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ABSTRACT

In winter and spring 1995, the Western Center for Community College Development, in Oregon, undertook a 2-year project to develop the Contextual Learning Institute and Consortium to train teachers in contextual teaching, or instruction linked to the real life domains of students, and implement this methodology in a variety of subjects at the high school level. In the first year of the project, 33 teachers were organized into contextual teaching teams at 5 public high schools, attended a contextual teaching summer institute, and implemented the methodology at their schools. In the second year, outcomes for contextual and non-contextual students were compared. Evaluation activities for the project included analyzing student gains through pre- and post-tests and comparing outcomes for contextual and non-contextual students, surveying teachers and students regarding their attitudes toward contextual learning, and analyzing classroom observation checklists completed by participating teachers. Results indicated that teachers were generally positive toward the contextual curriculum, while students expressed mixed feelings, generally enjoying the classes but not overwhelmingly supportive of the methodology in terms of learning. Comparisons of contextual and non-contextual student outcomes after the second year were inconclusive, but they did find that contextual learning did not reduce students' academic learning. Appendixes provide a list of participating high schools, the teacher and student survey instruments, the classroom observation checklist, a description of assessment instruments, a sample project newsletter, and overheads summarizing the project. (HAA)

FINAL EVALUATION REPORT

OCTOBER, 1996

CONTEXTUAL LEARNING INSTITUTE and CONSORTIUM

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PREFACE

This *Evaluation Report* has been prepared by the *Western Center for Community College Development, School of Education, Oregon State University.* The principal evaluator and report author is Lester W. Reed, Jr. Ph.D., Senior Associate of the Western Center. The evaluation was performed under contract with the principal investigator and project director and represents an independent opinion concerning the accomplishments and effectiveness of the grants activities during the its two year funding period. As appropriate, recommendations for future grants with similar objectives and design are included.

The evaluator wishes to acknowledgment *American College Testing* (ACT) which provided special support of this project. They are provided testing instruments, scoring and analysis which is a significant element in measuring student achievement. Without the resources donated by ACT this part of the project would not have been possible.

The motivation and objective of the contextual learning project is summarized in the statement below taken from a draft of U.S. Department of Education, Office of Educational Research and Improvement document Building on What we've Learned: Developing Priorities for Educational Research ---

"Building on a strong base of research in cognitive sciences, education reformers are attempting to shift the goal of instruction from rote memory of academic content and skills to conceptual understanding and application of knowledge. Further expansion of this knowledge base promises to provide an even more powerful resource for use in supporting practical efforts to design improved teaching and learning for all students. There is a need for additional inquire that improves our understanding of individual and development differences among learners, examines the nature of change in the brain that occurs with learning, explores possibilities for enhanced children learning potential, and investigates conditions of learning that promotes transfer of knowledge and skills"

At least in small part, this project has contributed to the above described teaching / learning improvement effort.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Contextual Learning Institute and Consortium (CLIC) project has effectively met its objectives. The project was quickly and efficiently organized during the late winter and spring of 1995. High schools were identified through a *Request for Participation* (RFP) application process. An advisory committee was formed and participated in evaluation of the RFPs, provided advice on the evaluation design, and gave input concerning the *Summer Institute*. The *Summer Institute* was successful in assisting in contextual curriculum development, adoption of teaching methodology, team building, and creating enthusiasm for the contextual approach to learning and teaching.

In the view of teachers involved in the project, the contextual methodology does work and does increase student learning. Contextual teaching/learning is based on a pedagogical theory that more rapid and meaningful learning occurs when the reason behind and importance of learning information and skills is linked to real life factors in the domain of the student. Also the theory postulates that the use of learned information and skills through application to "new contextual settings" by students results in better retention. In this context the contextual methodology is applicable to existing sets of knowledge taught in our school system. It is not teaching different or less information and content as is often assumed when the term "applied" is tagged on to contextual courses. The resistance to use of contextual methodology by teachers, administrators, parents, higher education institutions and others comes from a basic error made by advocates that "new courses and curriculum" are needed to effectively use the methodology. Elimination of these courses and the restructuring of existing courses using the premises of contextual teaching/learning theory would greatly assist in breaking down barriers to its use and legitimate evaluation of its effectiveness. Based on the results of this project such an effort is justified and should further validate the effectiveness of contextual methodology.

The selected high schools initiated contextual teaching in the fall of 1995. Recognizing the different needs of each school, the principal investigator authorized a deviation in the original design concept of using only junior students in similar courses in each school. This allowed for a more varied test of the teaching methodology, however, it has complicated the evaluation strategies by providing smaller and more diverse populations.

Reported teacher classroom observations and survey results are positive in regards to student learning, behavior, attitude and enthusiasm. The teachers report general satisfaction with the curriculum material but tend to report that the contextual methodology is "hard work". (An expected phenomenon in any curriculum redesign.) In the pre and post project opinions teacher also reflected positive feelings toward the contextual methodology. Both the survey results and classroom

observations showed an increased positive attitude toward contextual methodology after a full academic year of use indicating a building confidence in the efficacy of the technique. The teachers' reported similar positive results in student learning and behavior and their own desire to increase the use of contextual methodology in their final project reports and end year review.

Reported student perceptions of the effectiveness of contextual methodology reveals a mixed reception. In general students reported enjoying their contextual classes but were not overwhelmingly supportive of this methodology in terms of learning. Gifted students indicated that they learned more in the contextual classroom and would chose that approach in the future.

Although a redesign of the academic testing strategies, as described in this report, was, to some degree, to overcome the challenges posed by the increased variance in student populations the data was not as conclusive as it would have been the case if the original project design protocol had been followed. Testing designed to measure student academic gain of contextual students and "matched pairs" of non-contextual student has been conducted, but specific conclusions can not be drawn. As in other measures, small sample size, students not completing both pre and post tests, and the variance in grade level and courses prevent any meaning full analysis. The most valuable generalized conclusion is, that based on these data, the contextual students did not do significantly different from the non-contextual matched pair students (or in the case of freshman did better than the national norms). In some area they did slightly better and in others slightly worst. Therefore it can be concluded that contextual methodology ***does not*** "reduce the academic learning" of students - a generally heard criticism.

The project did not provide an optimum period of time to fully test the effects of contextual methodology. A minimum of two academic years of teaching experience would be needed to insure teachers had sufficient knowledge and time to revise and adjust curriculum and teaching strategies and insure that the potential of the contextual methodology was accurately measured and evaluated.

Use of principals as coordinators does not work for a variety of reasons including the extraordinary demands of their primary duties on their time and energy. The addition of a "coordinator" (a partial release time for a project teacher) to each school's teaching team with specific responsibilities to ensure effective communication, project organization, and completion of tasks would increase the administrative efficiency of the project.

BACKGROUND AND OBJECTIVES

The Contextual Learning Institute and Consortium (CLIC) was a funded US Department of Education project under the Innovative Education Program. The project had as its prime objective the establishment of a consortium of professional educators and five Oregon public high schools to train teachers in contextual teaching methodology, and have this methodology used in a variety of subject matter settings. The impact of the methodology on student accomplishment and attitudes toward learning was evaluated to determine the effectiveness of contextual methodology in the classroom. Other data was gathered and evaluated to determine the degree of accomplishment of objectives not directly associated with classroom teaching strategies and student academic gain.

The specific project objectives as specified in the grant application were:

- ESTABLISH A CONTEXTUAL LEARNING CONSORTIUM AND INSTITUTE
    - Identify and recruit five urban school/community college/employer teams of approximately 70 individuals (50 of whom are high school teachers) to form the Contextual Learning Consortium and Institute.

- TRAINING OF HIGH SCHOOL FACULTY
    - Conduct a contextual training institute, using experienced applied academics practitioners, to review, evaluate and field test five innovative academics courses in five urban high schools involving approximately 600-700 students.
    - Assist five urban high schools in drafting comprehensive operational plans to implement applied academic programs.
    - Provide urban high schools with field tested academic materials.

- REPLICATION AND DISSEMINATION
    - Promote the continued exchange of ideas about applied academic teaching practices across high school, community college and university lines following the institute, to be sustained with computer networks, working articulation agreements, continuing education courses, collaboration with other educators and future School of Education teacher training.
    - Identify and disseminate workable strategies and models to create better urban high schools for students by developing support for applied academics from School of Education leaders, school superintendents, principals, teachers, and labor-employers representatives.
    - Provide continuing university and community college technical assistance to the five selected urban high schools to assist participants in

understanding the linkages between the planning stages and implementation for integrated applied academic programs.

- Develop a strategic plan for initiating or continuing the development of integrated applied academics programs within other Oregon high schools committed to the integration of applied academics, and in time, use the successful CLIC teams to serve as "teacher-to-teacher" mentors to other high school teams desiring to implement this program in or outside Oregon.

The evaluation plan for the project was directed toward the learning/teaching aspect of the project and specified the following activities and measures:

- Student learning gains measured by pre-post testing;
- Attitudes of teachers toward contextual learning measure by a pre-post surveys;
- Attitudes of students measured by an end of course survey;
- Analysis of periodic observation checklists submitted by classroom teachers in contextual classes;

The evaluation plan identified project success as any of the following factors being supported by the assessment data:

- Student learning gains are positive and exceed those anticipated by classroom teachers for the specific student population;
- Classroom teachers indicate an increased awareness of contextual learning techniques and view this methodology as superior in achieving student learning;
- Students engaged in contextual classrooms view the experience as positive and of greater benefit than other teaching approaches;
- Teachers using contextual methodology report positive results in their periodic observation checklists.

In addition to the above specific measures and outcomes the evaluation report addresses accomplishments of the project in achieving the specific training and dissemination objectives not directly addressed by measures associated with contextual methodology and student achievement.

ORGANIZATION AND ACTIVITIES

The project was organized around five contextual teaching teams in five urban high schools in the Portland SMA. Each team implemented contextual curricula and methodology in a variety of subjects. Periodic team meetings were used to keep all participants informed. An evaluation of academic performance, classroom activities, and teacher and student opinions was conducted. Plans for dissemination of the project have been developed and are being implemented.

Although the original grant objective envisioned 50 teachers as part of the project there was actually only 33 teachers involved. This reduction resulted from a change in the original design which envisioned five academic disciplines being taught in each of the five high schools and in multiple sections. The decision to allow each high school to designate disciplines based on their perceived capabilities reduced the number of sections and consequently the number of teachers participating. Although the decision to alter the original teaching design was fully justified and necessary based on the high school choosing to request participation, there were several major adverse impacts of this decision. They were:

- Reduce the number of trained teachers to support dissemination and continuation of the program of implementing contextual methodology;
- Complicate the evaluation of the project and reduce the significance of the data gathered;
- Significantly reduce the planned student population from 600-700 to approximately 350.

The above impacts have been taken into account during the evaluation and, to the most part, accommodations have been developed and implemented. Additionally, the major objectives of the grant in implementing the use of contextual methodology by trained teaching teams in five urban high schools has been effectively met

During the first year, activities consisted of organization of the project, conducting a *Summer Institute* for teachers, pre-testing of contextual students, initial classroom instruction of students, and preliminary evaluation activities. During the second, and final year of the project, teaching/learning activities using contextual methodology continued with post testing of both contextual and non-contextual "matched pair" students conducted at the end of the 1995-96 academic year. Student opinions were solicited via a survey instrument and teachers completed a post project opinion survey. and submitted periodic classroom observation summaries. Project evaluation reports were submitted by each school and "debriefing meetings" conducted with both teachers, advisors and principals. These data form the bulk of the materials analyzed and presented in this evaluation report.

An evaluation of the organization , activities and outcomes of the CLIC project are presented below.

SUMMER INSTITUTE

A ***Summer Institute*** was conducted for teachers during June 1995. The institute's purpose was to provide:

- Teachers with an understanding of contextual learning techniques and methodology;
- Discipline teams to develop curricula for their discipline under the guidance of a subject matter expert "team leader";
- School teams to plan and coordinate project activities for their school;
- A basis for networking during the project.

The institute met its purposes and was a "high energy" experience. Teachers developed teaching strategies and curricula, as well as formed school based teams under the leadership of the school's principal. As part of the evaluation a post-institute evaluation was conducted. The results are shown below.

SUMMER INSTITUTE RATINGS

The ratings of the Summer Institute were high. Most teachers felt the institute was a positive experience. Many teachers reported the Institute had not changed their perception of the usefulness of contextual methodology since they were believers prior to volunteering for the project. The results of the institute rating are included below.

RATINGS

Strongly Agree-1. Agree-2, Don't Know-3, Disagree-4, Strongly Disagree-5

ITEM	RATING
1. My understanding of contextual learning methodology has been greatly enhanced by the Institute.	1.9
2. My expectation of student academic gain in classes using contextual teaching techniques has greatly increased as a result of information provided during the Summer Institute.	2.4
3. Information provided during the Summer Institute linked the process of content mastery, establishing relevance and demonstrating application which is central is contextual teaching.	2.1
4. The Summer Institute has contributed significantly to my ability to apply contextual teaching concepts to my subject matter discipline.	2.3
5. I have a positive attitude towards the expected outcomes in my contextual based classes.	1.5
6, Working with teachers from other schools in developing contextual curriculum has been a positive professional experience.	2.4
7. There will be adequate support provided for my teaching efforts by my school's principal and his/her staff.	2.1
8. I expect to use the network formed through the contextual learning	2.3

consortium to assist me during the next school year's application of contextual teaching methodology.	

Teacher Opinions

OVERVIEW:

The Teacher Survey was administered to 32 teachers participating in the CLIC Summer Institute as a "pre experience instrument" prior to the teachers using contextual teaching methodology during the 1995-96 school year. Twenty-eight completed and usable surveys were returned and were used in the initial analysis. At the end of the project a identical instrument (edited only to changes in tense of items) was administered. Only 20 of the original 28 teachers who provided a usable survey completed the post survey. To ensure computability in pre and post data only the 20 teachers completing both surveys were included in the results displayed below. The analysis has three parts: (1) a profile of opinions concerning contextual teaching, (2) the impact of the CLCI project on the use and understanding of contextual methodology and (3) comments on initial expectations associated with use of contextual methodology versus comments at the end of the project concerning actual experiences. (See Appendix for copy of the survey)

SUMMARY OF THE ANALYSIS:

OPINIONS: The teachers were initially positive toward the expected results of contextual methodology (as reflected in the pre teaching survey) and became more positive as they used the methodology. Generally, the responses on the post teaching survey were more positive toward contextual methodology than their initial opinions. (See table below) Teachers completing the surveys felt that the benefit of contextual methodology would accrue to all students, with attention, motivation and learning all enhanced. In the initial survey a minimal trend toward a concern over availability of equipment and the demand on teachers was detected. However, this concern dissipated during actual use of the contextual methodology. An analysis by high school and discipline showed no significant difference between subgroup and overall ratings.

PROJECT IMPACT: Teachers clearly valued the results of the CLIC Project on their ability to use contextual methodology and obtain increased student learning. As reflected in the table below there was very positive ratings toward all aspects of the projects impact with one major exception. The rating concerning principal and school staff support shows a perceived lack of support by the project teachers. This was substantiated by other comments and by the evaluators difficulty in getting administrative support for evaluation activities. This situation is most likely a basic issue between teachers and administrators, and does not directly relate to contextual teaching methodology.

TEACHER COMMENTS: Overall, the teachers initial comments anticipated positive results as they used contextual methodology. Several teachers indicated they felt they employed contextual methodology in their classes currently. This was particularly true

among science and technical subject matter teachers. After the experience of using the methodology for a full academic year the comments indicated a continued high level of enthusiasm for the contextual teaching methodology, indicating a perception of better academic results for contextual taught student. A summary of this free response section is also included below.

Opinions Concerning Contextual Learning Methodology

RATINGS

Strongly Agree - 1, Agree - 2, Don't Know - 3, Disagree - 4, Strongly Disagree - 5

ITEM	PRE	POST	DIFF
1. Contextual teaching methodology will create a higher student interest in the subject matter.	1.60	1.35	0.25
2. Students retain learning better when the content is linked to their real life experiences.	1.45	1.20	0.25
3. The best demonstration of understanding of subject matter content is the ability to apply the knowledge to new situations.	1.45	1.40	0.05
4. Understanding of the subject content is the most important element of student learning.	2.85	2.75	0.10
5. Students' long-term application of learning will be enhanced by use of contextual methodology	1.60	1.70	*0.10*
6. Involving students in activities where they can apply their new learning reinforces understanding of subject matter content.	1.45	1.40	0.05
7. The contextual learning approach is suited only for less gifted students.	4.15	4.45	0.30
8. College bound students should be taught using a theory based curriculum.	3.95	4.15	0.20
9. In contextual learning, content is less important than demonstrating the ability to work with other students on joint projects.	3.50	3.50	0.00

10. The academic gains of students with poor academic records will not be significantly increased by contextual methodology.	3.70	4.15	0.45
TEACHER'S OPINION CONTINUED			
11. Contextual teaching methodology eliminates the need for teachers to concentrate on student mastery of subject matter content.	3.80	4.00	0.20
12. Using contextual teaching methodology reduces student absenteeism.	2.55	2.05	0.45
13. Students learn best when they understand the reason for mastery of the subject matter.	1.90	1.70	0.20
14. Good students do not benefit from contextual methodology.	4.20	4.55	0.35
15. Students who are motivated and involved in the learning process present fewer discipline problems.	1.45	1.40	0.05
16. A major limitation of contextual teaching methodology is the extensive requirement for equipment.	2.90	3.25	0.35
17. Contextual teaching methodology was more demanding of teachers than traditional academic content based classes.	2.15	2.60	*0.55*
18. Contextual teaching methodology is not significantly different than the current teaching methods used in my discipline.	2.85	3.10	0.25
19. There will be no difference in the level of learning of college bound students in classes using context teaching methodology.	3.25	3.25	0.00
20. The academic gains of average students will be significantly increased by using contextual teaching methodology.	2.25	2.05	0.30

NOTE: *Italicized differences above indicate a trend toward a less favorable opinion*

Perceptions Concerning the Impact of the CLIC Project on Teachers Use / Knowledge of Contextual Methodology

RATINGS

Strongly Agree - 1, Agree - 2, Don't Know - 3, Disagree - 4, Strongly Disagree - 5

	Item	Rating
1.	My understanding of contextual learning methodology has been greatly enhanced by the project.	1.25
2.	My expectation of student academic gain in classes using contextual teaching techniques has greatly increased as a result of information provided and my experiences during the project.	1.65
3.	Information provided during the project clearly linked the process of content mastery, establishing relevance and demonstrating application which is central is contextual teaching methodology.	1.30
4.	The project has contributed significantly to my ability to apply contextual teaching concepts to my subject matter discipline.	1.45
5.	I have a positive attitude towards the expected outcomes in my contextual based classes.	1.20
6.	Working with teachers from other schools in developing contextual curriculum has been a positive professional experience.	1.60
7.	There was adequate support provided for my teaching efforts by my school's principal and his/her staff.	2.25
8.	I expect to use the network formed through the contextual learning consortium to assist me during the next school year's application of contextual teaching methodology.	1.75

CONTEXTUAL PRE / POST SURVEY
TEACHER COMMENTS

NOTE: regular type indicates pre-survey, *italicized type indicates post-surveys*

1. **My contextual classroom will be/have *(was)*:**
   - More focused and organized
   - Connected to the wider world or "real life"
   - More involved and interactive
   - Better understanding of what is being taught
   - More interesting, relevant, and fun
   - More student directed
   - An environment conducive to learning
   - *Noisier than most teachers expect but relaxed and productive*
   - *Totally disorganized, exceptionally loud, busy and chaotic-a real learning environment*
   - *An enjoyable place to be*
   - *Exciting, challenging, creative and intense*
   - *Noisier - louder*
   - *Fun and relevant*
   - *Interesting to me in that I had an opportunity to learn along with my students*

2. **All students in my contextual classes will *(were)*:**
   - Be able to master skills and concepts
   - Know we are making the effort to improve their success
   - See the application of their learning
   - Do more work than in other classes
   - Apply the contextual approach to their other classes
   - Be excited to attend class and learn
   - Succeed by doing
   - Be actively engaged in learning
   - *More involved, more likely to stay on task*
   - *Material was understood by students to a greater degree*
   - *Had to take the heat from their peers & partners if they did not deliver*
   - *Given the opportunity to soar, look at themselves, be great (or not)*
   - *More energetic and more eager to come to class*
   - *Normally involved in learning - there are always those who limit their involvement*

3. **The impact of contextual learning on students discipline will *(was)*:**
   - Be positive as they are more involved in learning
   - Reduce problems
   - Help classrooms be less disruptive
   - Allow me to spend more time on teaching and less on "discipline problems"
   - Not matter much - I rarely have a discipline problem now
   - Increase problems as more projects increase the opportunity to "screw around"
   - *Problems are greatly reduced when students have a stake in their learning*
   - *I had fewer discipline problems by far*
   - *Great*
   - *Lessened the need for my discipline as students became more enthusiastic*
   - *Positive*
   - *More laughter, sometime getting out of hand but a lot more fun than prior discipline problems*

4. **The most noticeable difference between my contextual and regularly taught classes will be *(was)*:**
   - In understanding real life applications of subject
   - Increased student interest and a more positive attitude toward learning
   - Be less content driven and more realistic
   - More reason to participate in class
   - Increased attendance - students will enjoy coming to class
   - Not much or very little
   - Increased student responsibility for learning
   - More cooperation between students
   - The availability of equipment
   - *Better attendance and generally better grades*
   - *Contextual class bonded much faster and reached a higher level of "self-directed" and I became more a resource than an instructor*
   - *Students learn important concepts quicker and deeper when the content is tied to context*
   - *More difficulty in maintaining student interest in individual lessons*
   - *The "why do I have to learn this" - "why can't I teach this" syndrome was missing from the contextual class*

5. **The most significant impact in student academic performance in contextual classrooms will be *(was)*:**

- Students will learn from their own experiences
- Seeing the relevance of the material
- Students will be encouraged to become active learners
- More learning - greater skills - better performance and higher "grades"
- Increased retention of subject matter
- The ability to apply knowledge
- Greater ability to identify use of knowledge in new settings
- *Students enjoyed the class more & were more willing to put up with "non-contextual" (to them) concepts*
- *Students developed greater independence in accepting responsibility for learning*
- *The ability to produce quality work because their peers needed it - not me*
- *The increase shown by every student - all students exceeded expectations*
- *They wanted their work to be correct - came in after school to edit papers so they would be proud of their work*

6. **In terms of student skills such as problem solving and team work, my students in contextual classes will *(was)*:**

- Work together to solve problems
- Develop faster than non-contextual students
- Increase confidence in the ability to complete challenging and complex tasks
- Develop flexibility in working with others
- *Much more aware of the importance of each individual in the group to the success of the project*
- *More advanced in the use of these skills*
- *Very successful in working in team situations*
- *Somewhat more willing to tackle complex projects*

7. **The greatest impact contextual teaching methodology will have in my classroom will be *(was)*:**

- Increased student interest and have fun learning
- Students who understand and can apply knowledge
- Students motivated to learn and apply the knowledge gained
- Being able to collaborate with others
- Students who are "doers"
- Increasing the relevance of the curriculum and how it is delivered
- A big change in what I have been doing
- *High student interest & involvement*
- *A realistic approach to teaching mathematics*
- *Student success*

- *It made teaching more enjoyable for me (and for my students)*
- *Permission to experiment for me and my students*

8. **The students that benefit the most from contextual methodology will be *(were)*:**
   - Hopefully all students - everyone
   - Those who don't learn well from books or from traditional learning styles
   - The low end students - the low achievers
   - The creative student who can see how to apply knowledge
   - The ones who don't see themselves as "college bound"
   - Disenchanted students
   - All students but the greatest impact will be on those who have fallen behind
   - Somewhat improved, but "old habits" are hard to change
   - *More noticeable in the less academically oriented students - they were more motivated*
   - *I thought it motivated the low students just as well as the "high achieving" students*
   - *All my students*
   - *Low to middle range kids*
   - *The upper and lower level students*
   - *All students but especially those who are turned off and bored in "theory-based" classes*
   - *Less for traditional*

9. **Student motivation in contextual classes opposed to traditionally taught classes will be *(was)*:**
   - Higher, greater, more or improved
   - Centered on less "seat time" and more on "hands-on-activities"
   - *On the average a bit higher - some students took advantage of the situation and did not apply themselves*
   - *Increased to a sizable degree*
   - *Improved - students looked for ways to do higher quality work*
   - *higher, significantly different*

10 **In relation to traditional taught classes, absenteeism in contextual classes will be *(was)*:**
   - Reduced as the student becomes involved
   - No change - absenteeism is caused by other factors
   - Generally lower
   - *much lower*
   - *Pretty much the same*
   - *Considerably lower*

- *Less - there was no attrition in my contextual class, although not all students passed*

11. **Students will *(did)* describe contextual classes as:**
    - More fun
    - Easier places to learn and more enjoyable
    - Challenging but fun
    - Where learning is useful and meaningful
    - Important to their future
    - Less boring
    - Exciting
    - User friendly
    - Painful, difficult - not what they are used to or good at
    - *Fun - the question was "what are we doing today?"*
    - *Fun, cool, more relevant, addressing my (students) needs*
    - *Their favorite class*
    - *More active and community connected outside of school*
    - *More useful to their future career*
    - *A positive, fun environment where math make sense*
    - *More enjoyable, more worth while*

12. **The major difference between contextual and traditional methodology is *(was)*:**
    - Relevant curriculum related to the "real" world
    - Students learn more
    - Application of knowledge
    - Activity driven not book driven
    - Focuses on student interests (relevance) not teacher interests (relevance)
    - Hands-on involvement in learning & emphasis on process not facts
    - *Students overall get more involved, but very time consuming for the teacher*
    - *Putting the student in the active not passive learner role*
    - *In the application of things*
    - *Focus on the student - not the content*
    - *Contextual demanded more preparation and equipment*
    - *Was the connections made by the student*
    - *Putting more responsibility for learning on the student - not me*

13. **Students who benefit most from contextual methodology will be *(were)*:**
    - Those who become involved
    - All students - lower performers benefiting the most
    - Innovators - those with inquiring minds
    - Those who do not have good listening skills
    - Poor learners
    - Students who attend

- *All students benefit in varying degrees*
- *All students - however, younger students with an inability to think globally were best served*

(Cont.) 13. **Students who benefit most from contextual methodology will be *(were)*:**

- *Lower and middle student - but I do believe advanced students were motivated to go just a bit harder and farther*
- *Those willing to be part of learning*
- *All - perhaps a bit more at the extremes academic oriented and lower achievers*

14. **The application of contextual methodology in the future will:**
- Be a useful tool for more students
- Spread like wildfire
- Depend on the success in this class
- Be widespread - meeting the needs of all students
- Enhance student learning
- Slowly gain momentum - extensive teaching training and re-training needed
- Will be linked with brain function
- Widely accepted and displacing "traditional" lectures and "learning by listening/reading"
- Limited to money
- Universities will probably not teach teachers how to use it
- *seen more often as teacher receive more training*
- *I plan to infuse contextual into all my classes*
- *Something I will work on and perfect for future instruction*
- *In every class I teach*
- *Used more as time is provided for development of contextual learning lessons*
- *To expand the current curriculum*
- *Critical to helping the <u>usually</u> ignored , non-college bound student*

Results of Classroom Observations

The assessment of classroom activities and results have been gathered through the use of a teacher's observation checklist. (See Appendix for copy) The checklist provides for structured ratings and free-response concerning student activities and curriculum/methodology issues. Ratings and illustrative comments are shown below. To determine if there were any notable shifts in ratings a three point sample was taken - initial, mid and end teaching experience. A brief analysis of the observed differences is presented below. Overall the results favorable toward contextual methodology. However, the results should be viewed as inconclusive due to the small sample size (only 14 0f the potential 32 teachers participated by turning in the required periodic checklists). It is possible teachers with less favorable attitudes or experiences "voted" their negative ratings by not participating. A review of ratings from each school revealed no significant differences, however, again the sample size was too small to expect conclusive data.

CONTEXTUAL CURRICULUM AND INSTRUCTIONAL ISSUES

RATING VALUES

VERY GOOD - 1, GOOD - 2, AVERAGE - 3, POOR - 4, VERY POOR - 5.

	VALUES		
ITEM	***INITIAL***	***MID***	***FINAL***
1. Instructional strategy appropriate to topic	1.95	1.63	1.93
2. Classroom projects	2.10	1.79	1.64
3. Time available for classroom activities	2.19	1.74	1.64
4. Textbook/supporting materials	2.95	2.58	2.57
5. Meaningful student involvement	1.67	1.63	1.50
6. Appropriate learning outcomes identified	2.05	1.74	1.86
7. Measurement of student progress	2.10	1.79	2.00
8. Appropriate clarity and detail in supplemental teacher materials	2.38	2.42	2.14
9, Adequate flexibility to meet special requirements	2.05	1.58	1.79

10, Availability of outside support/assistance to teacher	2.76	1.74	2.07

The contextual curriculum and instructional issues showed considerable variation over time. The Issues dealing with contextual materials and methodology all retained (with some increasing) a positive rating during the project life. On some items ratings rose at the mid point only to "drop back" by the end of the project -- perhaps a phenomenon of "burn out" at the end of a strenuous academic year. The most significant result was the lower rating for text and associated materials (item 4 above). The need to improve this area this area is fairly clearly indicated.

STUDENT CLASSROOM BEHAVIOR AND PERFORMANCE

RATINGS RELATIVE TO NON CONTEXTUAL CLASSES

Definition	Value
MUCH MORE FREQUENTLY	1
SOMEWHAT MORE FREQUENTLY	2
ABOUT THE SAME	3
SOMEWHAT LESS FREQUENTLY	4
MUCH LESS FREQUENTLY	5

(Ratings follow in Table below)

***NOTE:* * Indicates a low rating is favorable to contextual methodology**
 # Indicates a high rating is favorable to contextual methodology

OBSERVATION RATINGS

Item	*INITIAL*	*MID*	*FINAL*
1. Student absences #	3.62	3.60	3.71
2. Student tardiness #	4.05	3.50	3.86
3. Disruptive talking #	3.95	3.75	4.00
4. Attention to topic #	3.76	3.50	3.86
5. Completion of home work *	2.76	2.60	3.29
6. Positive social interaction *	2.62	2.05	2.14
7. Discipline problems #	3.90	3.60	3.93

8. Expression of interest in subject *	2.24	2.10	1.79
CLASSROOM OBSERVATION CONT.			
9. Positive class participation *	2.19	2.00	1.86
10. Completion of in-class assignments *	2.24	2.05	1.48
11. Negative social interaction #	3.67	3.70	2.52
12. Willingness to work together *	2.10	2.10	1.14
13. Acceptance of responsibility for learning *	2.29	2.10	1.52
14. Demonstration of mastery of subject content *	2.38	2.15	1.43
15. Better academic performance by:			
(a) Less gifted students *	2.19	2.05	1.33
(b) Average students *	2.43	2.15	1.29
(c) Gifted students *	2.62	2.15	1.71
16. Seeking outside/special help in mastering subject *	2.38	2.25	1.57
17. Demonstrating positive attitude toward school *	2.52	2.15	1.57
18, Respectful attitude toward other students/teacher *	2.29	2.25	1.62
19. Ready to start class on time *	2.57	2.05	1.62

Ratings were favorable and their positive rating increased during the academic year. One notable exception was the completion of home work assignments - perhaps a result of "student end of year fatigue" or that the methodology places less emphasis on conventional homework. The positive increase in "bonding items" such as in items 6,8,9, 10 & 18 show that a maturation process seems to be at work. Reporting teachers indicate that all students benefited academically, with less-gifted and average students benefiting most. - a result that is also at odds with other reported data that indicated "average students" gained less than gifted and less-gifted. The positive rating for gifted students, although some what lower than other student performance categories, still is counter to the conventional wisdom that "contextual methodology" is not suited for these academically oriented students. Demonstration of mastery of content also received a very positive rating, particularly by the end of the project. Perhaps the safest conclusion that can be drawn is that contextual methodology requires a period of time to be effective - particularly if it is only used in random basis in some section and some subjects. Perhaps more universal use would reap benefits more quickly.

SAMPLE COMMENTS

Student motivation:
--Very motivated by projects
--Greater interest and motivation
--Most are more motivated but a few fight the "non-text" daily problems
--Students are far better motivated knowing they are working on real world problems

Student acceptance of contextual strategies:
--Respond well to method
--Accept connectivity and it helps retention
--Very good
--Good, although some still "fail to see"
--Students are more flexible than teachers and adept well
--This is quite positive

Student behavior /discipline:
--Best behavior ever
--No discipline problems
--Don't see approach has any impact here
--About the same as other classes but I can engage them longer
--Things are getting better - even freshman do mature
--Fewer behavior problems

Curriculum/instructional issues:
--Algebra is a bear to make contextual an still apply classic concepts
--This is a lot of work!
--Still struggle with what is crucial and what to eliminate
--Curriculum too broad - needs focus
--Need to reduce objectives to gain time
--Problem doing all that is planned
--It's not working well. I continue to work in isolation, as does everyone else. I've tried to ask for help, but no results
--We have done a team approach on bigger issues which is working
--Just need more planning time together to make it really fit

Other comments:
--Need to work more as a team and give mutual support
--Good support from the administration but other teachers are too busy to help
--Need time to plan and set performance standards
--Most people are not adaptable to new situations - including students and parents
--I have enjoyed using my new materials

Student Opinions

Student opinions of contextual teaching methodology were solicited by a end of academic year survey. (See appendix for a copy of the instrument.) There were 310 usable responses to the survey. However, as with other measures, the distribution of responses varied among the participating schools (See below).

HIGH SCHOOL	STUDENTS
Benson	47
Madison	73
Milwaukie	117
Oregon City	19
Reynolds	54
Total	310

In addition to the variation in the number of students reporting from various schools, there was considerable mix in grade level and disciplines. Therefore, although an overall rating is reported below, several "special analysis" are also reported in an attempt to more clearly define student perceptions and opinions. These data are described and also reported below with the evaluator's comments.

The survey instrument had two parts. Section #1 (10 items) dealt with the students perceived academic progress and learning style. Section #2 (17 items) dealt with opinions of contextual learning as experienced in the project's designated contextual classroom versus traditional taught classes taken by the student.

Overall on the learning style portion students indicated that they learn better and remember longer if the they use the information taught (Section #1 Items 4 & 7 and to a slightly lesser degree item 10). Both of these factors are prime premises of contextual methodology and the responses tend to support the validity of the contextual teaching approach. Students also tended to enjoy working together, a key element in the team project orientation of contextual methodology. The student responses were less definitive on other aspects of learning style with average responses clustering about the response of "Sometime".

Section I - Learning Style and Academic Progress

Ratings: Almost always - 1, Sometime - 2, Almost never - 3.

ITEM	*AVERAGE RATING*
1. Based on my past grades and performance in school, I would consider myself a(an):	Data not reported
(a) Excellent student (A student)	
(b) Good student (B student)	
(c) Average student (C student)	
(d) Poor student (D-F student)	
2. I do not have to work hard to learn my subjects.	1.92
3. It is easy for me to learn things by reading about them.	1.96
4. I learn best if I understand how I can use the information.	1.41
5. I learn best by listening to the teacher, taking notes, and reading about the subject.	1.89
6. I enjoy working with others when I learn.	1.44
7. If I use information I have learned, I remember it better.	1.29
8. Good grades are easy for me to get.	1.88
9. I prefer studying by myself.	1.94
10. Knowing why we are learning something and applying it to problems helps me learn.	1.67

Overall ratings (provided below) by students did not reveal any significant support for contextual methodology versus other teaching methods. The fairly high number of "Don't know" responses seemed to distort the distribution along with a fairly large number of freshman students (102 of the 310 respondents) with limited experience at the high school level. In selected analysis displayed below these factors have been factored out. However there was limited support reflected by positive responses if ratings of less than 2.5 for agreement responses or 3.5 for disagreement responses are considered. Based on that criteria students reported they enjoyed contextual methodology classes.

Section II - The Contextual Classroom Experience

Rating: Strongly agree-1, Agree-2. Don't know-3, Disagree-4, Strongly disagree-5

* Indicates a ***lower rating*** supports contextual methodology
\# Indicates a ***higher rating*** supports contextual methodology

ITEM	RATING
1. There was no difference between the Contextual Class and other classes I have taken.	3.42#
2.I enjoyed learning in my Contextual Class.	2.37*
3.I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	2.64*
4.I looked forward and enjoyed going to my Contextual Class.	2.72*
5.I made a special effort to attend my Contextual Classes.	2.36*
6.I have less interest in my other classes than in my the Contextual Class.	3.32*
7.I enjoyed working with others in the Contextual Class and it helped me learn the subject.	2.21*
8.I tried never to be late to my Contextual Class.	2.32*
9. The Contextual Class approach should be used in all my subjects.	2.89*
10.I did better in my Contextual Class than I normally do in my school classes.	3.11*
11.I could really tell the difference in how we were taught in my Contextual Class versus other classes.	2.49*

12. If given a choice, I would take a Contextual taught class versus a normally taught class.	2.65*
Section 2 table continued	
13. Using Contextual methods made learning fun.	2.55*
14. My fellow students paid better attention to the teacher in the Contextual Class.	2.82*
15. There was less discipline problems (like excessive talking, disruptive behavior, etc.) in the Contextual Class.	3.06*
16.I was anxious to complete the assigned projects in the Contextual Class.	2.79*
17.I did better in my Contextual Class subject than I would have done when this subject has been taught in other ways.	2.84*

SPECIAL ANALYSIS OF STUDENT RESPONSES

NON-FRESHMAN STUDENT RESPONSES COMPARED TO RESPONSES BY ALL STUDENTS:

The analysis depicted below comparing the total response using only non-freshman students compared to responses by all students revealed slightly more positive results in regard to the use of contextual methodology. The most significant rating difference was the more favorable rating by non-freshmen of their interest level in contextual classes than other classes. Overall the ratings, while tending to support the effectiveness of contextual methodology, did not provide ample evidence that the great majority of students agreed with the efficacy of the approach or could make a judgment pro or con on the issues presented in the survey items.

Student Population Excluding Freshman

Section I - Learning Style and Academic Progress

Ratings: Almost always - 1, Sometime - 2, Almost never - 3.

ITEM	*AVERAGE NON-FRESH*	*AVERAGE ALL STUDENTS*
1. Based on my past grades and performance in school, I would consider myself a(an):	Data not reported	Data not reported
(a) Excellent student (A student)		
(b) Good student (B student)		
(c) Average student (C student)		
(d) Poor student (D-F student)		
2. I do not have to work hard to learn my subjects.	1.93	1.92
3. It is easy for me to learn things by reading about them.	1.84	1.96
4. I learn best if I understand how I can use the information.	1.63	1.41
5. I learn best by listening to the teacher, taking notes, and reading about the subject.	1.61	1.89
6. I enjoy working with others when I learn.	1.61	1.44
7. If I use information I have learned, I remember it better.	1.31	1.29
8. Good grades are easy for me to get.	1.59	1.88
9. I prefer studying by myself.	1.88	1.94
10. Knowing why we are learning something and applying it to problems helps me learn.	1.88	1.67

Section II - The Contextual Classroom Experience

Rating: Strongly agree-1, Agree-2. Don't know-3, Disagree-4, Strongly disagree-5

* Indicates a ***lower rating*** supports contextual methodology
\# Indicates a ***higher rating*** supports contextual methodology

ITEM	RATING NON - FRESH	RATING ALL
1. There was no difference between the Contextual Class and other classes I have taken.	2.62	3.42#
2.I enjoyed learning in my Contextual Class.	2.53	2.37*
3.I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	2.37	2.64*
4.I looked forward and enjoyed going to my Contextual Class.	2.39	2.72*
5.I made a special effort to attend my Contextual Classes.	2.54	2.36*
6.I have less interest in my other classes than in my the Contextual Class.	2.61	3.32*
7.I enjoyed working with others in the Contextual Class and it helped me learn the subject.	2.79	2.21*
8.I tried never to be late to my Contextual Class.	2.27	2.32*
9.The Contextual Class approach should be used in all my subjects.	2.55	2.89*
10.I did better in my Contextual Class than I normally do in my school classes.	2.72	3.11*
11.I could really tell the difference in how we were taught in my Contextual Class versus other classes.	2.64	2.49*
12.If given a choice, I would take a Contextual taught class versus a normally taught class.	2.55	2.65*
13.Using Contextual methods made learning fun.	2.34	2.55*

14.My fellow students paid better attention to the teacher in the Contextual Class.	2.51	2.82*
Section 2 table continued		
15.There was less discipline problems (like excessive talking, disruptive behavior, etc.) in the Contextual Class.	2.85	3.06*
16.I was anxious to complete the assigned projects in the Contextual Class.	2.78	2.79*
17.I did better in my Contextual Class subject than I would have done when this subject has been taught in other ways.	2.50	2.84*

RATINGS OF PERFORMANCE AND CHOICE IN SELECTED SECTIONS:

In a junior Honors English class of 25 students who held an opinion (e.g. did not mark "Don't know") indicated the following concerning the following three issues:

ITEM	RATING
I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	16 agreed 5 disagreed
If given a choice, I would take a Contextual taught class versus a normally taught class.	15 agreed 3 disagreed
I did better in my Contextual Class than I normally do in my school classes.	9 agreed 8 disagreed

For these higher achieving students contextual methodology was clearly preferred and effective, although the students could not reasonably judge if they performed better -- not an unexpected outcome since they probably always do well, particularly if "doing better" was considered a letter grade of A or B.

Similar results were detected in a junior / senior level physics class of 15 students and a junior English class of 22 students

Physics Class

ITEM	RATING
I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	11 agreed 0 disagreed
If given a choice, I would take a Contextual taught class versus a normally taught class.	8 agreed 1 disagreed
I did better in my Contextual Class than I normally do in my school classes.	3 agreed 2 disagreed

English Class

ITEM	RATING
I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	15 agreed 5 disagreed
If given a choice, I would take a Contextual taught class versus a normally taught class.	14 agreed 3 disagreed
I did better in my Contextual Class than I normally do in my school classes.	9 agreed 7 disagreed

NOTE: Of the 22 junior English students 12 self-rated themselves as "A" or "B"" students and 10 as "C" students. Although there was a higher rating for the amount learned the final grades still may have been as expected by the student.

These data would support the premise that good students in academic disciplines learn more with contextual methodology. Due to the distribution of disciplines taught in this project (many being career oriented and by their nature "contextual") it was not possible to determine perceptions in academic type classes of non-freshman students who are poorer students (e.g. C-, D or F students).

BLOCK TEACHING USING CONTEXTUAL METHODOLOGY

Reynolds High School had instituted a "block teaching strategy" prior to the decision to use contextual methodology as part of the CLIC project. This methodology keeps student together in "blocks" for their freshman and sophomore year while they are "team taught" an integrated curriculum. To see if there was any marked difference in the "Reynolds's experience" as it related to the classroom, there student ratings were compared to that of all other students. The results are shown below:

Section II - The Contextual Classroom Experience

Rating: Strongly agree-1, Agree-2. Don't know-3, Disagree-4, Strongly disagree-5

* Indicates a ***lower rating*** supports contextual methodology

\# Indicates a ***higher rating*** supports contextual methodology

ITEM	RATING RHS	RATING ALL
1.There was no difference between the Contextual Class and other classes I have taken.	4.07	3.42#
2.I enjoyed learning in my Contextual Class.	1.98	2.37*
3.I think I learned more in my Contextual Class than if the subject had been taught in the normal way.	2.15	2.64*
4.I looked forward and enjoyed going to my Contextual Class.	2.11	2.72*
5.I made a special effort to attend my Contextual Classes.	2.13	2.36*
6.I have less interest in my other classes than in my the Contextual Class.	2.76	3.32*

7.I enjoyed working with others in the Contextual Class and it helped me learn the subject.	2.06	2.21*
8.I tried never to be late to my Contextual Class.	2.70	2.32*
Section 2 table continued		
9.The Contextual Class approach should be used in all my subjects.	2.63	2.89*
10.I did better in my Contextual Class than I normally do in my school classes.	2.70	3.11*
11.I could really tell the difference in how we were taught in my Contextual Class versus other classes.	1.91	2.49*
12.If given a choice, I would take a Contextual taught class versus a normally taught class.	2.07	2.65*
13.Using Contextual methods made learning fun.	1.85	2.55*
14.My fellow students paid better attention to the teacher in the Contextual Class.	2.46	2.82*
15.There was less discipline problems (like excessive talking, disruptive behavior, etc.) in the Contextual Class.	2.78	3.06*
16.I was anxious to complete the assigned projects in the Contextual Class.	2.22	2.79*
17.I did better in my Contextual Class subject than I would have done when this subject has been taught in other ways.	2.30	2.84*

The results in almost every case by the Reynolds students were more favorable toward contextual learning. Students clearly exhibited more positive scores toward contextual methodology within areas such as having more fun (items 2, 4 &13), learning more(items 3,10 & 17), and preference for contextual teaching (items 12& 13). One issue that can not be resolved is the degree these results come from the block approach or the contextual methodology. It seems clear, however that the combination of the two have a powerful potential to reach students and stimulate learning.

Student Achievement

The analysis of the CLIC assessment of student academic outcomes is based on American College Testing (ACT) instruments administered as a pre and post test to students in designated contextual learning class. The post- test data is augmented by "matched pair" results from non contextual students providing a control group reference point for data analysis for sophomore and junior students. (No GPA was available for freshman so matched pairs could not be developed.) The specific instruments were: (a) ***Explore*** designed and standardized to measure achievement of freshman students; (b) ***Plan*** designed to measure achievement of sophomores, however this instrument as sufficient "top" to be used with rising juniors; (c) ***ACT*** designed for use by juniors and seniors as a measure of academic achievement mainly for college admission (used as post-test for juniors). All instruments have national normed results that serve as a basis for limited comparison to the project population. Explore and Plan were administered as a pre test in each participating high school during the fall of 1995. They were administered as a post test to freshman and sophomores, with the ACT used for juniors, in the spring of 1996. (See the Appendix for further test descriptions.)

Although the pre - post test and matched pair design was intended to help demonstrate the effectiveness of contextual learning, in reality the variance in grade structure and classes along with very small populations resulted in inconclusive data. As shown below there were a very limited number of matched pairs of students in the sophomore and junior groups. When combined with the diversity in subject matter the analysis of these score data is, at best questionable, and perhaps unreliable. Additionally, there were many students who took only a pre or post test thus precluding reliable analysis of overall student academic gain.

NUMBER OF MATCHED PAIRINGS

HIGH SCHOOL	*SOPHOMORES*	*JUNIORS*
BENSON	24	0
MADISON	23	37
MILWAUKIE	7	14
OREGON CITY	16	12

REYNOLDS	10	0
TOTAL	80	63

COMPOSITE SCORES BY HIGH SCHOOL AND GRADE LEVEL

HIGH SCHOOL	CONTEXTUAL STUDENTS	MATCHED STUDENTS	DIFFERENCE	SIGNIFICANCE LEVEL
BENSON				
SOPHOMORES	19.2	19.3	-0.1	0.94
MADISON				
SOPHOMORES	19.3	16.9	2.4	0.04*
JUNIORS	16.0	18.2	-2.2	0.02*
MILWAUKIE				
SOPHOMORES	20.4	21.6	-1.2	0.67
JUNIORS	19.6	18.3	1.3	0.27
OREGON CITY				
SOPHOMORES	20.4	21.6	1.2	0.67
JUNIORS	19.6	18.3	1.3	0.27

* INDICATES A STATISTICALLY SIGNIFICANT DIFFERENCE

NOTE: A large number of the Madison sophomores were in a honors English class and this may contribute to the higher contextual score, although the "matching" was, in part based on past GPA and should have mitigated the difference in performance not attributable to contextual methodology. Based on student and teacher survey data, the positive impact of contextual methodology on these academically high performers probably accounted for a significant amount of the score differences. At Reynolds High School students did not take the math sub test and no composite score was available

Based on the above limited data it appears that the contextual students did as well statistically as the matched pairs based on the ACT testing instruments. This

should help to confirm the teacher and student survey data that they "learned more" - or at least as much - in contextual taught classes as they did/do in non-contextual classes.

An attempt was made to compare pre and post test results of contextual students and compare it to nationally normed gains. The limited numbers of usable measures due to students not taking either pre or post test made this comparison unreliable, and the analysis was not completed by the ACT staff. The ACT professional staff also declined to publish data on differences between academic achievement population since the numbers and diversity of subject did not allow for sound analysis.

Data on the post test *EXPLORE* instrument for freshman at Reynolds and Milwaukie High Schools indicated that, like the *Plan* and *ACT* test data did when compared to matched pairs, that students did as well or better than the national norms. At Milwaukie the mean score for 69 freshman was 15.1 versus a national mean of 14.4. At Reynolds no composite score was available (only one student took the mathematics sub test) but for the 28 students taking English, reading an scientific reasoning sub-test the mean score was above national norms (see below). Reynolds High School used a unique "block & contextual" teaching strategy which seems to be a powerful approach based on these limited data and the results reported above ion the analysis of student opinions.

EXPLORE student test results for freshman at Reynolds

SUB-TEST	REYNOLDS MEAN	NATIONAL MEAN	DIFFERENCE
ENGLISH	15.8	14.2	1.6
READING	17.3	14.2	3.1
SCIENCE	16.7	14.2	2.5

Dissemination Activities

Initially the preliminary dissemination of the project was through a periodic newsletter called ***EXCHANGE.*** (See example in Appendix)The wide distribution of this document kept project participants informed and made other schools, higher education institutions and educational organizations aware of the project. The principal investigator, Dale Parnell, is a noted educator and is in demand as a presenter and consultant. In his appearances he consistently cites the CLIC project as a major effort in documenting the validity of the contextual learning model. Dr. Parnell has recently updated his academically oriented book ***LOGO LEARNING*** under the title of ***WHY DO I HAVE TO LEARN THIS?*** which is geared for popular consumption. This book will help establish interest in the contextual approach to learning and teaching. He has also published numerous articles on contextual learning and its relationship to improved student performance.

Additionally, the use of the CLIC teaching team members to conduct workshops and seminars on contextual learning is well underway. There are plans for additional dissemination of the results of this project upon its completion. Ideas on how to facilitate replication of this project are also being developed by the principal investigator and the contextual teams. All participating school principals indicate they plan to continue and expand the project. Issues of funding, release time for curriculum development, gaining acceptance - especially in traditional academic subjects, and effective outreach to other schools are all being explored. However, the impact of restructuring of public education and the reduction of resources brought about by tax limitation initiatives and mandates for "equal funding of school districts" make answers difficult to develop.

Overall the grant dissemination and replications have, to the maximum degree possible within the existing budgetary and educational environment, been met.

Network and Support

The prime inter-school support and networking is the "school team" under the leadership of the school's principal. Discipline support is provided through the discipline teams formed during the summer institute and facilitated through subject matter experts with experience in contextual methodology. Periodic "all participant" meeting have also been used to network among teachers and administrators. There was limited effectiveness in relation to support and networking. It was obvious to the evaluator that the "school team" was not effective from a management viewpoint. The principals were not able to devote time to administrative detail and the teachers' schedules precluded functioning as a team either academically or administratively. (One exception was the arrangement at Reynolds High School which had established "block teaching teams" with common planning and integrated teaching duties to which CLIC was added.) Future projects involving school teams should have a designated coordinator other than the principal that can assist the teams and project director and/or evaluator in accomplishing the required activities associated with the project's objectives.

Discipline teams did not make a material difference in the project since the subjects taught and the grade levels covered in each participating high school varied significantly. The original five common course disciplines design involving only junior students would have effectively used the common experience of discipline teams. However, the actual design encompassed freshman, sophomore and junior students in more than 15 different subjects and grade level courses. As a result there was only minimal commonality in terms of disciplines.

A electronic mail network was established for project participants. Lack of computer access in the high schools limited the effectiveness of this communications mode and the evaluator could find no evidence that it was ever used as a communication pathway by project participants.

Organization and Administration

The overall organization of the project's initiation and the ***Summer Institute*** was effective and these activities carried off without any discernible problems. The use of expert subject matter consultants and an overall advisory group enhanced the project's effectiveness.

The organization of the teaching activities has been based on letting each school design its own contextual application approach. While this has the advantage of capitalizing on the strengths of each school and meeting their needs, it has made outcome assessment more difficult. The lack of commonality in class levels (originally visualized as all juniors) and the variety of disciplines versus the intended limited subjects impacted the ability of defining and measuring student academic gains. Conversely the wider range of students and teachers provided a broader sampling of opinion as to the effectiveness of the contextual learning approach but limited the " critical mass" of these data.

Communication with teachers in the project was hampered by having the principal as in-school facilitator. Principals need to be involved in the project but the heavy demands on their time precludes them from managing administrative detail. As noted above, without an administrative focal point it has proven difficult to obtain some data and documents need in the projects evaluation.

DEBRIEFING AND REPORT FINDINGS

Each school team submitted a written evaluation of the project to the principal investigator. These reports uniformly reflect a positive orientation to the methodology that is the cornerstone of contextual teaching/learning. Several reports indicated that more time is needed to fully exploit the potential of contextual methodology, and a "longer project" would have been desirable. Individual teachers seemed to benefit most from the curriculum development and teaching experience. Integration of contextual methodology into the "total curriculum" offered by the various schools was not considered as feasible with only the limited effort supported by the grant. The lack of common team planning time as well as lack of individual teacher release time was cited as major drawbacks in even greater success.

Each of the reports contain information that can assist in dissemination effort. In particular the Reynolds High School report is extremely through and could be used in dissemination efforts on how to organize and implement a "block - contextual" program. (See comments above under ***STUDENT OPINIONS*** concerning the apparent effectiveness of this approach.)

The post school year multi-day review held by the project investigators reflected attitudes similar to those in the written reports. Overall the teachers rated the project as "highly successful" (the evaluators term).

A meeting to debrief with the principals was held at the end of the school year. In general they favor the continuation of the contextual methodology by project teacher and the expansion to other subjects/teachers. They do see the challenge of gaining acceptance, particularly from "old time academic teachers" or as one principal put it "the sage on the stage" style teacher. There is also a problem of parent, student and teacher acceptance of contextual methodology based on the initial attempts to characterize courses using this methodology as "applied course" and different from "traditional academic content courses." There seems to be a strong feeling that the contextual methodology is not suited for college bound students (and apparently most parents and students see them selves as "4 year college" bound even if data indicates very few will enter such an institution right after completing high school.) The data from this project does not support these fears or assumptions, but perceptions are - even when false - real in their consequences and principals recognize the difficulty of gaining wide acceptance. A major error in the initial contextual approach may have been to characterize the courses as "different" opposed to the "same" only taught in a different way! (See comments above under ***EXECUTIVE SUMMARY***.)

Principals also stated that the project was hampered by its "late start" in terms of school scheduling and as a result common planning time could not be arrange. Lack of resources also prevented individual or "team leader" release time through out the year. They recommended that the allocation of funds be amended in any future project to provide release time. They also supported the concept of relieving the principal of direct administrative responsibility for teaching teams, but did want to be informed and involved in such future projects.

Recommendations

Several recommendations are made below concerning future projects of this nature.

1. The design of teaching methodology projects be more closely controlled to ensure relevant empirical data on results such as teacher opinions and student academic achievement can be obtained.

2. Projects using "in school" teaching teams in large complex high school have an administrative focal point that can coordinate activities among the teaching team.

3. Projects be of a minimum of two teaching academic years to provide ample time to refine the teaching approach and measure the results.

4. Use of cross school/district discipline teams be based on common subjects and grade levels.

APPENDIXES

1. Participating High Schools
2. Principal Investigator & Staff
3. Teacher Pre - Post Survey
4. Teacher Observation Checklist
5. Student Opinion Survey
6. Description of ACT Instruments
7. The Contextual Learning Exchange (example)
8. Summary briefing charts

PARTICIPATING HIGH SCHOOLS

Benson High School
546 NE 12th Avenue
Portland, OR 97232
Robert O'Neill, *Principal*

Phone: (503)280-5100
Fax: (503)280-5773

Madison High School
2735 NE 82nd Avenue
Portland, OR 97220
Ron Hudson, *Principal*

Phone: (503)280-5220
Fax: (503)280-5220

Milwaukie High School
11300 SE 23rd Avenue
Milwaukie, OR 97222-7795
Joyce Henstrand, *Principal*

Phone: (503)653-3750
Fax: (503)653-3767

Oregon City High School
1306 12th Street
Oregon City, OR 97045
Sharon Rodgers, *Principal*

Phone: (503)657-2411
Fax: (503)657-0445

Reynolds High School
1698 SW Cherry Park Road
Troutdale, OR 97060-9633
Steve Olczak, *Principal*

Phone: (503)667-3186
Fax: (503)669-0776

Principal Investigator & staff

Professor Dale Parnell
Education Hall 419
Oregon State University
Corvallis, OR 97331
Phone: (541)737-5058
Fax: (541)737-2040
Principal Investgator & Project director

Sue Shields
Staff Development Director
North Clackamas School District
444 SE Lake Road
Milwaukie, OR97222-4799
Phone: (503)653-3921
Fax: (503)652-3625
Co-proncipal Investgator & Project Associate Director

Lester W. Reed, Jr. Ph.D.
Education Hall 418
Oregon State University
Corvallis, OR 97331
Phone: (541)737-5963
Fax: (541)737-2040
Principal Evaluator

Teacher Survey

Contextual Learning Consortium and Institute

SCHOOL OF EDUCATION

OREGON STATE UNIVERSITY

JUNE 1995

Identification Information: Please complete the information requested below to assist in the evaluation of your responses to the Teacher Survey:

1. Name: _____

2. High School: _____

3. Subject Matter (If teaching more than one subject in a contextual setting, please indicate all subjects): _____

_____

_____

Instructions for Completing the Survey

The Teacher Survey is designed to obtain information concerning your opinions related to contextual teaching methodology prior to your actual involvement in the Contextual Learning Consortium and Institute (CLCI) project. A second survey will be administered at the end of the 1995-96 school year which will solicit your opinions related to your experience in the CLCI project and the efficacy of the contextual learning methodology.

The survey items are structured to obtain your evaluation of your opinions and expectations concerning contextual teaching methodology prior to the Summer Institute and gather data concerning your opinion of the Summer Institute.

Please mark your responses in this workbook using the pencil provided. If you wish to change a response, completely erase the original answer and remark the correct response. Please remember this survey is designed to obtain your opinions and expectations and there are no "correct answers". Your responses on this survey will form a benchmark for change in your opinions and expectations as the result of your experiences in using contextual teaching methodology.

Section I
Opinions Concerning Contextual Learning Methodology
Prior to the CLCI Summer Institute

SA - Strongly Agree

A - Agree

DK - Don't Know

D - Disagree

SD - Strongly Disagree

	Item	SA	A	DK	D	SD
1.	Contextual teaching methodology will create a higher student interest in the subject matter.					
2.	Students retain learning better when the content is linked to their real life experiences.					
3.	The best demonstration of understanding of subject matter content is the ability to apply the knowledge to new situations.					
4.	Understanding of the subject content is the most important element of student learning.					
5.	Students' long-term application of learning will be enhanced by use of contextual methodology.					
6.	Involving students in activities where they can apply their new learning reinforces understanding of subject matter content.					
7.	The contextual learning approach is suited only for less gifted students.					
8.	College bound students should be taught using a theory based curriculum.					
9.	In contextual learning, content is less important than demonstrating the ability to work with other students on joint projects.					
10.	The academic gains of students with poor academic records will not be significantly increased by contextual methodology.					

	Item	SA	A	DK	D	SD
11.	Contextual teaching methodology eliminates the need for teachers to concentrate on student mastery of subject matter content.					
12.	Using contextual teaching methodology reduces student absenteeism.					
13.	Students learn best when they understand the reason for mastery of the subject matter.					
14.	Good students do not benefit from contextual methodology.					
15.	Students who are motivated and involved in the learning process present fewer discipline problems.					
16.	A major limitation of contextual teaching methodology is the extensive requirement for equipment.					
17.	Contextual teaching methodology is more demanding of teachers than traditional academic content based classes.					
18.	Contextual teaching methodology is not significantly different than the current teaching methods used in my discipline.					
19.	There will be no difference in the level of learning of college bound students in classes using context teaching methodology.					
20.	The academic gains of average students will be significantly increased by using contextual teaching methodology.					

Section II

The following items require you to provide your expectations in terms of teaching effectiveness and student impact that led you to participate in the CLCI project. Please provide short succinct written responses that reflect the most important expectation to the items below:

1. My contextual classroom will be _____

   _____

   _____.

2. All students in my contextual classes will _____

   _____

   _____.

3. The impact of contextual learning on student discipline will _____

   _____

   _____.

4. The most noticeable difference between my contextual and regularly taught classes will ___

   _____

   _____.

5. The most significant impact in student academic performance in contextual classrooms will _

   _____

   _____.

6. In terms of student process skills such as problem solving and team work, my students in contextual classes will _____

   _____

   _____.

7. The greatest impact contextual teaching methodology will have in my classroom will ____

_____

_____.

8. Student motivation in contextual classes opposed to traditionally taught classes will _____

_____

_____.

9. The students that benefit the most from contextual methodology will _____

_____

_____.

10. In relation to traditionally taught classes, absenteeism in contextual classes will _____

_____

_____.

11. Students will describe contextual classrooms as _____

_____

_____.

12. The major difference between contextual and traditional methodology is _____

_____

_____.

13. Students who benefit the most from contextual methodology will be _____

_____

_____.

14. The application of contextual methodology in the future will _____

_____

_____.

Section III

The following items relate to your opinion concerning the CLCI Summer Institute and your view of contextual teaching methodology as a result of your experience in the Summer Institute.

	Item	SA	A	DK	D	SD
1.	My understanding of contextual learning methodology has been greatly enhanced by the Summer Institute.					
2.	My expectation of student academic gain in classes using contextual teaching techniques has greatly increased as a result of information provided during the Summer Institute.					
3.	Information provided during the Summer Institute clearly linked the process of content mastery, establishing relevance and demonstrating application which is central is contextual teaching methodology.					
4.	The Summer Institute has contributed significantly to my ability to apply contextual teaching concepts to my subject matter discipline.					
5.	I have a positive attitude towards the expected outcomes in my contextual based classes.					
6.	Working with teachers from other schools in developing contextual curriculum has been a positive professional experience.					
7.	There will be adequate support provided for my teaching efforts by my school's principal and his/her staff.					
8.	I expect to use the network formed through the contextual learning consortium to assist me during the next school year's application of contextual teaching methodology.					

Teacher Survey

Contextual Learning Consortium and Institute

SCHOOL OF EDUCATION

OREGON STATE UNIVERSITY

JUNE 1996

Identification Information: Please complete the information requested below to assist in the evaluation of your responses to the Teacher Survey:

1. Name: _____

2. High School: _____

3. Subject Matter (If teaching more than one subject in a contextual setting, please indicate all subjects): _____

_____

_____

Instructions for Completing the Survey

The Teacher Survey is designed to obtain information concerning your opinions related to contextual teaching methodology after your actual involvement in the Contextual Learning Consortium and Institute (CLCI) project. The survey results will be compared to the results of the survey you took during the 1995 Summer Institute to determine what, if any, changes have occurred in your opinions concerning contextual teaching methodology.

The survey items are structured to obtain your evaluation of your opinions and expectations concerning contextual teaching methodology after your actual teaching experiences during the 1995 - 1996 school year.

Please mark your responses in this workbook. If you wish to change a response, completely erase the original answer and remark the correct response. Please remember this survey is designed to obtain your opinions and expectations and there are no "correct answers". Your responses on this survey will allow us to measure change in your opinions and expectations as the result of your experiences in using contextual teaching methodology.

Section I
Opinions Concerning Contextual Learning Methodology
After using "contextual methodology"

SA - Strongly Agree

A - Agree

DK - Don't Know

D - Disagree

SD - Strongly Disagree

	Item	SA	A	DK	D	SD
1.	Contextual teaching methodology created a higher student interest in the subject matter.					
2.	Students retained learning better when the content was linked to their real life experiences.					
3.	The best demonstration of understanding of subject matter content was the ability to apply the knowledge to new situations.					
4.	Understanding of the subject content was the most important element of student learning.					
5.	Students' long-term application of learning was enhanced by use of contextual methodology.					
6.	Involving students in activities where they can apply their new learning reinforced their understanding of subject matter content.					
7.	The contextual learning approach was suited only for less gifted students.					
8.	College bound students should have been taught using a theory based curriculum.					
9.	In contextual learning, content was less important than demonstrating the ability to work with other students on joint projects.					
10.	The academic gains of students with poor academic records was not significantly increased by contextual methodology.					

	Item	SA	A	DK	D	SD
11.	Contextual teaching methodology eliminated the need for teachers to concentrate on student mastery of subject matter content.					
12.	Using contextual teaching methodology reduced student absenteeism.					
13.	Students learned best when they understood the reason for mastery of the subject matter.					
14.	Good students did not benefit from contextual methodology.					
15.	Students who were motivated and involved in the learning process presented fewer discipline problems.					
16.	A major limitation of contextual teaching methodology was the extensive requirement for equipment.					
17.	Contextual teaching methodology was more demanding of teachers than traditional academic content based classes.					
18.	Contextual teaching methodology was not significantly different than the current teaching methods used in my discipline.					
19.	There was no difference in the level of learning of college bound students in classes using context teaching methodology.					
20.	The academic gains of average students was significantly increased by using contextual teaching methodology.					

Section II

The following items require you to report your experiences in terms of teaching effectiveness and student impact in contextual classes during the past school year. Please provide short succinct written responses that reflect the most important expectation to the items below:

1. My contextual classroom was:

2. All students in my contextual classes were:

3. The impact of contextual learning on student discipline was:

4. The most noticeable difference between my contextual and regularly taught classes was

5. The most significant impact in student academic performance in contextual classrooms was:

6. In terms of student process skills such as problem solving and team work, my students in contextual classes were:

7. The greatest impact contextual teaching methodology had in my classroom was:

8. Student motivation in contextual classes opposed to traditionally taught classes was:

9. The students that benefit the most from contextual methodology were:

10. In relation to traditionally taught classes, absenteeism in contextual classes was:

11. Students describe my contextual classrooms as:

12. The major difference between contextual and traditional methodology was:

13. Students who benefit the most from contextual methodology were:

14. The application of contextual methodology in the future will be:

Section III

The following items relate to your opinion concerning the CLCI project and your view of contextual teaching methodology as a result of your experience in the project.

	Item	SA	A	DK	D	SD
1.	My understanding of contextual learning methodology has been greatly enhanced by the project.					
2.	My expectation of student academic gain in classes using contextual teaching techniques has greatly increased as a result of information provided and my experiences during the project.					
3.	Information provided during the project clearly linked the process of content mastery, establishing relevance and demonstrating application which is central is contextual teaching methodology.					
4.	The project has contributed significantly to my ability to apply contextual teaching concepts to my subject matter discipline.					
5.	I have a positive attitude towards the expected outcomes in my contextual based classes.					
6.	Working with teachers from other schools in developing contextual curriculum has been a positive professional experience.					
7.	There was adequate support provided for my teaching efforts by my school's principal and his/her staff.					
8.	I expect to use the network formed through the contextual learning consortium to assist me during the next school year's application of contextual teaching methodology.					

Monthly Observation Check List

Contextual

Learning

Consortium

and

Institute

Check List for:

Name: _____

School: _____

Subject/Class: _____ Month: _____

Note: Please complete a separate check list for each subject or class section taught using contextual methodology.

When you complete the check list, seal it in the envelope provided and have your school mail it to the address indicated.

Thank you.

Section I

Items 1 through 21 deal with student classroom behavior and performance and should be rated as follows:

MMF - Much more frequently than in other classes

MF - Somewhat more frequently than in other classes

AS - About the same as in other classes

LF - Somewhat less frequently than in other classes

MLF - Much less frequently than in other classes

Item	MMF	MF	AS	LF	MLF
1. Student absences.					
2. Student tardiness.					
3. Disruptive talking.					
4. Inattention to topic.					
5. Completion of home work.					
6. Positive social interaction.					
7. Discipline problems.					
8. Expression of interest in subject.					
9. Positive class participation.					
10. Completion of in class assignments.					
11. Negative social interaction.					
12. Willingness to work together.					
13. Acceptance of responsibility for learning.					
14. Demonstration of mastery of subject content.					
Better academic performance by:	X	X	X	X	X
15. Less gifted students.					
16. Average students.					
17. Gifted students.					
18. Seeking outside/special help in mastering subject.					

Item		MMF	MF	AS	LF	MLF
19.	Demonstrating positive attitude toward school.					
20.	Respectful attitude toward other students/teacher.					
21.	Ready to start class on time.					

Section II

Items 22 through 31 relate to curriculum and instructional issues associated with the contextual class(es) and should be rated as follows:

VG - Very Good

G - Good

A - Average

P - Poor

VP - Very Poor

Item		VG	G	A	P	VP
22.	Instructional strategy appropriate to topics.					
23.	Classroom projects.					
24.	Time available for classroom activity.					
25.	Textbook/supporting materials.					
26.	Meaningful student involvement.					
27.	Appropriate learning outcomes identified.					
28.	Measurement of student progress.					
29.	Appropriate clarity and detail in supplemental teacher materials.					
30.	Adequate flexibility to meet special requirements.					
31.	Availability of outside support/assistance for teacher.					

Section III

Please make comments as appropriate concerning the following topics/issues.

1. Student Motivation: _____

_____

_____

_____.

2. Student acceptance of contextual strategies: _____

_____

_____

_____.

3. Student behavior/discipline issues: _____

_____

_____

_____.

4. Curriculum/instructional issues: _____

_____

_____

_____.

5. Other comments concerning the CLCI project: _____

_____

_____

_____.

STUDENT SURVEY

Oregon State University
School of Education

Contextual

Learning

Institute

and

Consortium

Identification Information

I am a student at:

(a) _____ Benson High School

(b) _____ Madison High School

(c) _____ Milwaukie High School

(d) _____ Oregon City High School

(e) _____ Reynolds High School

2. I am currently a:

(a) _____ Senior (12th grader)

(b) _____ Junior (11th grader)

(c) _____Sophmore (10th grader)

(d) _____ Freshman (9th grader)

3. Name of my "Contextual Class" is:

_____

INSTRUCTIONS:

This survey is designed to obtain your opinion concerning your learning style, academic progress, and the results of attending the Contextual Learning Class. ***Your Contextual Learning Class is the special class in which you are now answering this questionnaire.*** When your opinion is asked concerning the Contextual Class, please compare your experiences in this class versus other classes which do not regularly use the teaching methods which emphasize application of the items being taught to real life situations. For each question, there will be a series of responses. Please check the response which most accurately describes your opinion. Please remember that it is your opinion that is important--there are no right or wrong answers to these questions. Additionally, we have purposely not identified you in this survey, therefore, your answers will be completely confidential and anonymous. Thank you for your effort in helping us evaluate the results of Contextual Teaching and Learning.

Section I - Learning Style and Academic Progress

This section deals with the way you learn and your school grades. How you learn is important in helping teachers understand how to best teach the subjects you take. Your school performance - grades - also may reflect how you were taught, not your ability to learn. Your honest evaluation of your academic performance and learning style will help your future teachers in making their classes fit how you learn best.

1. Based on my past grades and performance in school, I would consider myself a(an):

   _____ (a) Excellent student (A student)
   _____ (b) Good student (B student)
   _____ (c) Average student (C student)
   _____ (d) Poor student (D-F student)

2. I do not have to work hard to learn my subjects.

   _____ (a) Almost always

   _____ (b) Sometimes

   _____ (c) Almost never

3. It is easy for me to learn things by reading about them.

   _____ (a) Almost always

   _____ (b) Sometimes

   _____ (c) Almost never

4. I learn best if I understand how I can use the information.

   _____ (a) Almost always

   _____ (b) Sometimes

   _____ (c) Almost never

5. I learn best by listening to the teacher, taking notes, and reading about the subject.

   _____ (a) Almost always

   _____ (b) Sometimes

   _____ (c) Almost never

6. I enjoy working with others when I learn.

_____ (a) Almost always

_____ (b) Sometimes

_____ (c) Almost never

7. If I use information I have learned, I remember it better.

_____ (a) Almost always

_____ (b) Sometimes

_____ (c) Almost never

8. Good grades are easy for me to get.

_____ (a) Almost always

_____ (b) Sometimes

_____ (c) Almost never

9. I prefer studying by myself.

_____ (a) Almost always

_____ (b) Sometimes

_____ (c) Almost never

10. Knowing why we are learning something and applying it to problems helps me learn.

_____ (a) Almost always

_____ (b) Sometimes

_____ (c) Almost never

Section II - The Contextual Classroom Experience

This section deals with your Contextual Learning Class. Please respond to these statements concerning your agreement or disagreement with their accuracy. In considering these statements, please compare your experience in this Contextual Class to other classes you have taken that do not use the approach of linking knowledge to application. That is, classes that rely primarily on reading textbooks, doing assignments, listening, and taking notes.

1. There was no difference between the Contextual Class and other classes I have taken.

   _____ (a) Strongly Agree

   _____ (b) Agree

   _____ (c) Don't Know

   _____ (d) Disagree

   _____ (e) Strongly Disagree

2. I enjoyed learning in my Contextual Class.

   _____ (a) Strongly Agree

   _____ (b) Agree

   _____ (c) Don't Know

   _____ (d) Disagree

   _____ (e) Strongly Disagree

3. I think I learned more in my Contextual Class than if the subject had been taught in the normal way.

   _____ (a) Strongly Agree

   _____ (b) Agree

   _____ (c) Don't Know

   _____ (d) Disagree

   _____ (e) Strongly Disagree

4. I looked forward and enjoyed going to my Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

5. I made a special effort to attend my Contextual Classes.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

6. I have less interest in my other classes than in my the Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

7. I enjoyed working with others in the Contextual Class and it helped me learn the subject.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

8. I tried never to be late to my Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

9. The Contextual Class approach should be used in all my subjects.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

10. I did better in my Contextual Class than I normally do in my school classes.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

11. I could really tell the difference in how we were taught in my Contextual Class versus other classes.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

12. If given a choice, I would take a Contextual taught class versus a normally taught class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

13. Using Contextual methods made learning fun.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

14. My fellow students paid better attention to the teacher in the Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

15. There was less discipline problems (like excessive talking, disruptive behavior, etc.) in the Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

16. I was anxious to complete the assigned projects in the Contextual Class.

_____ (a) Strongly Agree

_____ (b) Agree

_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

17. I did better in my Contextual Class subject than I have done when this subject has been taught in other ways.

_____ (a) Strongly Agree

_____ (b) Agree

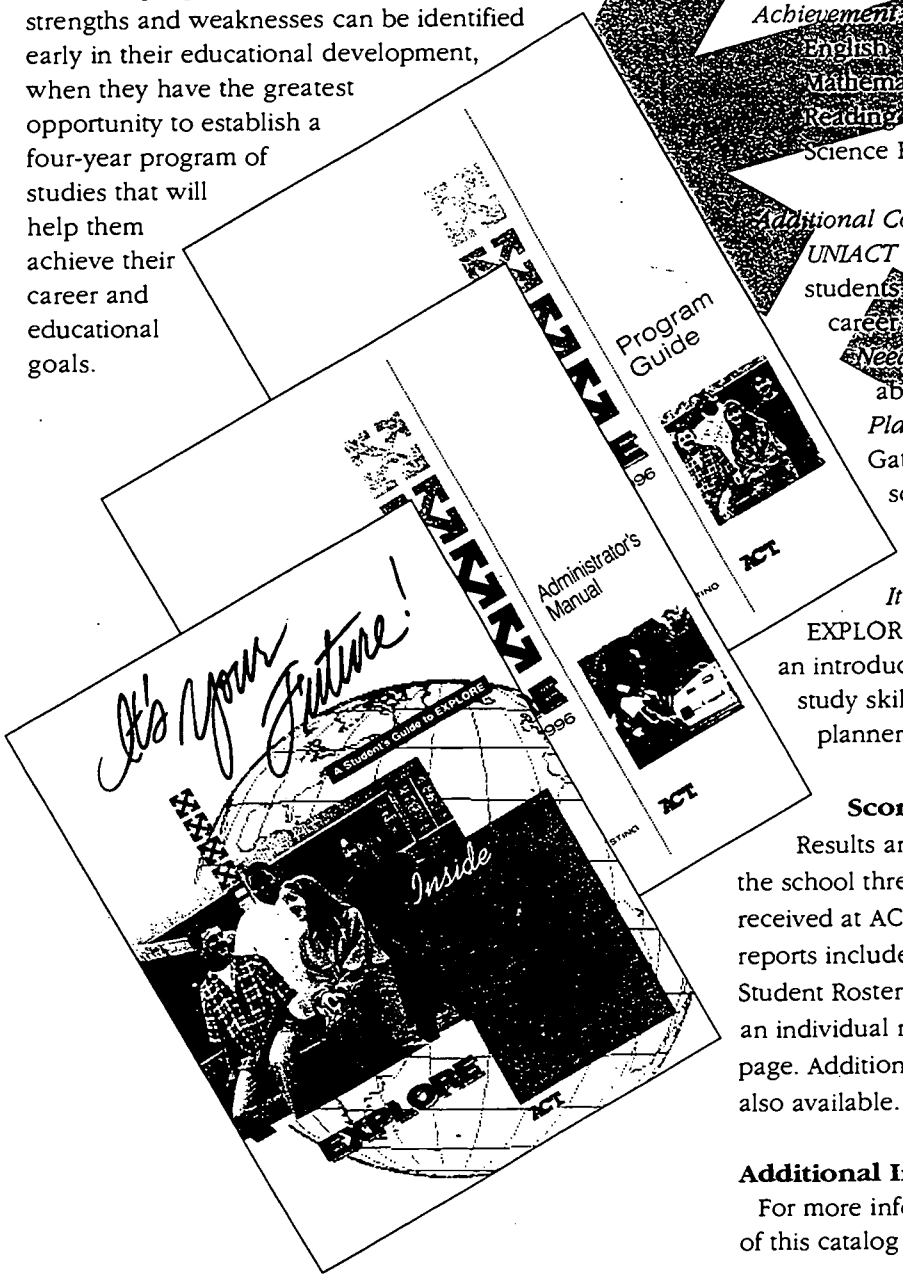
_____ (c) Don't Know

_____ (d) Disagree

_____ (e) Strongly Disagree

EXPLORE

The first step in the EPAS process, EXPLORE helps students investigate and understand a wide variety of career and educational options. The program prepares students not only for their high school coursework, but for their post-high school choices as well. An ideal high school intake measure, EXPLORE gives educators the means to structure high school planning and career exploration for students and parents and serves as a baseline to monitor academic progress. Through EXPLORE, students' strengths and weaknesses can be identified early in their educational development, when they have the greatest opportunity to establish a four-year program of studies that will help them achieve their career and educational goals.



Grade Level: 8

Program Description

EXPLORE is typically administered to all students during the regular school day at the school's convenience. The instrument is not secure, and the test booklets may be reused. EXPLORE is made up of four academic achievement tests and other key components.

Achievement Tests

English	40 items	30 minutes
Mathematics	30 items	30 minutes
Reading	30 items	30 minutes
Science Reasoning	28 items	30 minutes

Additional Components

UNIACT Interest Inventory (90 items) – Helps students explore personally relevant career options.

Needs Assessment – Collects information about students' perceived needs.

Plans and Background Information – Gathers information about students' school coursework plans, educational and career plans after high school, and other relevant information.

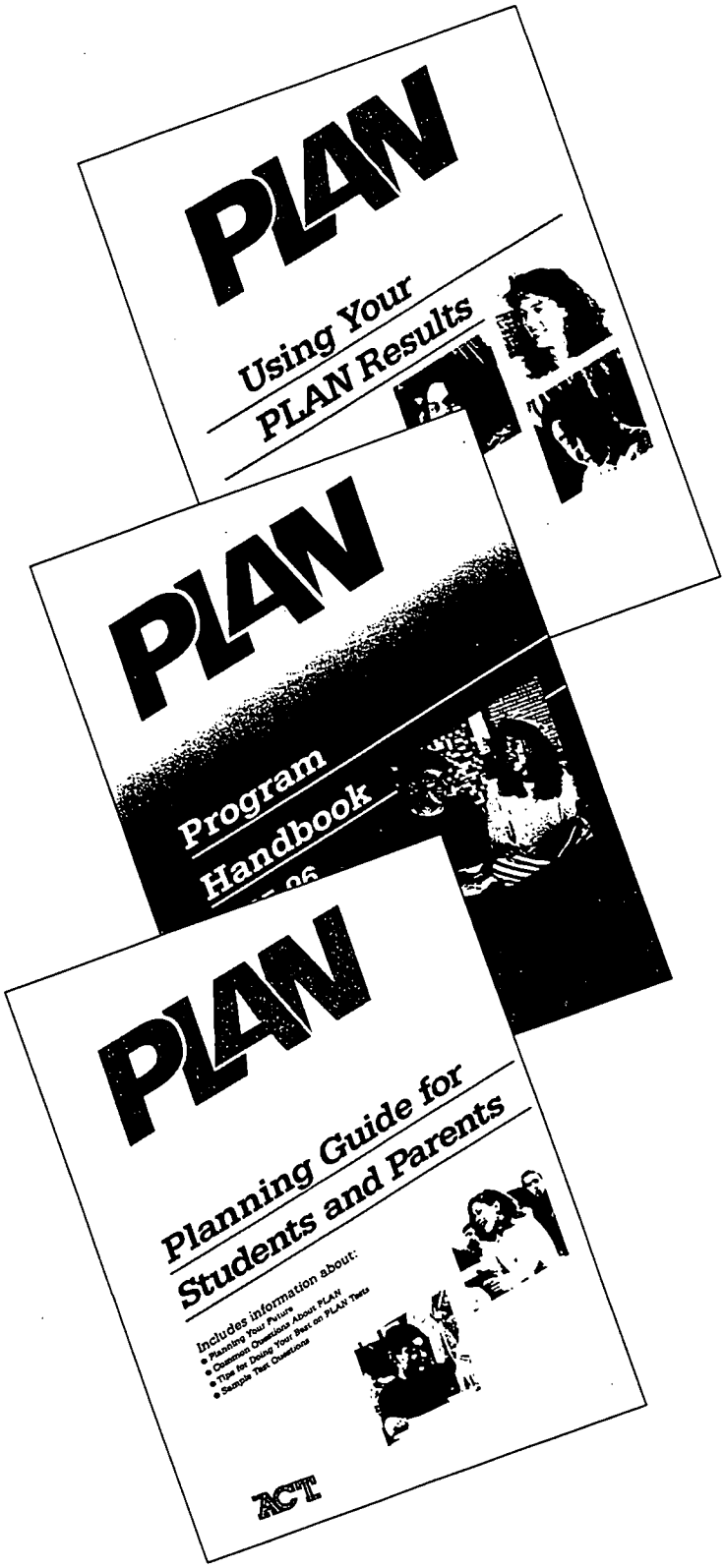
It's Your Future – Explains the EXPLORE report profile to students and offers an introduction to ACT's World-of-Work Map, a study skills checklist, and a coursework planner.

Scoring and Reporting

Results and follow-up materials are shipped to the school three weeks after test materials are received at ACT's scoring center. Routine score reports include two copies of the Student Report, a Student Roster, and a Summary Report. A sample of an individual report is illustrated on the following page. Additional supplemental reporting services are also available.

Additional Information

For more information about EXPLORE, see page 45 of this catalog or call 1-800/498-6065.



PLAN

Designed for use by all students, PLAN is the midpoint review of progress in high school and the second component in the EPAS system. PLAN provides direction for educational and career planning, enabling students to make appropriate coursework adjustments in order to be better prepared to achieve their goals after high school. The program helps students consider their academic achievement, study skills needs, and post-high school goals as they evaluate their progress. PLAN also provides an estimated ACT Assessment composite score, giving college-bound students an indication of their academic preparation to date. School and district personnel can use PLAN to evaluate progress toward attaining locally determined outcomes.

Grade Level: 10

Program Description

A new form of PLAN is administered each fall during an established testing period. The entire program can be administered in a single half-day session or two separate sessions, one for the academic tests, another for the non-test sections. PLAN is made up of four academic achievement tests and other key components.

Achievement Tests

English	50 items	30 minutes
Mathematics	40 items	40 minutes
Reading	25 items	25 minutes
Science Reasoning	30 items	25 minutes

Additional Components

UNIACT Interest Inventory (60 items) – Helps students review personally relevant career options.

Needs Assessment – Collects information about students' perceived needs.

Study Power Assessment – Tests students' awareness of effective study practices, with results linked to ways to improve in this important skill area.

COREY, PAT A.

HIGH SCHOOL CODE: 000000
DATE TESTED: 10/27/95
SORT CODE:

PLAN STUDENT REPORT

Your Test Scores and Skills Diagnosis

YOUR TEST SCORES

TESTS	TEST SCORES (1-32)	SUB-SCORES (1-16)	NATIONAL PERCENT AT OR BELOW: 10TH GRADE	NATIONAL PERCENT AT OR BELOW: COLL.-BND. 10TH
ENGLISH	19		76	70
Usage/Mechanics		11	87	84
Rhetorical Skills		9	71	65
MATHEMATICS	14		31	24
Pre-Algebra/Algebra		6	46	38
Geometry		6	18	14
READING	20		84	79
SCIENCE REASONING	17		64	57
COMPOSITE (Average) Score	18		75	68

YOUR ESTIMATED RANGE OF ACT ASSESSMENT COMPOSITE SCORES IS: 18–22

When you take the ACT Assessment, your actual composite score may vary from this estimate depending on your educational experiences during the next two years (grades 10 and 11). This estimate is provided only if you indicated you are now in 10th grade and assumes that you maintain your level of academic achievement relative to other students during the next two years.

YOUR SKILLS DIAGNOSIS

The correct responses to the items on the PLAN academic tests are listed below in the first row under the item numbers. Your responses are listed in the second row. If your response was correct, a "+" is indicated. If your response was incorrect, the alternative response you chose is shown. If you omitted the item entirely, an "0" is indicated. The third line in the English and Mathematics Tests indicates which items belong in the following content areas, U=Usage/Mechanics; R=Rhetorical Skills; A=Pre-Algebra/Algebra; G=Geometry.

ENGLISH

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
CORRECT ANSWER	C J D G C K C G A J B F D H E K A J D G B F E H A F B G A G D H B F E J D H A K C J B F E H C K E K
YOUR ANSWER	+ + + + + + + K + + + + + + + + B + + + + K + + D + C H + + A K + G C + + J D J D H D + + + A + B H
CONTENT AREA	U U U R R U U R U U U R U U R R U U R R U U U U R U U U R R U U R R U U U R R U U U

MATHEMATICS

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
CORRECT ANSWER	B H B J A F D J B H E J A K C G E G D F C G E F B F A K C H D K E J A H C K D G
YOUR ANSWER	+ + + + + + A + + J + + B H B J A K B H B H A J C G D G B F A H B G D K O O O O
CONTENT AREA	A A G A A G G A A A A G G A G G A A G A G A G A G A G G A A G A G A G A

TEST FORM: Ø6Z

READING

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
CORRECT ANSWER	E K A K B J C H A K B G E J C G D F D J B H C F E
YOUR ANSWER	+ + + + + K + + + J + + + G D + + H + K + F O O O

SCIENCE REASONING

	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
CORRECT ANSWER	A F B G D H A K C J C F B H D H E G B J D J E K E G A F C K
YOUR ANSWER	+ J + + + + C + + + A + D J C J + K D F E O B F A H E G B F

- A "+" indicates your response was correct.
- A letter A through K is the response you chose, if your answer was incorrect.
- An "0" indicates you omitted the item.

Plus . . . .

YOUR STUDY SKILLS SCORES

SKILL AREAS	NUMBER CORRECT (1-15)	NATL % AT OR BELOW
Managing Time & Environ.	12	60
Reading Textbooks	13	49
Taking Class Notes	13	57
Using Resources	14	74
Preparing for Tests	11	30
Taking Tests	9	17
TOTAL	72	37

YOUR INTEREST INVENTORY RESULTS: MAP REGIONS 8, 9, 10

These map regions are based on your responses to the Interest Inventory items. To use this information, turn to the back of this report.

YOUR EDUCATIONAL PLANNING PROFILE

NUMBER OF YEARS YOU PLAN TO STUDY THESE SUBJECTS IN HIGH SCHOOL

ENGLISH	MATH:COMP. SCI	SOCIAL STUDIES	NATURAL SCI.	FOREIGN LANG.
4	2	3	2	2

YOUR EDUCATIONAL/TRAINING PLANS AFTER HIGH SCHOOL
4-YEAR COLLEGE OR UNIVERSITY

CAREER AREA YOU PREFERRED
ENGINEERING

YOUR NEEDS

You indicated the amount of help you feel you need in each of the areas listed below. You may wish to talk to your counselor about ways to get help in those areas where you indicated a need.

AREA OF NEED	AMOUNT OF HELP NEEDED: A LOT	SOME	LITTLE OR NO
1. Expressing my ideas in writing			X
2. Developing my public speaking skills		X	
3. Increasing my reading speed		X	
4. Increasing my understanding of what I read		X	
5. Developing my math skills			X
6. Developing my study skills and study habits			X
7. Developing my test-taking skills	X		
8. Understanding and using computers		X	
9. Choosing a college or technical school to attend after high school		X	
10. Selecting a career job that is right for me			X

Dash (—) indicates information not provided

High School Course Information – Organizes and reports grades earned in students' high school courses to date.

Student/Parent Planning Guide – Helps prepare students for a successful experience with PLAN.

Using Your PLAN Results – Helps students and their parents understand and apply their PLAN results.

Scoring and Reporting

Results and interpretive materials are mailed three to six weeks after answer folders are received by ACT. Two copies of the Student Score Report, two record labels for each student, and a High School List Report are routinely provided. A sample of the Student Report is illustrated above. Additional supplemental reporting services are also available.

Additional Information

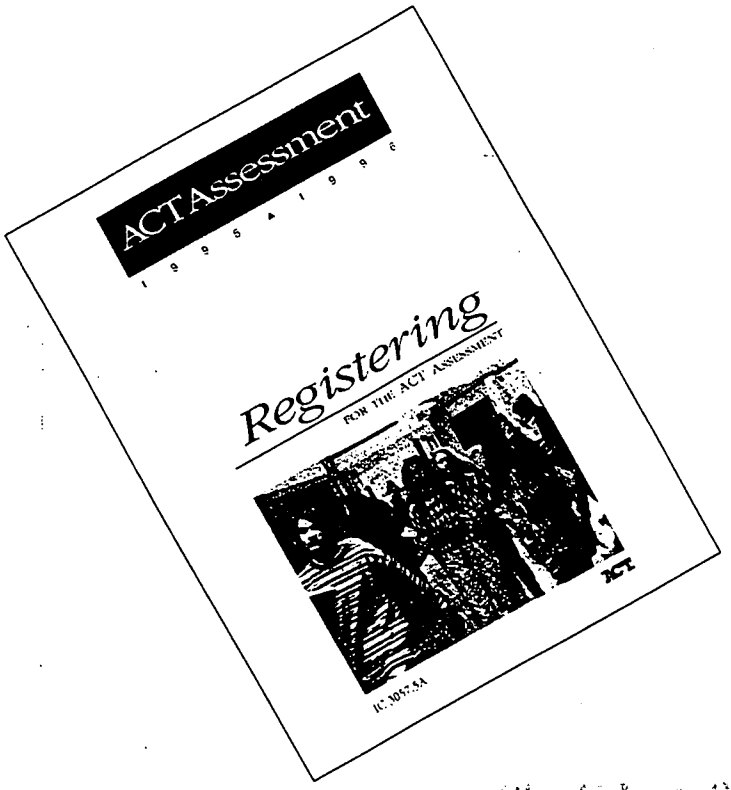
For more information about PLAN, see page 45 of this catalog or call 1-800/498-6065.

ACT Assessment Program (AAP)

The ACT Assessment, popularly called the "ACT," is a guidance, placement, and admissions program that helps students prepare, and postsecondary institutions plan, for the transition from high school to continuing education. The test serves as the final EPAS component for students who intend to pursue additional formal education after graduation.

Research has shown that one of the best indicators of how well students will do in college is based on their ability to perform the skills necessary for postsecondary coursework. The strength of the ACT Assessment is that it measures these skills in four curricular areas that are the major focus of academic instruction in most high schools and colleges. As a side benefit, the ACT provides schools with a final measure of the outcomes attained by their college-bound students. ACT results are accepted by nearly all postsecondary institutions across the country.

Grade Levels: 11 and 12



Program Description

The ACT Assessment is a secure instrument, offered only in carefully controlled settings, with most exams completed on one of five national test dates. The ACT includes four tests of educational development and other key components that aid the college planning process.

Achievement Tests

English	75 items	45 minutes
Mathematics	60 items	60 minutes
Reading	40 items	35 minutes
Science Reasoning	40 items	35 minutes

Additional Components

UNIACT Interest Inventory (90 items) – Helps students review personally relevant career options.

High School Course/Grade Information – Organizes and reports grades earned in students' high school courses to date.

Student Profile Section – Collects demographic information of importance to colleges.

Student Preparation Materials – Provides free information to help students prepare to take the ACT; sample tests are available for a fee.

Using Your ACT Assessment Results – Helps students understand and apply their ACT results.

Scoring and Reporting

To accommodate the wide range of uses for test results, ACT prepares a number of reports for each student who completes the ACT Assessment on a national test date. The documents include the Student Report, which provides an easily understood narrative summary of results; the High School Report, which helps counselors address the student's plans, needs, and goals; a College Report, which provides information to postsecondary institutions and agencies designated by the student; two score labels; and a Roster Report. A High School Profile Report, which presents statistical tables describing various characteristics of the students tested, is included if 30 or more students are tested at a school.

Preparation for the ACT

Many students are concerned about how they will score on the ACT and look for ways to improve their chances for favorable results. The best preparation for the ACT Assessment is to take a challenging sequence of courses in the core subject areas in which performance is measured on the tests. Schools and students looking for additional practice might consider the following resources.

– *Official Guide to the ACT Assessment,* published by Harcourt Brace. Written at ACT, this book contains accurate, reliable information, including previously used ACT tests. To order, contact Harcourt Brace at 1-800/543-1918.

– *"Time to ACT"* is a 35-minute color video that offers suggestions for effective test preparation and information about the content of the ACT tests.

– ACT's *Test Preparation Reference Manual for Teachers and Counselors* provides presentation graphics and instructions for a simulated test session.

– Sample copies of four previously used forms of the ACT Assessment, including sample answer documents and scoring instructions, are available for purchase from ACT.

– *Improving ACT Scores: Cognitive Skills Building and Test Familiarity,* published by the National Association of Secondary School Principals (NASSP), includes workbooks and computer software with "skill builder" exercises. To order, contact NASSP, 1904 Association Drive, Reston, VA 22091. Phone: 1-703/860-0200.

Additional Information and Ordering

For more information about the ACT Assessment or to order the ACT-published materials listed above, see page 45 of this catalog or call 1-800/498-6065.

The Contextual Learning EXCHANGE

The Contextual Learning Institute & Consortium Program (CLIC)
OREGON STATE UNIVERSITY SCHOOL OF EDUCATION

• Why do I have to learn this? •

September 1996
Issue #8

1995-96 Consortium Members

- **Benson High School**
  Robert O'Neill, *Principal*
- **Madison High School**
  Ron Hudson, *Principal*
- **Milwaukie High School**
  Joyce Henstrand, *Principal*
- **Oregon City High School**
  Sharon Rodgers, *Principal*
- **Reynolds High School**
  Steve Olczak, *Principal*

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Contextual Learning and A Model School-To-Work Program

Dear Colleague:

It was a joy to participate on the evening of August 9th in a Boeing Tech Prep Contextual Learning student completion ceremony. The ceremony was sponsored by the Oregon plant of the Boeing Company and led by David Bass, Boeing plant manager. A similar, and much larger, program, is also operated in the Seattle area. **This is a model school-to-work program utilizing contextual teaching methodologies.**

The Boeing Tech Prep Contextual Learning Program combines a high school and community college curriculum that integrates the academic and vocational, emphasizing contextual teaching and leading to an associate degree. The emphasis upon contextual teaching means the combining of subject-matter content with the context of application in the teaching-learning process. It is the aim of this program to prepare students for family wage technician jobs in the workplace, as well as for continued education that could lead to postsecondary degrees.

This program provides students with three progressive summer paid internships that are offered in between their 11th grade and college sophomore academic school years. The internship sessions are coordinated with the high schools and community colleges to ensure that the summer work-based internship experience complements the school-based contextual learning coursework in Math, Science, Communications, Economics and Career Preparation.

When a large and significant corporation like the Boeing Company throws weight and influence behind the Tech Prep Contextual Learning Program, it will help to institutionalize this exemplary practice with a balanced emphasis upon the school and work experience.

What follows in this issue of our Contextual Learning Exchange are some high school teacher thoughts about contextual teaching and learning.

Dale Parnell
Professor and Project Director

RESPONSES ABOUT CONTEXTUAL LEARNING FROM FACULTY INTERVIEWS DURING THE 1996 CLIC INSTITUTE

1. What have you learned about contextual teaching during the 1995-96 school year?

a. The contextual teaching approach makes learning more **interesting** and **more practical** for all students.

b. Contextual teaching **demands commitment and energy**. It is challenging and **time consuming** to develop, teach, and refine contextual lessons. However, the payoff is worth it. Active and involved students present fewer attendance and discipline problems. When students see an application for subject-matter content, they are willing to commit to learning. The students and I had fun this year and we learned a lot.

c. This is the direction education must follow. Contextual teaching is the **vehicle that allows us to provide meaningful experiences** for high school students. It is not just about content, it instead is about students learning about themselves and, how they learn as individuals.

d. We (I) **learned more about the process of good teaching** this year that at any time in my career.

2. What changes would you make as a result of what you have learned?

a. I would provide more individual opportunities for students to succeed! - **less lecture** - less tests - fewer hand-outs - fewer worksheets.

b. The biggest change would be to even **take contextual learning to a higher level.**

c. I will **further develop and refine lessons** from the contextual communications 2000 modules. During the 1996-97 school year, I plan to begin projects earlier in the year so there is adequate time for students to complete and evaluate their own products.

d. I plan to completely **revamp my chemistry curriculum**. Everything I will cover in Chemistry next year will be focusing on relevance in terms of student's lives!! It is lots of work - but worth every minute!

e. **I intend to increase the contextual activities and concepts in all my classes.** I hope to set an example for this type of teaching/learning in my building/district and be more aggressive about implementing contextual learning techniques in other areas of the school.

3. Based upon what you have learned, what would the ideal high school curriculum and instructional processes be like?

a. The ideal high school curriculum should become an **integrated-contextual learning experience** involving **teacher teams** from all disciplines.

b. I would like to see three or four schools-within-a-school in any large high school. Teachers would be encouraged to work in teams. Teaching would be contextual and the curriculum **thematic**. **Time** would be provided for teachers to reflect together on the contextual teaching pedagogy.

c. The curriculum would not be content driven. Schools should employ **integrated thematic approaches (student generated projects)** that allow students the opportunity to learn meaningful materials that have **useful application in their lives.**

d. Across the board, all curriculum/disciplines would be taught/**delivered** contextually in a **multidisciplinary fashion and by teams** of instructors. Teachers cannot continue to try to operate in a vacuum and lose 30% to 40% of our clients in the process.

4. What are some of your recommendations for the future of contextual teaching?

a. **Continue to promote and push the contextual teaching and learning process.** All new ideas and concepts are not widely accepted initially, so we cannot become discouraged and go back to the old ways of rote learning.

b. We just have to **keep pushing forward.** We must continue to show successes and failures in the contextual learning to others (nonbelievers).

c. Members of our OSU Contextual Learning Institute and Consortium need to be **models of good practice** and encourage students to talk about their contextual learning classes. . . If other teachers hear that good things are happening in someone else's room, they may want to adopt such practices for themselves.

d. School boards and administrators must make a **commitment** to providing leadership for contextual teaching to be successful. . . **It must become a high-level administrative priority.**

e. We must incorporate the **integration** of academics and vocational into the model because that is the most effective school setting in which to be contextual.

5. Comments:

a. There is no question that contextual learning is the **key to helping the "neglected majority"** prepare for a successful role in society.

b. I really appreciate having had the **resources** to develop contextual lessons. I believe the Contextual Learning Institute and Consortium has **greatly improved my practice** and helped students to enjoy learning.

c. Thanks for creating the opportunity for me to have, what I perceive, the most **positive growth environment for me as an educator.** I now have my eyes "wide-open" and am empowered to make my classroom nothing short of awesome.

d. Thank you for the **opportunity to participate** in this contextual learning research project. I have thoroughly enjoyed the opportunities to try **new things, to work collaboratively with my colleagues and to feel validated in my role as a life-long learner** which I now apply in my classroom.

CLIC Advisory Committee Members

Wayne Haverson, *Director*
School of Education
Oregon State University

Bruce Harter, *Superintendent*
Corvallis School District 509J

Gilbert James, *Principal*
Sprague High School

Judy Lindley, *Marketing Instructor*
Owen Sabin Occupational Skills Center

Greg Marks, *Math and Science Instructor*
McNary High School
Salem Public Schools

Pamela Matthews, *Assistant Professor*
American University, Washington, DC

Don McInnis, *Executive Vice President*
Portland Community College

Ben Schellenberg, *Superintendent Emeritus*
North Clackamas School District

Ed Smith, *Director of Curriculum*
Reynolds School District

Don Johnson, *Dean of Instruction*
Cascade Campus
Portland Community College

CLIC Goes International

Wendy Heatley, a visiting Fulbright Scholar from Australia, has joined the CLIC project team for five months as a research associate. Wendy is employed as executive liaison Officer at the Tasmanian Department of Vocational Education and Training, in a policy development role. The department runs four institutes of TAFE and Further Education (TAFE) and an Institute of Adult Education, which have similar functions to community colleges.

Wendy is interested in finding out about innovative practices in vocational education in the United States, particularly in the Tech Prep Contextual Learning Program. She intends to investigate the application of this program to Tasmania.

As a research associate for the CLIC Project, Wendy will be researching on the connections between contextual learning and brain-based learning (in itself a contextual exercise!). The CLIC teams have been demonstrating how contextual learning works in practice and Wendy will be exploring recent developments in brain-based learning reseach from disciplines such as psychology, neuroscience and linguistics, to see if there is a brain-based reason why it works.

Wendy will be working with the CLIC Project until the end of Fall Quarter in December and is looking forward to meeting CLIC members at the Program Evaluation Session on October 3, 1996 at the Oregon Trail Interpretive Center in Oregon City.

For information contact: Wendy Heatley at (541)737-4190 or e-mail her at heatley@ucs.orst.edu

Steve Olczak, New Principal at Reynolds High School

Welcome to Steve Olczak, the newest leader in our CLIC Project. Steve comes to Reynolds High School from Southern Maryland where he served as a high school teacher and principal and district supervisor of career and technology education. Principal Olczak is well-known across the nation for his leadership in establishing the tech prep contextual learning program in the State of Maryland. It is a joy to have him join our OSU CLIC team.

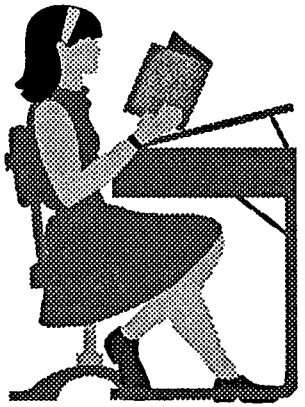
CLIC Date to Remember

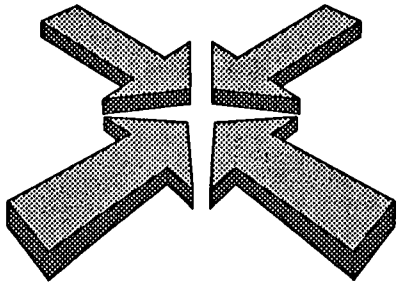
October 3, 1996 - 4:00 P.M. CLIC Project Evaluation Dinner Meeting
Oregon Trail Interpretive Center
1726 Washington Street, Oregon City

CONTEXTUAL LEARNING INSTITUTE and CONSORTIUM

PURPOSE

- TRAIN TEACHERS
- TEACH STUDENTS
- MEASURE RESULTS
- EXPAND USE





RESULTS
of
TEACHER TRAINING

SUMMER INSTITUTE

- TEACHERS SAID IT WAS A SUCCESS
  - UNDERSTOOD METHODOLOGY BETTER
  - VALUED WORKING IN "TEAMS" (SCHOOL MORE THAN DISCIPLINE)
- CURRICULUM DEVELOPMENT A CHALLENGE - BUT INSTITUTE HELPED
- ANXIOUS TO START

INITIAL TEACHER OPINIONS

- POSITIVE TOWARD METHODOLOGY
- CONTEXTUAL APPROACH BENEFITS ALL

TEACHING STUDENTS

- CONTEXTUAL METHODOLOGY USED
  - 32 TEACHERS
  - 350 STUDENTS
  - 15 SUBJECT AREAS

WHAT TEACHER SAW

- STUDENT:
  - DISCIPLINE PROBLEMS, ABSENTEEISM & TARDINESS DOWN
  - POSITIVE SOCIAL INTERACTION
  - ACCEPTANCE OF RESPONSIBILITY
  - LEARNED MORE (GIFTED , AVERAGE & LESS GIFTED)

WHAT TEACHERS FELT

- HARD WORK
- PEERS DID NOT ACCEPT APPROACH
- NEEDED MORE SUPPORT
- NEEDED MORE TIME TO PERFECT
- ARE GOING TO KEEP USING TECHNIQUE

POST PROJECT OPINIONS

- MORE ENTHUSIASTIC
- STUDENTS:
  - TRIED HARDER
  - BEHAVED BETTER
  - LEARNED MORE
  - HAD MORE FUN
- NEEDED MORE SUPPORT

ALL STUDENT SAID

- LEARN BETTER IF THEY KNOW REASON AND APPLY KNOWLEDGE & SKILLS
- ENJOYED CONTEXTUAL LEARNING BUT DID NOT KNOW IF IT WAS BETTER

SOME STUDENTS SAID

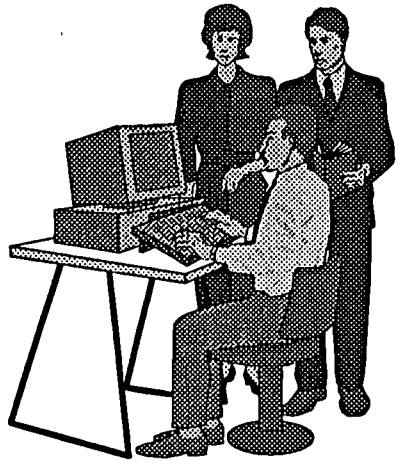
- SLIGHTLY MORE POSITIVE IF FRESHMAN ARE NOT INCLUDED
- HIGH PERFORMERS FELT THEY LEARNED MORE AND WANTED TO SEE MORE USE OF CONTEXTUAL CLASSES
- BLOCK STUDENTS GAVE HIGHEST MARKS TO PROJECT

HOW STUDENTS DID

- REALLY DON'T KNOW
  - DISTRIBUTION OF GRADE LEVEL AND MULTIPLE DISCIPLINES PRECLUDED MEANINGFUL ANALYSIS BY ACT
- ON AVERAGE CONTEXTUAL STUDENTS DID *"AS WELL AS OTHERS"*
- BLOCK DID BETTER THAN AVERAGE

OTHER STUFF

- SCHOOL TEAMS NEED MORE TIME TOGETHER
- INTER SCHOOL DISCIPLINE TEAMS NOT EFFECTIVE
- LACK ELECTRONIC TIES



ORGANIZATION

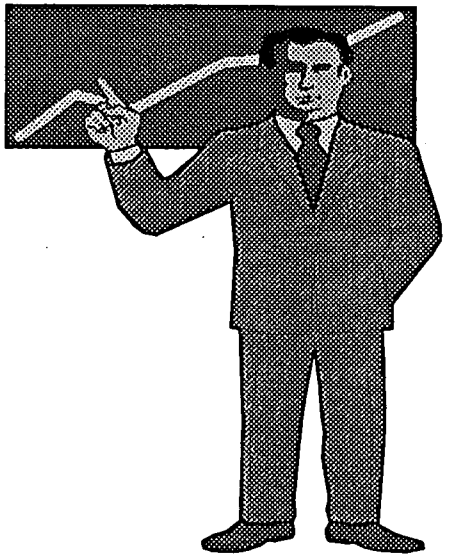
- SUMMER INSTITUTE AND INVESTIGATOR CONTACT - EXCELLENT
- PRINCIPAL HEADING SCHOOL TEAM DID NOT WORK
  - NEED "COORDINATOR" TO FACILITATE
- DIVERSITY LIMITED EVALUATION

REPORTS

- END OF PROJECT REPORTS VERY POSITIVE
- POST SCHOOL WORKSHOP INDICATED ENTHUSIASM FOR TECHNIQUE
- PRINCIPALS
  - WANT TO CONTINUE -
  - DID NOT HAVE TIME TO MANAGE

EVALUATORS OBSERVATIONS

- NEED MORE TEACHING TIME
- DESIGN NEEDS TO BE MORE STRUCTURED FOR EVALUATION
- REQUIRES TEAM COORDINATOR



MISUNDERSTANDING

- CONTEXTUAL METHODOLOGY IS NOT TEACHING DIFFERENT KNOWLEDGE AND SKILLS BUT TEACHING KNOWLEDGE AND SKILLS DIFFERENTLY

MY CONCLUSIONS

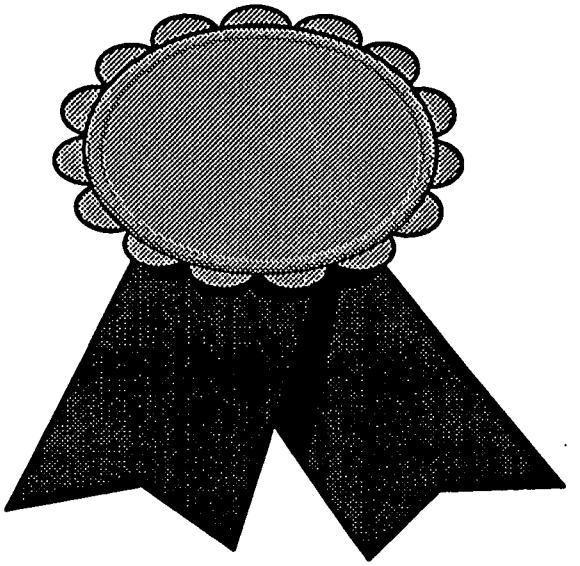
- PROJECT DID WHAT IT SET OUT TO DO:
  - TRAINED TEACHERS
  - TAUGHT STUDENTS
  - MEASURED RESULTS
  - EXPANDED USE

RESULTS AS WE KNOW THEM

- TEACHERS FELT THEY HAD POSITIVE RESULTS IN THE CLASSROOM
- STUDENTS FELT THEY ENJOYED CLASSES AND *EVEN MAY HAVE LEARNED MORE*
- ALL STUDENTS BENEFIT
- NEED TO BRING "NAY SAYERS" ABOARD

BOTTOM LINE

- YOU SHOWED CONTEXTUAL METHODOLOGY HAS AN IMPORTANT PLACE IN THE TEACHING / LEARNING PRACTICES



RESULTS AS WE KNOW THEM

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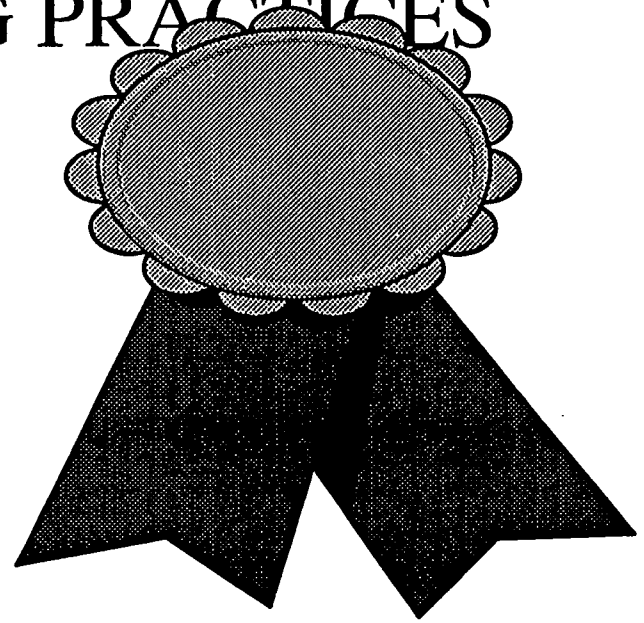

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