate for another.

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Consideration of the component personal adjust-

ment gives the opportunity for competency based pro-

grams to provide the freedom for teachers to "be

themselves". It personalizes and humanizes. It

encourages them to utilize their strengths or aptitudes

and to minimize or compensate for their weaknesses or

deficiencies. Furthermore it provides for creative

performance. It has already been pointed out that no

competency can ever be demonstrated twice in exactly

the same manner. The authors would further assert

that no attempt should ever be made to create identical

duplication in the practice of any professional

teaching competency.

Evaluation of the extent to which any individual

teacher is making the most of his or her personal

characteristics in the implementation of a competency

is difficult to evaluate. Certainly no standardized

instrument exists today. However, there are processes

by which this may be attempted. The student might

begin by systematically examining himself to the point

that he prepares an inventory of his personal charac-

teristics -- aptitudes and deficiencies. With this

list and assistance from peers, superiors and even

perhaps his students, he might systematically search

for ways in which he could capitalize on his aptitudes,

compensate for his deficiencies, and thus adjust

proposed behavioral models to his own particular per-

sonal characteristics.

The Attitude Component

When we have positive attitudes toward some ob-

jective we usually do those things which we think will

make it happen. When we have negative attitudes

toward some objective we tend to avoid it or to prevent

it from happening. If we feel neither positive nor

negative we tend to do nothing. With no attitude or

feeling there is no desire to act; thus, no performance.

It is only with positive feelings then that a competency

is implemented. This rationale leads the authors to

regard the attitude component which contains values,

attitudes and feelings as the foundation upon which

all other components rest.

Some people value certain things more than others.

Also, values differ within and among groups. Thus,

there may be many values associated with any particular

teaching competency. Some are suggested by the following

questions: How do we feel toward the learning objec-

tives which the competency will attain? How do we
feel toward the learning environment? How do we feel
about the amount of work that the competency will
require us to perform? How do we feel about the long
range benefits? How do we feel about the competency? How
do we feel toward students? . . . toward ourselves?

To evaluate the elements of the affective com-
ponent is one of the most difficult tasks for the
evaluator. There are many reasons for this. Our
evidence today in most instances must be at least
partly subjective. Yet, sometimes a person just
simply does not know how he feels about something.
Indeed he may sincerely _think_ he feels one way when
indeed were the truth known he feels another. It is
not uncommon for a person to find it expedient to hide
his feelings from others particularly if they are not
in harmony with those he thinks he should have for
social acceptance. Others for seemingly unrelated
reasons may react to a situation in a manner incon-
sistent with value expectations.

In spite of the difficulties involved . it is
important that we gather evidence for evaluation. One
approach is to ask the performer to tell as honestly

and sincerely as he can how he feels toward the
objectives, the pupils, the learning situation, the
competency and other important elements in the learning
field. Next, we might ask others how they observe the
performer to feel when he is in action. These "others"
might include colleagues, supervisors and the learners
themselves. If there is a high measure of agreement
among all responding then it may be tentatively assumed
that the performer has the attitude suggested. If
there is a wide variation among responses ranging from
positive to negative it is likely that there's need
for further analysis and investigation.

Illustrative Statements of
Teaching Competencies

This discussion would be incomplete without some
illustrations of statements which the authors regard
as appropriate to represent teaching competencies.
The following list of twelve professional teaching
competencies (as distinguished from technical compe-
tencies and personal or other humanistic qualities)
are presented. These particular items were specified
by a group of educators who regarded them as some of

the teaching competencies essential for beginning

teachers. Those who formulated the list believed

that it is the responsibility of the teacher education

program (broadly perceived to include both on campus

and field centered experiences) to provide opportunities

for students to acquire these competencies.

1. Determines the needs of the learner.

2. Plans activities for the learner.

3. Selects learning materials appropriate
   for instruction.

4. Uses a variety of teaching strategies
   as required by the teaching situation.

5. Maintains an environment conducive to
   learning.

6. Employs a variety of evaluative pro-
   cedures appropriate to the situations.

7. Communicates effectively with others.

8. Works cooperatively with others.

9. Utilizes feedback to improve his
   professional competence.

10. Utilizes social control procedures ap-
    propriate to the situation.

11. Accounts for fulfilling the goals of the
    instructional program which he is
    implementing.

12. Evaluates the effectiveness of the
    instructional program for which he is
    responsible.

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