Content-based instruction can vary widely. One area that has embraced content-based instruction is vocational education. By simultaneously teaching vocational and academic skills, - reading, writing, mathematics, or ESOL - students can move through a program more quickly than if these skills are taught sequentially, academics first. In addition, since vocational skills are usually taught in a hands-on manner, and are directly linked to gainful employment, the content-based approach should provide motivation: learners learn more, faster.

Empirical research should prove this to be true. The impact of content-based instruction, however, has not been a priority in the field of adult literacy, as Tom Sticht points out in his article, “The Theory Behind Content-Based Instruction,” in Focus on Basics, Vol. 1, Issue D.

Similarly, few empirical studies examine the impact of adult basic education methods. Those that are done are often difficult to interpret for methodological reasons. For example, many studies use an "after the fact" methodology, surveying individuals who have been in a program about how they liked it. Usually the only people who answer such a survey are those who liked it. The result is findings that are biased towards the favorable. And this tells us nothing about the gains students have made. Sometimes a post-test is given, with no pre-test available for comparison. In that case, we don't know whether or not people entered the program with the prerequisite knowledge or if the program can take credit for the change in scores.

A Better Methodology

A study that used both a pre-test and a post-test would be better. We would know how much knowledge and skills people bring to class and how much they gained from the instruction. Of course, we still have potential sources of error. For example, we do not know exactly what happened to the learners from the start of the study to the end. We would be able to say that people learned in our program, but not that they learned more than they would have in some other program.

We have done research using a methodology that tries to address these issues. We used a comparison group: one group received the treatment - content- instruction - and was compared to a group which did not. Otherwise, the groups were treated in the same ways. Both received a pre- and a post-. Both groups, or classrooms, were already running, which allowed us to study naturally-occurring variation.

Three Questions

The three studies in this article used the comparison group methodology. We asked several questions about content-based instruction and used different groups to answer them. All the classes we studied were participating in a larger project and were answering the same surveys and taking the same tests. Each class differed in either content or process of instruction. Our first question was whether the content the student wanted to learn was related to the course in which the student enrolled. The second question was whether opportunity to immediately use the information had an effect on retention in the course. And finally, we wanted to know how much "knowledge" is learned in content- instruction.

Why Attend?

To gain insight into why adults want to go to school, we conducted a survey of adult students in three different types of ESOL programs. The first type was Vocational English as a Second Language (VESL), in which the teaching of English was accomplished using job- terminology and tasks. Students in this
class were Latino, Chinese, Russian, Vietnamese, and African, and were at the low-intermediate to low-advanced levels of ESOL. The second program type was Communicative English as a Second Language (CESL), in which general conversational and school-English was emphasized. These students were also ethnically diverse, with ESOL levels ranging from low intermediate to low advanced. The third was Family English as a Second Language (FESL), a special program that emphasized how parents could help with their children's learning and schooling. These students were primarily Latina and at low-beginning to low-intermediate ESOL levels.

Figure One shows that, in general, adults' stated reasons for wanting to attend ESOL paralleled the type of ESOL program in which they were enrolled. The participants could choose from seven choices. The respondents could check as many of the seven reasons as they wanted. The analyses of the data provided a glimpse into the reasons adults attended school, and also the degree of focus the learners had in choosing their courses. For example, 58% of the 121 enrolled in VESL were there to get a job. They marked an average of 1.85 choices out of seven. This rate (1.85) was computed by dividing the number of responses given by the number of respondents. A rate of 1.85 shows a high degree of focus; if the respondents thought all reasons for attending were equally important the rate of response would be seven.

**Figure 1: Reasons Students in Three Classes Gave for Enrolling in an ESOL Program.**

The VESL students were less interested in ESOL for college or self-purposes, while these were the most important reasons for those taking CESL, where the average rate was 2.45 choices marked out of seven. Those enrolled in the FESL class were primarily interested in taking ESOL to help their children. Their average rate was 2.24 choices out of seven, which is less focused than those taking VESL.

**Focus and Completion**

We next investigated whether the learners' purposes for taking an ESOL course and the closeness of the course to these purposes was related to whether students completed the course. To do so, we examined
three different VESL classes. One class was in electronics assembly, was very strong in placing people in jobs, and lasted only ten weeks. Students in this class were Vietnamese, Laotian, Chinese, and Latino, and were at the high- to low- ESOL levels. This class was considered the most focused. The second class was in office technology, and lasted 18 weeks. Students were Latino, Somali, Vietnamese, and Laotian, and ranged from low-intermediate to low-advanced ESOL levels. It was less strongly focused than the Electronics Assembly class. The third class was a general pre-vocational introduction to different fields such as office technology, automotive trades, and electronics assembly, and lasted 18 weeks. These students were all Latino, with ESOL levels ranging from low intermediate to low advanced. This class was considered the most general.

In general, the closer the fit between the learners' reasons for taking the ESOL course, in this case, to get a job, the more likely the learners are to complete a greater percentage of the course. This is clearest for the electronics assembly program. Almost 60% of the students who enrolled in week one of the ten-week course completed all ten weeks, and more than 80% completed nine weeks, by which time, many already had jobs in electronics assembly. For the other two courses, both of which were 18 weeks long, the course with the closer link to a particular job field, office technology, had greater persistence rates.

The foregoing data on the closeness of fit between adult learners' reasons for taking an ESOL course and their persistence and completion rates are based on a very small sample, 37, 42, and 47, for the high, medium, and low groups, respectively. Another limitation of the study is the difference in the length and hour requirements of the courses. It may well be that course length has an effect on persistence. However, the medium and low focus VESL classes, which show quite a difference in attendance rates, both last 18 weeks. So, in this case, the different levels of attendance are not explained by course length. This study suggests that closeness of between learners' reasons for enrolling and course content and duration of course may both lead to higher persistence on the part of the student. Both possibilities merit more research.

**Learning Gains**

The third study we conducted investigated learning gains in the content area as well as those in general reading. This study compared the ten- electronics assembly VESL class with a vocational class in electronics assembly that had no ESOL instruction, and a conventional ESOL class. As Figure Three indicates, the ten- instructional program produced more gain in vocational vocabulary and general reading than did a conventional electronics vocational program or a conventional ESOL program. Vocational vocabulary was measured by a test developed by three electronics technology teachers; general reading was measured by the Adult Basic Learning Exam (ABLE).
In this study, students in the six-hour-a-day, ten-week Electronics Assembly VESL program completed more hours of instruction between pre- and post-tests than did the three---, 18- electronics class with no ESOL, or the three---, 18- ESOL class. To standardize the number of hours between the three classes, the programs were compared in terms of rate of gain per 100 hours of instruction. Following this procedure, the vocational vocabulary gain for the VESL program was 13.45, for the conventional vocational course was 10.22, and for conventional ESOL, 10.8. This indicates that the rate of improvement in vocational vocabulary was greater than that in either of the other two programs.

Following similar procedures for the general reading gains gives a rate of 5.32 months per 100 hours of instruction for the integrated VESL program, 1.24 months for the electronics program, and 3.21 months for the ESOL program. Thus the content- VESL program had a gain rate per 100 hours of instruction some 65% higher for general reading than the general ESOL program, and more than 300% greater than the vocational program.

**Conclusion**

These data lend support to the theory that content-based instruction can lead to equally high gain in general literacy skills as well as job related skills. If one's goal is job training, by combining general basic skills classes with specific content, the amount of instructional time can be reduced. Rather than first raising students' basic skills to some pre- level and then enrolling them in vocational skills classes, learners can improve their academic skills while learning a vocation.

These findings need to be replicated with larger samples. In addition, it would be useful to replicate the findings with classes that are of the same duration. While we have some confidence in the findings because they replicate early work, more research is needed.
References


About the Author

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Summarized by Bella Hanson.

Questions for Self-reflection and/or Discussion

1. Did you find any surprises in the results found in the three studies?

2. Would it be possible for your program to offer VESL and/or CESL classes?

3. Would a significant number of learners enroll in a ten-week VESL course for electronic assembly? In another occupation with jobs in your area?