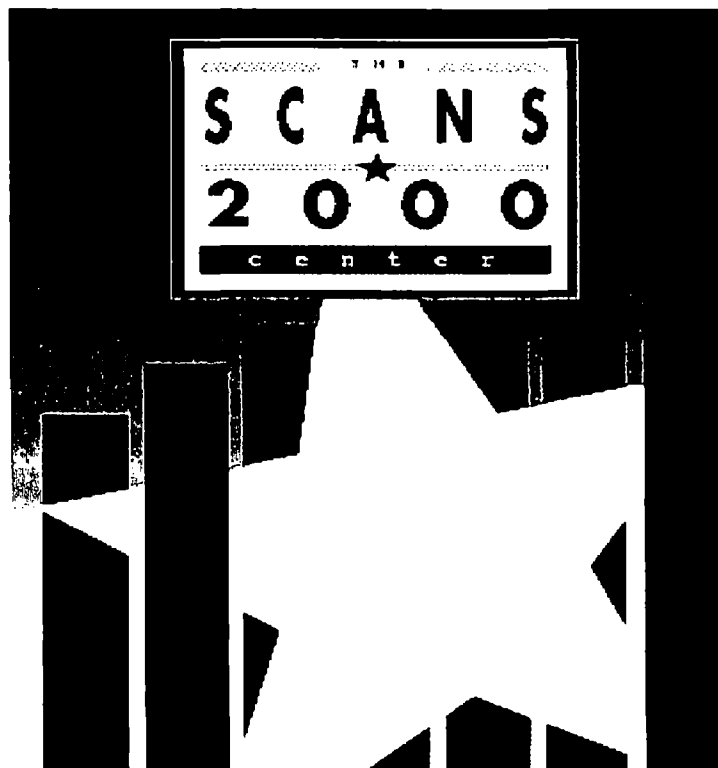


The Career Transcript System

JOHNS HOPKINS

U N I V E R S I T Y



The SCANS Skills

Workplace Competencies

Resources: Allocate time, money, material, staff and space

Interpersonal: Work on teams, teach others, interact positively with customers

Information: Collect, evaluate, interpret, and explain information to co-workers, peers, or customers

Systems: Understand social organizations, and technological systems, monitor and correct performance, design or improve systems

Technology: Select equipment and tools, apply technology to specific tasks, maintain and troubleshoot equipment

Foundation Skills

Basic: Reading, writing, mathematics, and arithmetic

Thinking: learn, reason, think creatively, solve problems

Personal Qualities: Responsibility, self-management, self-esteem, sociability, integrity

Funding to develop the Career Transcript System provided through grants from the National Science Foundation and the US Departments of Labor and Education. It is currently being piloted in Baltimore City Public High Schools and in community colleges across the country.

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SCANS
2000



Career Transcript System

JOHNS HOPKINS
UNIVERSITY

The Career Transcript System

The SCANS 2000 Center at the Johns Hopkins University invites you to participate in its Career Transcript System. Almost a decade in the making, this five-part system offers educational institutions a way to assure employers that its graduates are ready for a successful career. The System uses a "Career Transcript," documenting students' growing ability to work in teams; solve complex problems; understand what's needed for quality; allocate resources; acquire, evaluate and communicate information; understand systems; and use technology.

The word *transcript*, rather than certificate, is used to connote the idea of life-long learning – a record of continuous improvement. The record applies to all people who are in or will enter the workforce. It starts with those entering the workforce for the first time — high school students and Welfare-to-Work participants, can be used by community college students earning an Associate degree, and extends to college graduates returning for professional development mid-career. It will be completed only at retirement.

Used synergistically, the five components of the System can provide your institution with an innovative way to blend academic and career education. This departs from standard methods in both fields – being more relevant than traditional academic education and much broader than traditional vocational courses. The academic institution's top administrators must commit to this transformation of teaching and learning if it is to succeed. Faculty will not make the needed change unless leaders with vision give them continuous support.

SCANS is the acronym for the Department of Labor Secretary's Commission on Achieving Necessary Skills. In 1991, the commission brought together employers, educators and others interested in developing workers ready for the 21st Century to document the skills those workers would need to succeed in the changing economy.

1 Professional Development for Faculty Your faculty learn to implement project-based, collaborative learning in their classrooms through face-to-face and Internet-based training & communication.

2 Professional Development for Workplace Liaisons Training your staff to become industry experts is key. They help work supervisors develop learning rich workplaces by connecting the employer and the college.

3 Teaching Tools Students use eight CD-ROM modules which challenge them to solve complex, real-world problems through role-play as employees in high-demand industries.

The Five Components

4 Assessment Strategies The System provides a way to *assess, document, and certify* skill development over time through standardized, statistically reliable, assessments and a subjective assessment using a SCANS-based rubric. This makes it possible to assess presentations, solving problems, working in teams, and other process skills that are usually hard to assess.

5 Documentation A Community Human Resource Database (CHRD) houses data which results in the Career Transcript showing a person's competency levels in the SCANS skills on the job, in the workplace, and through life experience.

THE CTS

Career Transcript System

SCANS 2000 Center
Johns Hopkins University

Vice President's Summit

- **“Achieving the Potential of the Workforce Investment Act”**
- **“New Roles for Community Colleges”**
- **Labor-Management Partnerships, Small Business, Laid-Off Workers,**
- **Workplace-Based Training, Technology and Workplace Skills**

Gore's Vision Statement

Leaving No American Behind

- **21st Century Skills for All**
- **Life-long Learning**

What Is The CTS?

- **An Internet-based Data Base of Individuals' Career Skills (Interpersonal, Analytical, Technical) that are Certified by a Community College, One-stop, or Other Community Institution.**
- **Includes Assessment Devices, Teaching Materials, Faculty Development, and Supervisor Training**

Who Wants the CTS?

- **Employers -**
 - SCANS, Focus Groups, Indian River, SHRM
 - Irrelevant Academic Transcript, Unreliable Resume, Uncommunicative Previous Employer
- **Unions**
 - Joint Labor Management Programs, Morty Bahr: “Guarantee Employability, Not Employment”
- **Innovative Educators, AACCC**

What Are the Goals of the CTS?

- **Increase the Acquisition of Career Competencies by Students of All Ages - *Is it on the Test? Will it Help My Career?***
- **Increase the Acquisition of Career Competencies of Workers - *Does My (Current or Future) Boss Know and Care?***
- **Increase the Competitiveness and Productivity of American Firms - *Do my employees have the skills I need to remain competitive?***

Why the CTS?

- **Increase Skills to Prevent Inflation with Productivity Growth, Not Unemployment**
- **Increase Worker Flexibility by Providing Him/Her With a Believable Record of Competencies**
- **Increase Competitiveness in a Knowledge Economy by Giving Firms Reliable Data on Their Human Resources**

What Does The CTS Do?

The Career Transcript System Provides:

- **Students and Workers with a Certified Record of Their Career Skills**
- **Employers with a Means to Evaluate Current Workers and Potential New Hires**
- **Educators with a Way to Document the Acquisition of Career Skills**
- **Supervisors with a Way to Document Employee Growth and Development**

When Is the CTS?

Current (Incumbent) Workers

- **Welfare-to-Work**

- 1st Pilots: Catonsville MD, Indian River FL, Portland ME - September 1999
- 2nd Pilots: 6-7 Others - June 2000 (DoL Grant)

- **Members of Joint Union Management Training Programs**

- 1st pre-pilots - Maybe 1/1/2000

When Is the CTS?

Students

- **Community College Students - AAS Level**
 - Pilot Colleges: Hagerstown MD, Central Carolina SC, Sinclair OH, Ivy Tech IN, Burlington NJ - June 1999
 - 5-6 Others - Maybe June 2000 (NSF Grants)
- **High School Students - Senior Level**
 - Baltimore MD - June 2000 (ED Grant)

What Could be Done by June 2000?

- **Nationwide Job Corps**
- **2-3 State Systems for All Groups**

Teaching SCANS: A Case in Point

Characteristics of an Effective Case Study

Elizabeth Mathias, R.N., Ed.D.

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President, Frederick Community College

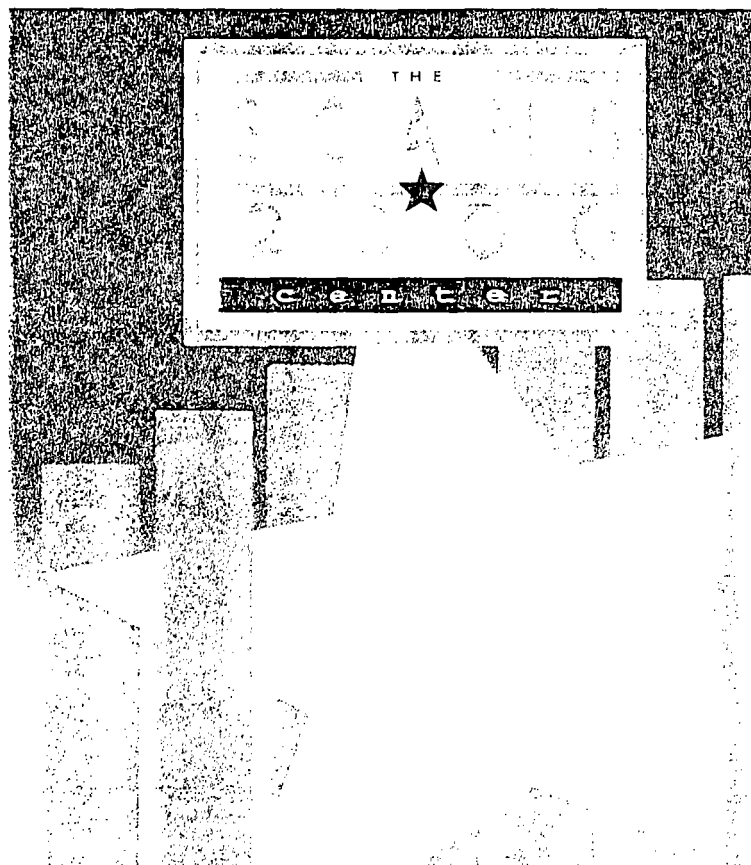
Frederick, Maryland

SCENARIO: Unhappy customers buying a call-screening system manufactured by Northeast Electronics are complaining about the high number of failures. At the same time, rejected products taken off the production line are crippling company profits. There is a sense of impending doom among the managers. Why and where are the failures occurring?

It's your job as the new student intern to find the root problem and recommend solutions. There are four production lines running two shifts and reams of data to sift through. There are lots of reasons why these failures may be occurring; many managers you visit point a finger at someone else. But, you have some useful tutorials available to help you and some of the people are really helpful. Good luck!

The case study is presented on CD-ROM. This format encourages students to sequence their own learning and presents them with large quantities of data, strong graphics, and realistic portrayals of people with whom they might be working. This scenario comes from one of five CD-ROM case studies developed jointly by SCANS 2000 at the Johns Hopkins University, multidiscipline faculty teams from five colleges* across the nation, and a multimedia production company. The National Science Foundation Advanced Technological Education (NSF/ATE) program partially supported this effort. Find more information at: www.scans.jhu.edu.

Our goal was to create teaching tools that educators could use to help their students master the SCANS (generic process) skills. SCANS is an acronym for the *Secretary's Commission on Achieving Necessary Skills*. The Commission, chaired by Arnold Packer, now director of SCANS/2000, articulated the generic process skills that led to success in building the pyramids, developing the cottage industries of the Middle Ages, running Feudal estates smoothly, managing the factories of the Industrial Revolution, and now driving our knowledge-based companies. We believed faculty needed a curricular tool to teach them because SCANS skills are not learned well in lectures nor are they



* Partner Community Colleges included: Hagerstown Community College in Maryland, South Seattle Community College in Washington, Modesto Junior College in California, the New Hampshire Technical College System, and Northern Essex Community College in Massachusetts.

(“Case Study” from page 4)

assessed well using paper and pencil tests.

When we tested the case studies in college classrooms, students reported learning new communication and teamwork skills and that the exercise helped them polish their presentation skills. Students pointed to gains in critical thinking and decision making, evaluating different courses of action within a larger context, working in teams, learning to gather and analyze information, and giving presentations to describe their findings and defend their decisions. Over 82% of the participating students reported that the module taught concepts or skills that they would not otherwise have learned in the class.

■ Characteristics of Effective Case Studies

Case studies must be factually correct, visually appealing, meet worthwhile specified learning goals, and be presented at a level appropriate for those using them. Beyond that, **effective case studies** should: present relevant problems and represent authentic experiences; be taught using collaborative learning; draw knowledge and applications from many disciplines; require sustained thought and activity; add new dimensions to assessment of the products and processes of learning; and be supported by the use of technology.

Present relevant problems: The activities in our case study modules simulate the work done by a large number of American workers and involve solving problems students know something about. Perceiving a future “pay off” for time invested makes good sense to today’s con-



Pat Stanley, Ed.D.

sumer oriented student. One student commented that as a technician, he may never make the kinds of decisions that affect the profitability of virtual “EVI Motors” however, he now understood “how managers think.”

Consider too, activities mirroring workplace requirements create good resume entries and give students a competitive advantage when they transition to the workplace. How often do we hear that employers want experienced employees? Documentation of successful problem solving experiences like those found in case studies can show employers that a student “has experience.” Here are one employer’s thoughts after he observed students’ presentations. He said:

“As a student in the traditional classroom, I had great difficulty anticipating how the skills I learned in school would be used in business... Often times, I would leave a classroom or finish an assignment asking myself, ‘What am I going to do with that?’...Post



Elizabeth Mathias, R.N., Ed.D.

graduation, I faced a huge learning curve. I am convinced that future participants in the SCANS/2000 program will not face the situation I described above.”

In our current SCANS/2000 project, we are taking the next steps to create and test assessment instruments that enable teachers to document and record the competencies students master. For “life-long” learners, growing lists of accomplishments documented on Career Transcripts will supplement those academic transcripts.

Represent an authentic experience: By this, we mean case studies are, like life, “messy” and with more than one “right” answer. Though this feature is related to “Relevant Problems”, this characteristic can be considered as both a feature and a strategy. Think about how often life’s problems present themselves with all the variables so clearly drawn that you move, straight as an arrow, to one and only one answer? The answer is “never” and for that reason, we aimed for authentic, real world case studies.

We created "authentic" by constructing scenarios that present data in such a way that students must search for information; and, maybe pieces are missing. Data must be ambiguous enough to build knowledge yet not so amorphous as to totally confuse or frustrate students. Present students with questions to analyze and answer. In fact, one reviewer suggested that students should define the questions. We did not go that far.

In making the scenarios authentic, we found that the design was heavily front-loaded. Scenarios, scripts, and graphics were thoughtfully created in order to anticipate the many pathways that our future students might take when navigating through the problem. We devised working papers to serve as a communication vehicle among team members. First, we agreed on the real world problem that the student should solve. It had to be a problem that had enough academic content to support the student research and to justify placing the module within in particular identified discipline and course. Then, we agreed on specific academic content and which SCANS skills: Each module addressed one or two primary SCANS skills. However, we found that complex problems draw from and integrate several disciplines (like real problems do) and that students learned many SCANS skills. Faculty found that students needed an array of academic knowledge to solve the problems. For example, students solving a problem about where to locate a coal burning smokestack in a physics course also needed to know some mathematics; and, to prepare a report and give a presentation using technology, they needed word processing and computer skills.

The SCANS* Know-How

The Secretary's Commission on Achieving Necessary Skills identified three foundation skills and personal qualities and five workplace competencies that are needed for solid job performance. These are:

FOUNDATION SKILLS: Competent Workers in the high-performance workplace need:

- *Basic Skills:* Reading, writing, arithmetic and mathematics, speaking and listening.
- *Thinking Skill:* The ability to learn, to reason, to think creatively, to make decisions, and to solve problems.
- *Personal Qualities:* Individual responsibility and self-management, sociability and integrity.

WORKPLACE COMPETENCIES: Effective workers can productively use:

- *Resources:* They know how to allocate time, money, materials, space, and staff.
- *Interpersonal Skills:* They can work on teams, teach others, serve customers, negotiate, and work well with people from culturally diverse backgrounds.
- *Information:* They can acquire and evaluate data, organize and maintain files, interpret and communicate, and use computers to process information.
- *Systems:* They understand social, organizational, and technological systems; they can monitor and correct performance, and they can design or improve systems.
- *Technology:* They can select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot equipment.

*SCANS: The Secretary's Commission on Achieving Necessary Skills. Source: *Learning a Living: A Blueprint for High Performance*. United States Dept. of Labor, April 1992.

We wrote the story, sometimes referring to it as our "Libretto." From the story came the characters and the dialogue. We developed our characters and housed them, usually in offices. We figured out what their offices looked like and what data the student needed from them, how it might look, and where students might realistically find it.

And we had to decide how students could interview and gather information from the characters. We decided which tasks should be done "on-line" and which "off-line."

This creative process required a team effort. Working from a real life problem was helpful yet, plotting out the entire exercise and creating and placing data and materials

"Faculty found that when case studies are 'messy' and when there are many right answers, they must teach differently. They became learning facilitators—a change that was a difficult transition for many."

was demanding. Industry partners were invaluable as advisors. We had numerous dialogues with faculty about what might and might not work. The media producers made programming and graphics suggestions. What we produced was realistic and authentic.

We found that not everyone liked the case studies for a variety of reasons. Students found they had to lis-

ten carefully and analyze. Others did not like working in teams. The case study took work. One student said: "I worked my b— off but I really learned something."

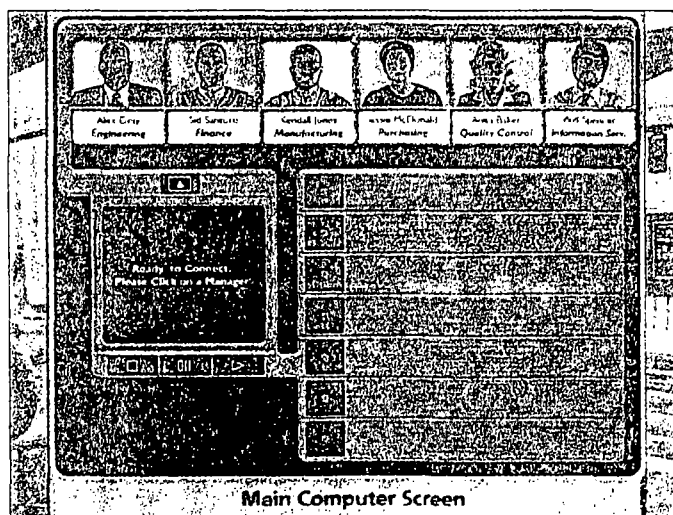
Faculty found that when case studies are "messy" and when there are many right answers, they must teach differently. They became learning facilitators—a change that was a difficult transition for many. Some faculty accustomed to classroom control and content delivery rejected using the modules and left the project. Others found ways to deal with change. One faculty member said: "As a teacher, I needed to become comfortable saying 'I don't know' when asked a question." Another faculty member helped students deal with ambiguity by assuming various roles of the characters portrayed on the CD. Students went to him to ask questions about how a particular character might be thinking. Another teacher simply told the students to make assumptions and work from those.

Indeed, ambiguity becomes a useful teaching/learning tool. Faculty required students to make assumptions and defend decisions. Students reported that they really learned when required to defend decisions and persuade others. These processes forced students to clarify their thinking and hone their presentation skills, skills important in many workplaces.

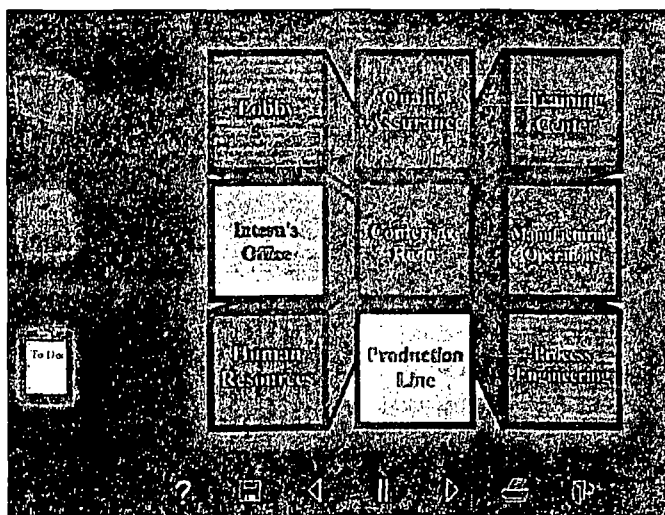
Be taught using collaborative learning: Students functioned in teams with structured roles and assignments. This peer contact had many benefits such as increased motivation, interest, and even, we believe, lower course attrition and higher grades. Jerald Schutte in *"Virtual Teaching in Higher Education: The New Intellectual Superhighway or Just Another Traffic Jam?"* reported 20% higher grades in virtual class versus a traditional class. The virtual class had significantly higher perceived peer contact and time spent on class work. He attributes the differences to the amount of peer contact.

Sample Screens from SCAN 2000

Main Computer Screen



Menu



Collaborative learning is difficult to implement in community college classrooms because most students are tightly scheduled around classes, studying, work and family responsibilities. Some faculty placed the onus on the student teams to solve their scheduling difficulties and they generally rose to the occasion. One such motivated team met at the bedside of a student temporarily on physician ordered bed rest.

Real challenges exist in implementing collaborative learning in community college classrooms such as how do you: motivate the unmotivated student; handle depletion of a team through attrition; establish personal and team milestones; and, grade individual student performance in a team effort? We now devote a substantial segment of our professional development programs to helping faculty learn a repertoire of strategies. The segment is an interactive session where faculty can share their successes too.

Faculty members solved problems too. A Hagerstown Community College faculty member developed a peer evaluation instrument so that students can evaluate their own and peers' performance. He knew the instrument worked when he found high levels of consistency between how the students rated each other and how he evaluated them.

Draw knowledge and applications from many academic disciplines: People need to integrate knowledge to solve complex problems in the real world where intuition and "gut feelings" enter into authentic problem solving. This became evident once we pinned down the case study problem. While we originally planned to integrate case studies into specific discipline courses, the reality became that the case studies could fit in many courses. The discipline "home" suddenly became far less important both to us and to faculty when the blending and integration of disciplines flowed directly out of the complex problem. At the same

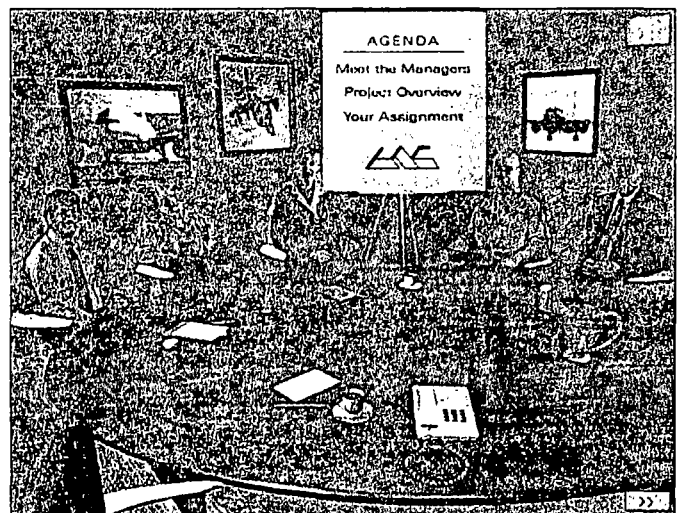
time, the generic nature of the skills needed to solve the problem became readily apparent.

Require sustained thought and activity: We intended that the module be integrated into courses commonly taken as part of a technology curriculum and be taught in a nine-hour block of time. Originally, faculty anticipated concentrating the case study module into nine hours of class time over two or three weeks. That didn't turn out to be the case. Faculty found that most of the modules worked best when they were spread across most of their course and offered in smaller increments per week. This approach gave students the time they needed to work together to research and solve the problems and to put together their report and presentations. First, the instructor introduced the CD to the students and then the students spent time just going through the CD. Some students thought it was just a fun game; they soon realized that serious information was being presented in a new way. The more they

Lobby



Conference Room



worked on the module and the longer they talked with their peers about the problem, the more most students became engaged. In fact, a physics professor at Northern Essex Community College tells of being hailed in the cafeteria and while walking across campus. It seemed that wherever his students were, they were talking about their problem. He claims students worked during their Holiday.

Sustained activity seemed to encourage creative problem solving. We observed students inventing tools to demonstrate their problem solutions, finding solutions not previously considered by the faculty creators, and getting involved doing in-depth research in areas far removed from the discipline base.

Add new dimensions to assessment of the products and processes of learning: We found faculty could say more about what students learned when they observed the students behaviors when solving the problems. Typically, the course grade has the most meaning to the

academic establishment. Now, faculty can attest to the mastery of many new skills or skills not normally learned in their class. And, because solving case study problems is active learning, students are more likely to remember learning reinforced through problem solving applications. We believe our students will remember what they learned in virtual "Pleasantwood" long after they complete their academic degree.

Consider too that the skills the student demonstrated have meaning outside of academe. Since these skills such as decision making and problem solving, working in teams etc. are in demand, descriptions of the tasks accomplished and the products, and the competencies learned can be meaningfully reported to say, future employers.

One employer who observed student presentations had this to say:

"What I observed was a group of students that were both excited and motivated. The interactive CD that was used

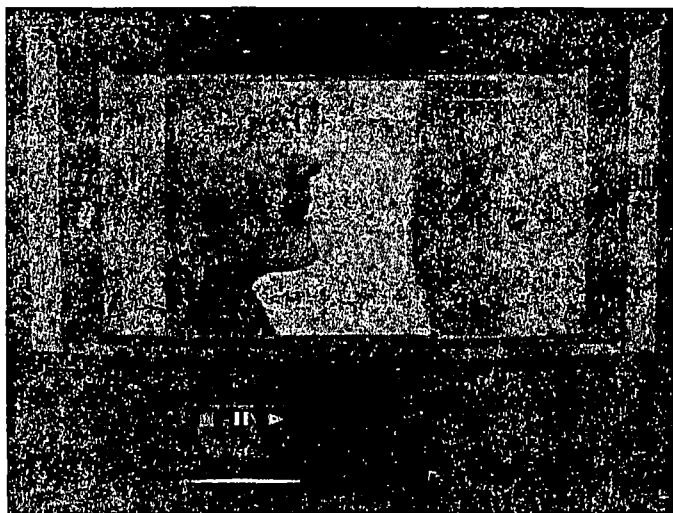
by this class was one of the most innovative teaching tools I have ever seen. It required them to perform all the tasks necessary to analyze a problem and recommend a proper solution. It required both teamwork and problem solving skills, traits that we in the business community are looking for in our future employees. Finally, a teaching tool that allows the student to apply their academic knowledge to real world situations."

This brings us back to the concept of a Career Transcript, a brief and academically verified version of a resume. Focus groups with employers verified that these skills are important and affirmed that documenting these activities and skills are highly desired.

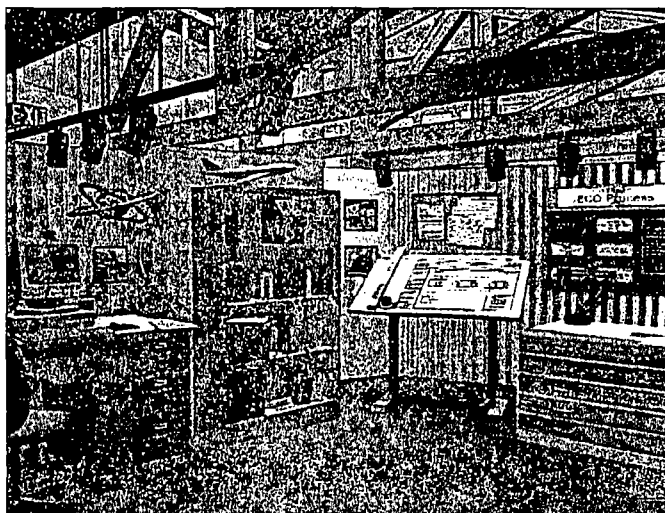
Be supported by the use of technology: Using modern work tools to do many of the tasks has serendipitous effects for students such as sometimes making them work harder and learn more. According

Sample Screens from SCAN 2000

Theatre



Office



to Kent L. Norman, in An Introduction to Electronic Education and HyperCourseware.

"Students have an uncanny ability and inherent motivation to adjust their effort to receive the desired grade. If the class is hard, they work harder to achieve the grade that they want. If the class is easy, they may do only as much as is necessary to achieve the desired grade... Instructional technology may make learning easier, but that does not necessarily mean that grades will improve. Alternatively, instructional technology may actually confuse and confound students to such a degree that they over-compensate by increased study or use of traditional learning methods."

We observed students working harder and mastering technology while they solved problems. Throughout the collaborative work, students were observed teaching peers particularly about computer use. And, students expressed pleasure with their new abilities. One team helped debug some of the CD-ROM software while another created a WEB site.

■ How do you adapt case study features to teach technical content?

We used a variety of approaches that included:

- 1) Embedded the case study within technical content as currently being taught in a traditional course. We used the case study for students to apply technical content.
- 2) Embedded the technical content within the case study. We placed videos, interactive tutorials, and technical briefs and "textbooks" on our CD-ROMs. The medium interactively enriches technical content teaching. A few examples of our tutorials include: linear programming; Statistical Process Control tools; statistics; simulated flow-charting after students watched a video of a manufacturing process.
- 3) Used a technology medium (CD-ROMs) to help students increase their computer skills. Students also used the computer to gather information off the Internet. They used computers when they delivered presentations and invented new technical tools.
- 4) Used paper-based materials to teach technical content by packaging our modules with Teacher Guides that contain additional handouts. A draft Guide can be found at: <http://192.233.237.47/jhu/manual.html> and <http://192.233.237.47/jhu/tips.html>. ■

■ References Consulted

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Schutte, Jerald. Virtual Teaching in Higher Education: The New Intellectual Superhighway or Just Another Traffic Jam <http://www.csun.edu/sociology/virexp.htm>

The South East Advanced Technological Education Consortium (SEATEC) requested this paper presented at Vanderbilt University January, 1999. SEATEC, an Advanced Technological Education project funded through the National Science Foundation, is a consortium whose goals are to provide national leadership for the development and implementation of case-based instruction for technological education. In the next issue, the author will address faculty development and student assessment models. Elizabeth Mathias, Ed.D. is Co-Principal Investigator for an NSF/ATE SCANS 2000 project at Johns Hopkins University and Hagerstown Community College.

Partial support for this work was provided by the National Science Foundation: Advanced Technological Education Program through grant #DUE#9850249.





SCANS Transcript for

Sample Tester

SSN# 549333333

As of: 7/14/99

SCANS Skills			
Resources	Interpersonal Skills	Information	Systems
Technology	Thinking Skills	Personal Qualities	

SCANS Skill	Date Test Taken	Source of Information	Performance
TOP			
Allocates Time			
	7/14/99	AES International Skill Coach Assessment	For an Entry Level Employee, prepares and organizes multiple schedules, manages timelines, and recommends timeline adjustments, with 80-89 percent proficiency.
Allocates Materials			
	7/14/99	AES International Skill Coach Assessment	For an Entry Level Employee, orders and maintains inventory, and monitors safe and efficient utilization of materials, with 70-79 percent proficiency.
Allocates Space			
	6/25/99	Nurses Aid, Johns Hopkins Hospital	Noticed that the office arrangement impeded patient traffic flow in doctor's office and rearranged the furniture to accomodate a better flow
TOP			
Teamwork			
	1/23/98	AccuVision WSS	For Actively acknowledges and recognizes the positive work efforts and accomplishments of team members this participant performs acceptably.
General Interpersonal Skills			
	1/23/98	AccuVision WSS	The performance of this individual on the AccuVision WSS assessment indicates a 90% percent probability of success in Interacting with Others.
TOP			

Acquire/Evaluate Data		
7/14/99	AES International Skill Coach Assessment	For an Entry Level Employee, analyzes data, Integrates multiple items of data, and contrasts conflicting data, with 80-89 percent proficiency.
TOP		
Identify, Understand, and Work w/ Systems		
7/14/99	AES International Skill Coach Assessment	For an Entry Level Employee, analyzes system configuration/stability, and recognizes system strengths/limitations, with 70-79 percent proficiency.
TOP		
Maintain & Troubleshoot Equipment		
7/14/99	AES International Skill Coach Assessment	For an Entry Level Employee, implements technological improvements/changes and generates technological solutions, with 60-69 percent proficiency.
TOP		
Reasoning		
1/23/98	Nurses Aid, Johns Hopkins Hospital	Doctor noted client's creative thinking skills when addressing problems and developing solutions
TOP		
Responsibility		
1/23/98	AES International Skill Coach Assessment	For an Entry Level Employee, monitors performance standards and follows up on assigned tasks, with 90-100 percent proficiency.

INSIDE ...

Winning a Rhodes
is no surprise
for this scholar

See story, page 6

COMMUNITY COLLEGE TIMES

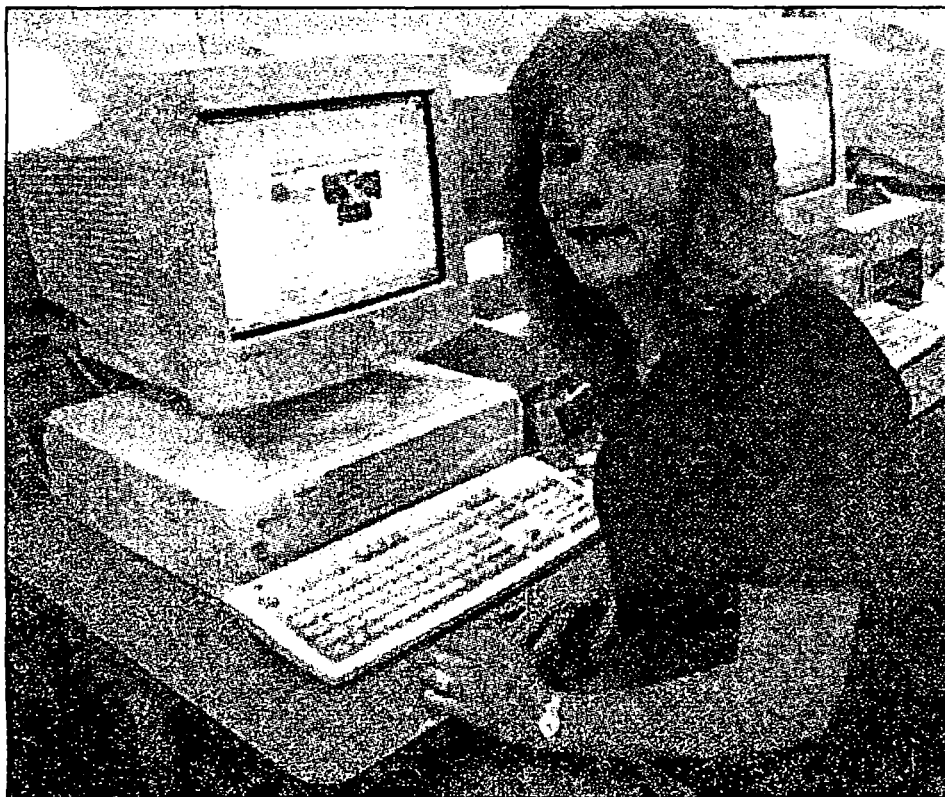
Briefs	2
National	4
Newsmakers	5
Grants	8
Careerline	9-11

JULY 13, 1999

THE AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

VOL. XI, NO. 15

Researchers craft 'career transcript' to prove abilities



Hagerstown Community College student Cheyanne Lewis smiles at becoming one of the first in the nation to show on-line proof of her skills and abilities to prospective employers.

Johns Hopkins University researchers, working with companies and community colleges across the nation, have developed an on-line "career transcript" program designed to teach workers needed skills and show proof of those skills to potential employers.

The transcripts — which would follow students throughout their working lives — might indicate, for example, that the needed skills have been recently upgraded. The transcripts might also include things such as a student's performance on specific tests that companies might use to evaluate workers' skills.

"Our idea," said Arnold H. Packer, senior fellow at the Johns Hopkins Institute for Policy Studies in Baltimore, "is that whether you're on welfare or a 40-year-old in a company with a master's degree, you

can begin to build this transcript."

The program, which is the second phase of a six-year project funded by the National Science Foundation, will enable participants to say: "Here's what I can do" instead of "I got a B in Biology 107," said Packer, a former assistant secretary in the U.S. Labor Department.

Companies that hire program participants would likely have lower turnover rates and higher productivity, said Cabot Jaffee Jr., chief operating officer of AlignMark, a Maitland, Fla., workforce recruitment and development company that created the data base and web site for the career transcripts.

"What is going to happen eventually," said Jaffee, "is that the teamwork part of the transcript is going to be 'just as ac-

cepted" by employers as certain other certificates are now. "Employers will know that when [they] hire people with this certificate, those people will work out on the job," he said.

A pilot group of more than 200 students from four community colleges — Central Carolina Technical College in Sumter, S.C., Ivy Tech in Terre Haute, Ind., Sinclair Community College in Dayton, Ohio, and Hagerstown Community College in Hagerstown, Md. — were the first to enter the program. They were tested before and after the spring semester, evaluated on what they learned during that semester, and given scores. They were taught a variety of subjects, including creative thinking, working effectively in teams, and applying mathematics to real-world situations.

See *Careers*, page 12

Online transcript designed to show recent prowess

Careers, from page 1

Hagerstown student Cheyanne Lewis, for example, took a college algebra course this spring that used a CD-ROM case study as part of the course. As she completed her classroom exercises working as a member of a team, she performed selected skills and was evaluated by course instructor Robert Carson, a senior mathematics faculty member at Hagerstown.

Like Carson, faculty members in mathematics, communications, physics, and computer and engineering technologies used CD-ROM case studies to impart academic knowledge and allow students to

practice necessary career skills. They then evaluated the students based on their performance. Students successfully completing courses obtained the first career transcripts.

The students can now log onto the career transcript Web site, review their scores, and direct prospective employers or their current boss to the site to view their skills and accomplishments.

The career transcript is the final phase of a project to teach skills that the Secretary of Labor identified in 1991 as necessary to compete in the job market. Those skills, known by educators and employers as

SCANS (Secretary's Commission on Achieving Necessary Skills), include foundation competencies such as creative thinking, and problem solving and workplace competencies such as managing time and interpreting information.

Packer, the senior research fellow at Johns Hopkins, said he and his research team are focused on developing learning strategies to imbue students and workers with those skills. Companies that use the career transcript system would benefit by building an inventory of skills in their workforce, thus providing knowledge that many companies now do not have, Packer said.

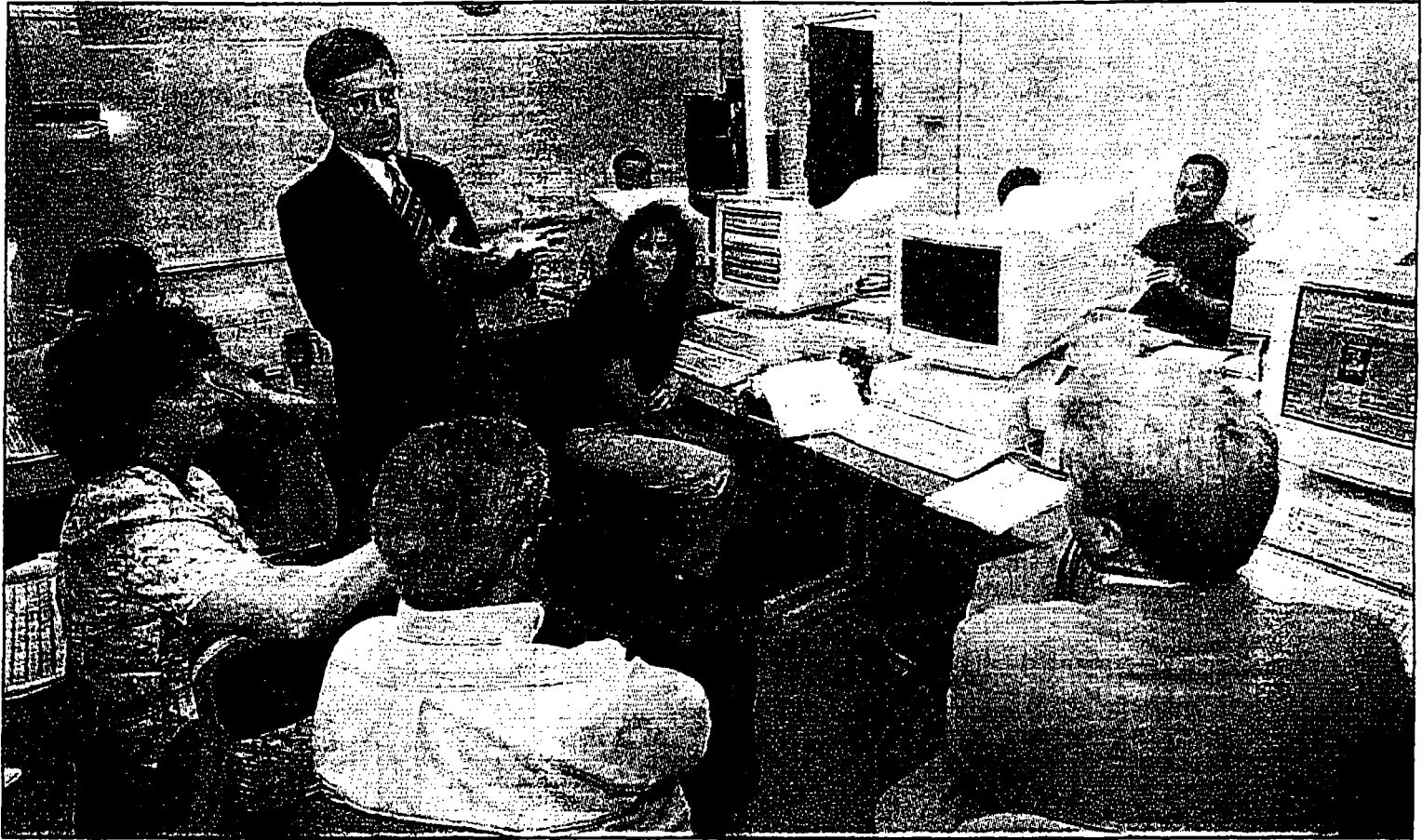
"If you go to a factory and ask them about their inventory, they can probably tell how many machines they have and how many supplies," said Packer. "But if you go to them and say, 'Tell me about your intellectual capacity,' they won't be as clear. If it's a big company, they will probably know how many engineers they have. But ask them how many of their engineers can make a presentation and they don't have the foggiest idea."

The career transcript page can be found at <http://cts.alignmark.com>. A description of career transcripts can be found at <http://www.scans.jhu.edu/CTS.html>.

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Job skills assessed



By Richard T. Meagher/Staff Photographer

Hagerstown Community College professor Robert Carson, standing, is coordinator of the Career Transcript System.

Career transcripts at HCC look beyond grade average

By **BRUCE HAMILTON**
Staff Writer

Cheyenne Lewis went to the computer lab Thursday and looked online at a college transcript that did not provide information on her grades.

Instead, it rated her ability to think and solve problems.

The Hagerstown Community College graduate was one of the first students in the country to take part in the Career Transcript System pilot program.

Students who participated were assessed for attributes such as responsibility and reasoning skills.

Peers and professors also rated the students and the averaged scores were entered into a database.

The results are available on the Internet for students, as well as their prospective employers or current bosses, to check out.

"I think it's really good for employers to access," said Lewis, a recent HCC graduate from Martinsburg, W.Va. "I would

want them to access it. I think it would make me more competitive."

As part of a six-year project funded by the National Science Foundation, Johns Hopkins University researchers are working with four community colleges to teach future workers the skills they will need to compete in the job market.

The career transcript is intended to document the abilities of prospective employees.

Transcripts

Continued from A1

"Our idea is, whether you're on welfare or you're a 40-year-old in a company with a master's degree, you can begin to build this transcript," said Arnold H. Packer, a senior fellow at Johns Hopkins' Institute for Policy Studies.

"The person can say, 'Here's what I can do,' not ... 'I got a 'B' in Biology,'" he said in a press release.

In 1991, the U.S. Labor Secretary's Commission on Achieving Necessary Skills identified key job skills, such as the ability to manage time and interpret information.

Packer heads a center at Hopkins that is trying to give employers a way to better evaluate workers, increase worker productivity and decrease turnover.

AES International, a Detroit Lakes, Minn., company, developed tests that measure competency in the skills identified as important by the program.

AlignMark, a work force recruitment and development company in Maitland, Fla., created the database and Web site for the career transcripts.

Students can access their transcripts using their Social Security numbers and a code. They can block parts they don't want employers to see.

Statements such as, "Accurately recalls factual information from discussion," are followed by assessments such as "needs development, performs acceptably or performs proficiently."

Some skills come with a percentage rating.

Packer said companies that use the career transcript system will benefit from inventorying their employees' abilities.

"If you go to a factory and you ask them what is their inventory, they can probably tell you how many machines they have and how many supplies," he said. "But if you go to them and say, 'Tell me about your intellectual capacity,' they won't be as clear."

It is Packer's hope that the career transcript will become widely accepted as more colleges participate.

Some students and business leaders on hand Thursday for the database debut were skeptical.

David Gerrish, a Frederick, Md., resident and recent HCC graduate, said he thinks the overall concept is a good one. But he said he believes the assessment system is flawed because it involves peer groups.

"The only problem I could see is if you had conflicting personalities," he said.

In other words, an enemy could give you a low mark in sociability skills and thus hurt your hiring potential.

Kurt Johnson, vice president of payment solutions at First Data Merchant Services in Hagerstown, suggested it is necessary to better explain the online transcripts and said employers would question the validity of the results.

Johnson, who is a member of a local advisory board for the project, said an effort to follow up on the workers would increase the validity of the system.

For example, employers could verify whether a student deserves a high rating for visualization, he said.

The career transcript Web address is cts.alignmark.com/.

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