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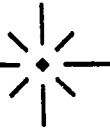ED 394 071   CE 071 493

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ABSTRACT
              Although most efforts to improve schools through
integration of academic and vocational education recognize the need
for staff development, most staff development efforts fall short. The
reasons these efforts often do not succeed include the following:
teachers have little authority to make decisions about the
improvement process; the programs do not take into account what
motivates teachers to engage in staff development; and the programs
fail to consider the process by which change in teachers typically
takes place. An instrument that is designed to facilitate staff
development and the integration of academic and vocational education
is the SIAVE Self-Assessment (Status of the Integration of Academic
and Vocational Education), developed at Temple University. The SIAVE
was developed through identification of the essential elements of the
integration of academic and vocational education, assessment of the
degree to which schools had implemented the essential elements, and
use of assessment data to nurture the integration of academic and
vocational education efforts. The SIAVE focuses on in-school staff
development in small clusters focused around a subject area. Teachers
are to concentrate on student needs and engage in continuing staff
development, assessment of the efforts, and refinements based on the
assessment. Using the change process directed by teachers is
suggested. The SIAVE process integrates research on change,
emphasizes a shift in focus from the professional development of
individuals to the professional development of staff within the whole
school setting. The promise of using the SIAVE process is a
curriculum framework and high-performance staff capable of providing
the competitive advantage in creating the high skills work force
needed for the 21st century. (Contains 18 references.) (KC)

The Center for Vocational Education
Professional Personnel Development

CHANGING SCHOOLS FROM THE INSIDE OUT:
Professional Development Through Application of the SIAVE Self-Assessment

by

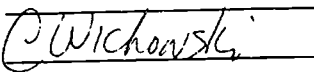Thomas J. Walker
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1995 American Vocational Association Convention

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Changing Schools from the Inside Out: Professional Development

Through Application of the SIAVE Self-Assessment

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Changing Schools from the Inside Out: Professional Development

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Schools with an integrated academic and vocational education
curriculum will provide the competitive advantage in creating the
high skills workforce needed for the 21st century. Granted,
curriculum integration is more a goal than a reality in the
school reform agenda of the nineties, still the value of it has
been proven in that it is helping many schools to increase the
educational achievements of career bound students (Bottoms,
Presson, & Johnson, 1992). The key question at this point is not
whether curriculum integration will work, but how to create the
organizations and frameworks that will enable it to work
effectively.

Central to nearly every proposal to improve schools is the
issue of high quality staff development (Guskey, 1986).
Questions like, How can we improve the teaching and learning
environment of our school? How can we improve teacher
effectiveness? How can we improve teacher efficacy and morale? or
How can we increase student achievement? are not new ones.
Indeed, questions like these have been asked time again by
educators and legislators throughout the 20th century. But
sadly, when we search the literature for answers, "...nearly
every major work on the topic of staff development has emphasized

the failings of these efforts" (Guskey, 1986). One reason
hypothesized by Boyer (1991) as to why most efforts fall short is
because teachers, "the individuals upon whom the success of any
school reform effort ultimately depends" (p. 191), have had
little authority to make decisions associated with the overall
improvement process. Guskey (1986) offers two additional
reasons: first, "the majority of programs fail because they do
not take into account...what motivates teachers to engage in
staff development" and second, they fail to consider "the process
by which change in teachers typically takes place" (p. 6). We
address these factors in this paper as we present our
recommendations for using the SIAVE Self-Assessment, an
instrument designed to facilitate staff development and the
integration of academic and vocational education. The
instrument, the protocol for carrying out an assessment, and how
the SIAVE can be used as a staff development tool for achieving
curriculum integration are discussed.

The SIAVE Self-Assessment

The SIAVE Self-Assessment (pronounced SAVE, Status of the
Integration of Academic and Vocational Education) was developed
at the Temple University, Center for Vocational Education
Professional Personnel Development (Brower, Walker, & Wichowski,
1994). The Temple Center, and Centers at Indiana University of
Pennsylvania and Penn State University, had been charged by the
State Department of Education with the responsibility of

assisting schools with curriculum integration. We at Temple
devised an inservice education strategy to assist districts in
the eastern region of the state. The premise of the strategy was
simple: you can't integrate academic and vocational education if
you have not defined it. Districts at the time were engaged in a
wide variety of rich "integration" activities. But these
activities were the product of attending a workshop or seminar,
and not viewed systematically. Our strategy was designed to (a)
identify the essential elements of the integration of academic
and vocational education, (b) assess the degree to which schools
had implemented the essential elements, and (c) use assessment
data to nurture the integration of academic and vocational
education efforts.

The Essential Elements of Academic and Vocational Education
Integration.

The integration of academic and vocational education is
defined as a program that

>...will provide students with applied and contextual
>learning opportunities in both an academic and an
>occupational environment and in a manner that has
>direct relevance to a career major and occupational
>outcomes....A program consisting of applied
>methodologies, interdisciplinary teaching and team
>teaching strategies....(Brustein & Manler, 1994, p. 27)

The definition, although quite broad, provided us with a valuable

starting point. The challenge was to "flesh" it out.

Our first step was philosophical in that we agreed to view the integration of academic and vocational education as an educational innovation. This interpretation enabled us to reference our efforts to the adoption work of Rogers (1986), Lindquist (1978), and the change theory research and methodology of the Concerns Based Adoption Model (CBAM) (Hall & Hord, 1987).

To define an innovation, CBAM requires the researcher to identify the innovation configuration (IC). Essentially, IC activity determines the consistency between the innovation in the "eyes" of the developer(s), and variations of the innovation seen in practice. We selected Dr. Gene Bottoms as the individual most associated with the academic and vocational education integration movement, based on his writing, speaking, and practice accomplishments with the "High Schools that Work" initiative. Once he accepted our nomination, we

1. Completed an exhaustive review of Bottoms' writing, including an analysis of his speeches and a review of sources he cited. The result was a preliminary listing of "integration" components and associated elements. The preliminary listing was reviewed and revised numerous times.

2. Confirmed the components and elements of the innovation. This step included a review of the preliminary list of components and elements by Bottoms, and was completed in a one-day personal

meeting. The interview resulted in 56 changes to the components and elements, and the innovator's definition of the integration of academic and vocational education.

3. Identified variations of the innovation. This step included a review of the "innovator's definition" (the components and elements) by vocational and academic personnel at integration sites in Maryland, Alabama, Tennessee, West Virginia, and Pennsylvania. Each of the interviewees was identified as being involved in exemplary integration activities. The primary purpose was to determine variations in use, that is, differences between the innovator's version and how the innovation was being used in practice. Thirty-six differences were identified, both editorial and substantive.

4. Determined whether the variations in use (practice) were acceptable to the innovator. This step was completed during a telephone interview with Bottoms, after reviewing a revised listing of components and elements that included user variations. Bottoms found the revised listing acceptable.

We now had a definition of the integration of academic and vocational education that could be used to engage in meaningful discussion with our colleagues. The definition included the 8 components listed below, and each component was further defined

by associated elements (see Figure 1).

1.   A Challenging and Coherent Program of Studies that
Prepares Career-bound Students for Continued Learning in an
Employment and an Educational Setting.

2.   Individualized Advisement for Career-bound Students that
uses Information and Experiences as the Basis for Decisions about
Self, Educational Programs, and Employment.

3.   School-based and Work-based Activity that Foster Higher
Expectations for Career-bound Students.

4.   Cooperation Between Academic and Vocational Educators to
Assist Career-bound Students to Meet High Performance Standards.

5.   Extra Help and Extra Time to Assist Career-bound
Students to Complete a Rigorous and Coherent Program of Academic
and Vocational Studies.

6.   Planned Professional Development for Academic and
Vocational Staff.

7.   Various Indices Used to Evaluate Progress Toward
Academic and Vocational Goals.

8.   Administrative Support.

Assessing the Status of Integration.

The adoption of any innovation is a journey, not an event.
And so it is with the adoption of the integration of academic and
vocational education.   Our challenge was to determine whether a
school's journey had begun and how far it had progressed.   The
goal had two elements: first, to develop a "yardstick" that

school district staff could measure themselves against as they

undertook and progressed with the work of integration; second, to

provide a basis for appropriate and responsive inservice

education.   Again, we turned to the CBAM methodology, with a

particular focus on the level of use (LoU) thinking.

Hall and Hord (1987) suggest that adopters of an innovation

proceed through four categories of "use":   nonuser, inexperienced

user, experienced user, and refocusing user.   The four categories

are further defined through several "use" levels: no use,

oriented to use, prepared to use, mechanical use, routine use,

refined use, integrated use, and renewal use (p. 84).   We took

this thinking and attached the "use" levels (as a scale) to the

components and elements of the integration of academic and

vocational education.   The result was the SIAVE Self-Assessment.

A sample section of the SIAVE is presented in Figure 2.

At this point we felt we had the yardstick to determine use,

that is, we could use the SIAVE to determine the degree to which

integrated curriculums were in place.   Next, it became necessary

to operationalize some emerging, rich thinking relative to

nurturing and structuring professional development for achieving

the conception of integration advanced through the SIAVE.   For

us, staff/professional development meant engaging cademic and

vocational personnel in collegial activity that would enable them

to move along the "use" continuum.   Our thinking employed an "If-

Then" hypothesis.   Specifically, "If," integrated curricula were

in place at some level. "Then" a level of student outcomes would

result (e.g., a level of math scores, employer satisfaction with new employees, technical skills, and the like). What follows is that "If" there is <u>increased "use" of integration,</u> "Then" increased math scores, increased employer satisfaction with new employees, increased technical skills, and the like, should result. (Admittedly, the "If-Then" hypothesis needs to be tested.) Let's now turn to the specifics of staff/professional development.

<u>Traditional vs. In-School, Systematic Staff Development</u>

Districts that invest in the continuing development of their professional staffs normally do so from the outside-in, rather than from the inside-out. Typically, districts encourage (mostly require) teachers to take college classes or complete continuing education courses for professional development and certification in the evening or during the summer. In addition to the courses, participation in inservice education activities may be required where participants are made aware of the latest new idea or teaching technique by external consultants. The outside-in approach tends to focus on the professional development of individual staff members. The concern with the model, in and of itself, is whether the courses and the ad hoc inservice programs add up to achieve "whole school" or district wide goals. Rarely are the external activities tied or linked in any coherent way to planned in-school discussions or experiences intended to achieve an institutional mission. Even more rare is the linking of such

experiences to in-school discussions that focus on state or
national goals. And, still rarer are discussions or experiences
where teachers and administrators together focus on whole school,
district, state, or national goals. It's little wonder that most
staff development efforts have been viewed as failing.

We believe that if districts really want high performance
schools with integrated academic and vocational education
curricula they must develop them internally, over time through an
in-school, systematic process of staff development. Such a
system would be characterized by a shift in focus from the
professional development of individuals to the professional
development of staff within the whole school setting. And, it
would employ a collegial approach and involve teachers,
administrators, and specialists from the beginning in discussions
about integration. This in no way implies that external
experiences are not important. They are. But to achieve whole
school or state or national goals (e.g., academic and vocational
education integration), external experiences need a context for
application, that is, they must be focused and discussed within
the school, in a coherent way.

The in-school system of staff development also needs to be
structured to inspire teachers commitment and involvement, and
designed so that new practices become integral to the school's
culture and the staff's professional repertoire. Research has
shown, for example, that staff development programs that use the
change process (Fullan & Miles, 1992; Hall & Hord, 1987;

Lindquist, 1978; Rogers, 1983), and that involve teachers in the
change process and assist them with it from start to finish lead
to lasting changes in teaching practices (Fullan, 1993; Guskey,
1986; Joyce, Weil, & Showers, 1992). We relied on this research
as we developed the SIAVE and designed our protocol for carrying
out an assessment.

The SIAVE Assessment: Systematic Staff Development for Curriculum Integration

We begin with a caution. The SIAVE Assessment is a
formative tool. Its value lies in its ability to contribute to
both staff development and school improvement activities. The
SIAVE was <u>not</u> designed as a summative assessment. It is <u>not</u>
meant to be used as a basis for rendering personnel decisions
relative to the integration of academic and vocational education,
or for judging the effectiveness of school programs.

Given this caution, we feel the SIAVE has several uses as a
vehicle for staff development within the current academic and
vocational education integration milieu and we encourage
districts to experiment. Consider the following applications:

1. If a district is beginning to integrate academic and
vocational education, the assessment can be administered to focus
discussion and educate the staff on the comprehensiveness of the
concept.

2. If a staff is progressing with integration but full
adoption of the innovation has not yet been achieved, the SIAVE

Assessment can focus staff development on particular components and elements of the innovation.

3. If a staff is an advanced implementation site, components and associated elements of the SIAVE can be addressed in toto or individually so new and potentially more powerful modifications of the innovation can be considered for meeting changing goals.

With all administrations of the SIAVE Assessment, however, we recommend that two criteria be satisfied. First, we believe staff must be fully oriented both to the content on the SIAVE and to the change theory that undergirds it before an assessment begins. Each component and its associated elements should be reviewed and discussed, as should the relevant information about adopting and sustaining new practices. A full day of inservice education seems appropriate for the task.

Second, prior to the assessment we encourage districts to frame those to be assessed in small groups, organized around the needs of students, not teachers. Groups can be formed around occupational clusters, occupational areas, grade levels, even between sending and shared time schools. We refer to these small groups of professionals as "small learning communities" (SLCs). Our notion of an SLC for integrating academic and vocational education is that it involves, minimally, academic teachers of math, science, language arts, and social studies; a vocational teacher or teachers for an occupation or cluster of occupations; and academic and vocational administrators and support personnel

(e.g., guidance counselor). This composition, by force of logic, brings the group size to approximately 10-12 individuals. The figure is not meant to be regulatory, but simply to serve as a guide in that a group of 4 would be too small, and a group of 25 too large.

Framing staff development to focus initial discussion and educate a staff. This possibility became apparent as we progressed from development to pilot testing. We discovered the SIAVE had utility beyond its original, diagnostic purpose. As we observed the conversations of reviewers, we recognized the value of the dialogue surrounding the content of the instrument, and how the give and take in discussions helped to focus the reviewers' conversations about integration. What became obvious was that we were experiencing staff/professional development in action; that staff development actually began as soon as the assessment conversation began, not later after an assessment had determined a starting point. In this light, we came to view the SIAVE as being both a means and an ends for staff development.

Framing staff development with a staff that is progressing with integration or in advanced implementation sites. Our earlier discussions described how the CBAM methodology was used to define the integration of academic and vocational education (e.g., Innovation Configuration Research) and determine a staff's level of use (LoU) (see Figure 2). But we are also using CBAM

methodology to design specific professional development
strategies for integration through a dimension of the model that
its developers refer to as Stages of Concern (SoC).

Hall and Hord (1987) suggest that

...change can be more successful if the concerns of teachers
are considered. This assertion is not offered as a
simplistic slogan. It is meant to reflect our belief in the
importance of the personal side of change, especially from
the perspective of the front line user. (p. 52)

Hall and Hord report that individuals encounter different
concerns as they progress toward full adoption of an innovation.
Early use is characterized by little concern (Unrelated), with a
progression of concerns that ask How am I affected? (Self), How
can use for me be made easier? (Task), and How can the impact of
use on students be increased? (Impact).

For us, the SoC thinking was powerful. It suggested that if
personnel were to progress with the implementation of integrated
curricula, then we had to provide staff development that was
sensitive to the "stages" of their concerns. SoC also suggested
that we could correlate use levels (LoU) and concerns stages!
That is, once we identified an individual's level of use on the
SIAVE, we knew something about his/her concerns, and, therefore,
knew something about the kinds of staff development
(interventions) that were necessary to nurture movement along the
use continuum! We could then begin to frame our staff
development efforts.

Staff Development for Continuous Improvement

A major flaw of most staff development programs is the
absence of opportunities for observing and practicing new
concepts, and receiving individualized feedback. According to
Lindquist's (1978) theory of the process of change, people must
first see the need to modify their behavior, be encouraged to
attempt these changes in a nonthreatening environment, and then
receive process help as they apply these changes. This theory
applied to the SIAVE Assessment means that individual members of
an SLC will not only receive information on topics highlighted in
their assessments, but also have opportunity to observe and
practice using new information with each other in simulation and
get process help from staff who are more experienced with the
topics than they are.

> Bekhard and Pritchard (1992) contend that...
> Probably the most important single process involved in
> effective change is the process of learning while doing.
> The complexity of change strategies demands that
> processes of feedback and replanning make up the essential
> core of change management. In a military campaign, it is
> a basic principle that intelligence goes hand in hand with
> delivery. Learning to improve the effectiveness of the
> effort is a natural component of all strategies and
> tactics. Yet in many business organizations, executives
> have trouble applying this principle to the management of
> the organization. Historic practices, early training,

"traditional" values about what are good and bad managerial
practices, all combine to reward behavior that is "results
oriented" rather than "learning oriented." (pp. 9-10)

Joyce et al. (1992) have written extensively on strategies
to integrate education and training into staff development
programs where the mastery of professional skills is a central
goal. Their work, which ties directly to Lindquist's (1978)
theory of change, recommends the extensive use of study groups
and coaching teams to facilitate learning among inservice
professionals. We have used their strategies in our own work
with districts and inservice teachers (Walker, 1993) and we
recommended them here for SLCs as they go about the process of
integrating academic and vocational education. Here's how the
process would work in developing specialized teaching knowledge
associated with the SIAVE Assessment:

1. The SLC develops a group profile and staff
development plan based on the assessment. The plan
addresses both individual and group needs and suggests
studies and experiences for exposing and educating SLC
members to the components and associated elements
comprising the plan.

2. Provisions are made for individuals to observe
demonstrations by persons expert in the component and
associated elements (specialized knowledge, technique,
model, etc.) being focused on.

3. Practice opportunities follow, first in a

relatively safe setting (perhaps with a trusted
colleague or SLC peer in a designated in-school
professional development center), and then with
students. As many as ten trials may be necessary for
getting a new practice under control.

4. Observation, demonstration, discussion, and
continuous practice occurs with other SLC members who
are working to integrate the new strategy into their
repertoire. Importantly, the emphasis is not on
critiquing the person doing the demonstrating, but
rather on seeking clarification on the strategy and
trying to learn from the demonstration.

5. Linking activities with members of other SLCs are
considered (during each stage of the model) to help
make changes and facilitate learning for the school
staff as a whole.

Staff Development in Small Learning Communities (SLCs).

Using SLCs as the organizational frame for administering the
SIAVE is important for several reasons. First, integration by
its very definition is not an activity undertaken by any one
individual. Instead, it represents the direction taken by a
group of individuals. The SIAVE Assessment focuses on individual
use of various elements and components of curriculum integration,
but, as mentioned, aggregate calculations that yield a group
profile represents the final results of an assessment. It is

absolutely critical, therefore, that the composition of the SLC meet the spirit of the criteria advanced earlier in this paper. Hastily convening a group for a self-assessment without having satisfied the recommended preconditions, or using the SIAVE as a paper and pencil measure merely to assess integration is likely to produce disappointing results.

Second, issues regarding the reliability of self-report data emerge in administering the instrument. The CBAM literature (Hall & Hord, 1987) indicates there is an underlying desire by individuals to appear in as positive a light as possible and thus a tendency to over rate the degree of adoption. The small group process can help counter this problem. We recommend the initial responses by each member of an SLC be discussed by the group before a final response for the SLC is recorded. The discussion at this level of the assessment should enable group members to explain and clarify their perceptions. It should not be designed to force agreement on observable elements. A group discussion of individual responses to the degree-of-use questions will assist the SLC to report what in fact does occur.

Third, the SLC approach brings together individuals who may have implemented the components or elements of integration to varying degrees but who represent the entire process from a holistic perspective. We feel this holistic perspective is important. Using the SLC(s) as the organizational unit has the potential to build and maintain group expectations which can be beneficial in persuading individual group members to change in a

desired direction (Edwards, 1981).

We encourage the use of SLCs recognizing there are both advantages and disadvantages to using groups. Groups, for example, have a broader perspective and greater knowledge than individuals, and can be an effective way to improve communications and increase acceptance of decisions. But, groups can also over-react to situations and individual domination can close down discussion and creativity (Maier, 1967). In addition, any one (or more) members of an SLC can be resistant to change and actually work to undermine a change process. We believe, however, these drawbacks to the small group process can be minimized and managed so long as they are recognized as possible detractors, and clear rules for group processing are agreed to "up-front." Using SLCs (there could be several in a given school) as an organizing unit not only enables educational planners and staff developers to objectively and accurately view staff and groups of staff as they undertake and progress with the work of integration, but also to examine variability in integration programmatically. The implication here, obviously, is that the usefulness of the SIAVE transcends staff development, and contributes to organizational development.

Summary

Research tells us that change is a process that takes time, requires a commitment of energy and resources, and must be carried out systematically (Hall & Hord, 1987; Schlecty, 1990; Sparks, 1990). The in-school system of staff development

advocated in this paper integrates research on change. It also emphasizes a shift in focus from the professional development of individuals to the professional development of staff within the whole school setting. It is designed to see that an SLC's conversations about integrating academic and vocational education vis-a-vis the SIAVE Assessment continue and get acted upon continually throughout the school year, and beyond. The promise is a curriculum framework and high performance staff capable of providing the competitive advantage in creating the high skills workforce needed for the 21st century.

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Figure Captions

Figure 1. Observable elements for one of 8 components used to
operationally define the <u>integration of academic and vocational</u>
<u>education.</u>

Figure 2. Sample section of the SIAVE Assessment.

(Figure 1)

COMPONENT 3:

SCHOOL-BASED AND WORK-BASED ACTIVITY THAT FOSTERS <u>HIGHER EXPECTATIONS</u> FOR CAREER-BOUND STUDENTS

A. Collaboration between vocational and sending schools, parents and students to develop rigorous, coherent academic programs for career-bound students.

B. In-school performance standards "benchmarked" against industry standards, with students held accountable for these standards.

C. Aptitude and interest assessments conducted by a "community of educators" (teachers, guidance and industry personnel.)

D. Career-bound students enrolled in three years of math (equal to Algebra I or higher), three years of lab-based science (equal to Chemistry, Physics or a Biology course), and four years of English (college preparatory or equivalent.)

E. An instructional system judged adequate to enable career-bound students to meet revised academic requirements and industry performance standards.

F. Nontraditional homework, i.e., projects, case studies, work visits, community projects, interdisciplinary (jointly constructed) assignments;

G. A "tech-prep" strategy that articulates secondary and postsecondary <u>occupational</u> and <u>academic</u> subjects.

H. Vocational teachers stressing math, science and reading.

I. School culture (climate) that includes:

   1. students completing challenging tasks and solving complex, multi-step, high-level problems;
   2. staff development devoted to raising expectations; and
   3. vocational and academic teachers communicating to career-bound students that they can meet higher academic expectations.

J. Elimination of "general track" and "slowed down" courses.

K. Multi-faceted, active and aggressive community and home support for higher expectations efforts.

(Figure 2)

COMPONENT 2:   INDIVIDUALIZED ADVISEMENT FOR CAREER-BOUND STUDENTS THAT USES INFORMATION AND EXPERIENCES AS THE BASIS FOR DECISIONS
ABOUT SELF, EDUCATIONAL PROGRAMS AND EMPLOYMENT

ELEMENTS This is what you would see in a school that has individualized advisement.	NON USER			INEXPERIENCED USER		EXPERIENCED USER		REFOCUSING USER
	NO USE	ORIENTED TO USE	PREPARED TO USE	MECHANICAL/ ROUTINE USE	REFINED USE	INTEGRATED USE	RENEWAL USE
	0	1	2	3	4	5	6
A. Career-bound students and their parents oriented (through seminars, individual and group meetings, etc.) to workplace requirements and the connection between those requirements and challenging academic and vocational programs.							
B. Aptitude and interest assessments conducted by a "community of educators" (teachers, guidance and industry personnel.)							
C. Career-bound students, parents and counselors jointly developing 4 + 2 vocational and academic programs. (Note: See Exhibit 3 for a description of jointly developed vocational and academic programs.)							
D. Teachers conducting classroom-based advising related to career-exploratory experiences.							
E. Review of students transcripts to confirm:							
1. programs of study match career goals; and							
2. higher level math, science and communication courses are completed in a coherent fashion.							
F. Linkages with Middle Schools.							

The ELEMENTS describe what you would see. Remember: The basic question is, At what level do I use this element with/for my career bound students.

Use the following guide when making your level of use decisions.

NON USER
"0": I have no knowledge of or involvement with this element.
"1": I have some awareness or knowledge about this element.
"2": I am aware of and uncertainties about this element are being reduced (e.g., through discussion or inservice.)

INEXPERIENCED USER   "3": I am just beginning to use this element, with most of my efforts focused on day-to-day concerns.

EXPERIENCED USER   "4": I am using this element and have made refinements to improve its impact on students.

"5": I am combining my efforts and the efforts of my colleagues on this element to achieve a greater impact on students.

REFOCUSING USER   "6": I have fully adapted this element and am seeking more powerful modifications.
*Temple University - 10/95

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