How Vocational Agriculture Education Units are Organized

Timothy C. Visel, Coordinator - May 2004

Vocational Agriculture Education is often called the hybrid between the academic and industrial/technical education models. It is in fact such a hybrid which utilizes both models and instructional approaches to produce a matrix of connecting occupational experiences allowing students a career exploration opportunity unparalleled in US public high schools.

While the academic model prepares students with "liberal" skill areas and the technical models very defined "specialized" outcome both have looked to the Vo Ag model for block schedule, portfolios and performance based assessments. Recently (1993) the School to Career initiative was entirely based upon vocational agriculture instruction.

Vo Ag Unit Structure with Laboratory and Occupational Experience -

One of the problems associated with emerging technical/vocational curricular development is that much of it is written by academic educators. The basic assumption is that all curricular development is structured the same, objectives and detailed processes that attain objectives. The trouble with this comparison is that educational spaces are not similar, equipment requirements can be very different and supplies, teaching methods district, etc. The academic model has been criticized for a heavy emphasis upon "theory" while vocational model are criticized for reliance on the "product." What is critical in the Vo Ag model is the "activity" that links theory and product, the connection between curricular elements and applications that produces the occupation and career experience.

Elements describe a constituent of a composite entity while application is defined as putting something to special use or purpose. We call that an education outcome, Vocational Agriculture students experience the connection between them by performing the industry application. The way Vo Ag accomplishes this can be shown in the chart below.

A thematic unit of grouped occupational experiences (applications)

	Process connects	Experiences to Occupational Outcomes
Curriculum:	Elements	Activities
Industrial Applications		

Instructional:	Content	Demonstration	Performance
Assessment:	Tests	Projects	Practicals
Laboratory:	Equipment	Protocols	Operations
Career Awareness:	Field Trips	Directed labs	Employment/SOE
Vocational	Employment	Job Titles	Workplace Readiness
Expectations:	Descriptions		

If you look at early Vo Ag curriculums you will recognize these connecting or linkages between classroom, laboratory and occupational experiences. In fact many curriculums start with job titles and describe them before the elements, activities or applications are even introduced.

In describing curricular processes vocational educators take the "connecting" of instruction, practice and performance for granted. Applications may become "stranded" or fail to show a progression of skill sets (experiences) that connects content to performance. Sometimes activities have no application. Holes develop in the thematic unit and the need to constantly reevaluate applications prevent out of date curriculums. The Connecticut Vo Ag System for example was heavy criticized in 1992 for failing to revise many of its 1950 production applications to the newer applications of plant science and biotechnology. This type of curricular change creates the need of new activities, new protocols, new operation fact sheets, equipment, supplies, it's a lot of work! I find it helpful to first identify the industry applications and group them in a unit. Units are then grouped into a "course." Courses form a program of study.

The Vo Ag curriculum was originally designed to link classroom learning to industry applications. In order to accomplish this you need industry level equipment and the proper "laboratory" to accomplish it. That's why Vo Ag has no size limitation on laboratories, can purchase industry level equipment and reequip at any time. It is the only public school program who has these special provisions.

This can be illustrated by the example below -

Process content - Agriculture Technology - The modern farm tractor, students read the development of the modern tractor, history, manufacturers, impact upon production and problems of erosion, etc (elements).

Experience - Class has a field trip (activity) to a vegetable farm to see minimum tillage (demonstration occupational outcome - student actually learns how to operate a tractor, performs the same procedures on a small plot (application).

Could the student be assessed doing the above - a "practical" are there "protocols" involved certainly when the "operation" of the tractor is involved. Often the vocational educator skip elements and goes directly to the application - it may be painful to "map out" all the connecting activities but research has shown that young people learn quicker and retain information better when "learning is linked by doing." When curricular elements, activities and applications are organized learning can in fact be facilitated and often accelerated. Curricular elements also provide opportunities to integrate defined skill sets into all three components especially the "skill based activity." By stating "skill based activity" it lets readers know something more in going on that just the activity by allowing the development of predetermined skills. This is especially important. On other newer education initiative is higher order thinking skills (problem solving estimation critical thinking, etc). They can be defined and incorporated into the unit outline.

Supporting the school Vo Ag curriculum is its student organization FFA and teacher supervised occupational experiences.