

FOR IMMEDIATE RELEASE

REF: 1-5-21-90

CONTACT: Chris Patterson

LUBBOCK -- Summer sessions for the Reading Laboratory, a program that offers assessments of reading difficulties and individual tutoring, begin June 7. The lab is a sub-division of the College of Education at Texas Tech University.

The lab is for students in grades kindergarten through 12 who have reading problems or who need additional reading motivation. Students who have been diagnosed as learning disabled or dyslexic also may be admitted to the program.

An initial mini-diagnosis is required of all new clients and clients who have not attended tutoring sessions during the prior six months. The series of tests identifies specific reading problems, strengths and weaknesses. An individual tutoring plan is developed based on the results of the tests. The fee for the mini-diagnosis is \$30. A complete diagnosis costs \$90.

Tutors for the sessions are graduate students or advanced undergraduate students in reading education. They evaluate a student's particular need and utilize a teaching technique that is best suited for that child.

Director Lester Butler said that in addition to developing reading skills, the Reading Lab emphasizes building students' self-confidence as readers and developing a love of reading.

The Reading Lab operates during two summer sessions -- June 7 - July 12 and July 17 - Aug. 16. Scheduling options include: Monday through Thursdays, Mondays and Wednesdays, or Tuesdays and Thursdays. Four time options are available: three in the morning and one in the early afternoon. Tutoring sessions are in the Administration/Education Building, Room 223. The fee for sessions that meet four times a week is \$200 and \$100 for sessions that meet twice a week.

For more information or to register, contact the Reading Laboratory, Texas Tech University, Lubbock, Texas, 79409-1071 or call (806)742-2397.



FOR IMMEDIATE RELEASE REF: 2-5-21-90

CONTACT: Chris Patterson or Gayle Fulcher,

(806) 742-2352

LUBBOCK -- A Law School Admission Test (LSAT) review class will be offered May 26 and June 2 through Texas Tech University's Division of Continuing Education.

The LSAT is a standardized exam to assist law schools in assessing the academic promise of their applicants.

The LSAT review program offers several unique features which ensure that students have the opportunity to maximize their test scores. The instructor provides an in-depth analysis of each exam section administered under exam conditions.

The fee for the two-day review course is \$137 and includes the required textbook. MasterCard and VISA charges will be accepted by telephone at (806) 797-7203. Checks or money orders may be mailed to: LSAT Review, Division of Continuing Education, 3223 S. Loop 289, Suite 115, Lubbock, Texas, 79423. Fees also may be paid in person between 8 a.m. and 5 p.m. (excluding the noon hour) Monday through Friday at either the South Loop 289 location or at the Continuing Education Building at 15th Street and Akron on the Texas Tech campus.

For more information contact the Division of Continuing Education (806) 797-7203.



FOR IMMEDIATE RELEASE REF: 3-5-21-90 CONTACT: Chris Patterson or Gayle Fulcher,

or Gayle Fulcher (806) 742-2352

LUBBOCK -- Small business owners and self-employed persons will benefit from a special tax program offered through Texas Tech University's Division of Continuing Education.

The Small Business Tax Education Program (STEP) provides an overview of the role of the Internal Revenue Service and kinds of tax information available to businesses. The tax series consists of six courses which will be held May 29 through June 28.

Comprehensive exercises will help participants understand how to complete employment and business tax forms. Record-keeping advice for tracking business expenses and income also will be discussed. Other topics include depreciation of property, figuring of profit or loss, self-employment tax and payments of personal income and social security taxes via estimated tax payments.

Steve Claus, owner of Claus Associates, Tax and Financial Consultants, will present the sessions. Claus, a certified public accountant and doctor of jurisprudence, specializes in tax and financial planning for small businesses and owners.

Shortcourse participants will meet 6:30-9:30 p.m. on selected days of the week. Cost of each session is \$15. A certificate of completion will be awarded after participants have completed 15 classroom hours -- three required classes and two of three optional classes.

For more information regarding the Small Business Tax Education Program, contact Tricia McCoy or Deborah Palmer at (806) 742-2352.



FOR IMMEDIATE RELEASE REF: 4-5-22-90 CONTACT: Steve Kauffman

(EDITOR'S NOTE: Media representatives are invited to attend the triathlon events and the 1 p.m. awards ceremony in the Stetson Room of the Lubbock Inn, 19th Street and Brownfield Highway. For supplementary interviews, contact Betty Blanton, assistant director of Texas Tech Recreational Sports, at 742-3351.)

LUBBOCK -- Entries for the June 17 Hub City Coca-Cola Triathlon are being accepted now through June 8 at the Texas Tech University Recreation Center, Main Street and Hartford Avenue, and at the Lubbock Parks and Recreation Office, 916 Texas Ave.

The triathlon will begin at 7:30 a.m. June 17 (Sunday) at the Texas Tech Recreation and Aquatic Center. Participants will compete in a 900-meter swim, 22-mile cycle trek and a 5-mile run.

An awards ceremony will be held at 1 p.m. at the Lubbock Inn, 3901 19th St. Awards will be given for overall first place individual for men and for women; top three finishers for men and women in five-year age groupings (15-19, 20-24 years old etc.); and top three finishers in men's, women's and co-ed teams with age totals less than 100 and age totals 100 and over.

Entry fees are \$22.50 for individuals and \$45 for teams of three people. Entries received after 5 p.m. June 8 will be assessed a late fee. All contestants must be at least 15 years old and in good physical condition.

To receive more information on the triathlon rules or to request an entry form, contact the Texas Tech Recreational Sports Office at (806) 742-3351 or the Lubbock Parks and Recreation Office at (806) 767-2690.



FOR IMMEDIATE RELEASE

REF: 5-5-22-90

CONTACT: Myrna Whitehead

LUBBOCK -- Skyviews of Texas Tech University will welcome summer diners for lunch and evening meals beginning June 12. Skyviews is located on the top floor of the NCNB of Texas Building, 19th Street and University Avenue.

Skyviews began serving dinner to the public last fall. In the spring, the restaurant extended its service to include lunch. The June 12 re-opening will mark Skyviews' first summertime schedule.

The restaurant serves as a hands-on training lab for students in the Restaurant, Hotel and Institutional Management (RHIM) program at Texas Tech. Students learn food production, dining room service, kitchen work, planning and accounting, front desk work and computer applications of the restaurant business.

The restaurant will serve lunch daily from 11 a.m. to 1 p.m. June 12 through July 11 and from July 24 through Aug. 15. Dinner will be served on Tuesdays and Thursdays from 5:30-8 p.m. on June 19, 21, 26 and 29; July 17, 19, 24, 26 and 31; and Aug. 2, 7 and 9.

According to Lynn Huffman, Ph.D., director of the RHIM program, 80 percent of the students in the program find jobs by the time they graduate. Enrollment in the program is limited to 650 students.

For additional information or reservations call Skyviews at 744-7462 or the Restaurant, Hotel and Institutional Management program office at 742-3068.



FOR IMMEDIATE RELEASE

REF: 6-5-22-90

CONTACT: Jennifer LeNoir

(EDITOR'S NOTE: A student from your area is included in this release.)

LUBBOCK -- Texas Tech University's College of Engineering recently awarded three full tuition scholarships to students that plan on studying civil engineering at Texas Tech in the fall of 1990.

The three high school student recipients are: Carol Ann Hatfield of Alamogordo, N.M.; Timothy Robbins of Artesia, N.M.; and Troy D. Sallee of Albuquerque, N.M.

Hatfield, daughter of Mr. and Mrs. Tommy D. Hatfield of High Rolls, N.M., plans to pursue a degree in civil engineering while at Texas Tech. A graduate of Alamogordo High School, she will be employed by the department of civil engineering at Texas Tech as a student research assistant.

Robbins, son of Herbert and Kelly Robbins of Artesia, N.M., will study under a dual degree plan that includes architecture and civil engineering. The Artesia High School graduate also will be employed by the department of civil engineering at Texas Tech as a research assistant.

Sallee, son of David F. and Bonnie Rae Sallee of Albuquerque, N.M., graduated from Albuquerque Academy in June. He plans to study civil engineering at Texas Tech while also employed as a student research assistant by the department of civil engineering.



FOR IMMEDIATE RELEASE

REF: 7-5-22-90

CONTACT: Myrna Whitehead

(EDITOR'S NOTE: A student from your area is included in this release.)

LUBBOCK -- Five Texas Tech University interior design students were recognized for outstanding achievements during the College of Home Economic's Senior Presentation Day.

The Outstanding Senior Award was presented to Stacie Schaper of Texas City. Schaper, the daughter of Mr. and Mrs. C.D. Schaper, and the College of Home Economics each received checks for \$250 presented by Sue Wade, owner and president of Sue Wade and Associates of Dallas.

Quepha Rawls, owner of Design Today in Lubbock, presented the Sophomore Studio Awards to: Elizabeth A. Burgess, daughter of Lt. Col. Gary Burgess of Amarillo, for \$50; Brent S. Delatte, son of Mr. and Mrs. Joe Delatte of Desoto, for \$100; Betsy Kearse, daughter of William Kearse of Lubbock, for \$100; and Nora Morales, daughter of Alfredo Y. Morales of El Paso, for \$50.

Also during the ceremony, Donna Cook, owner of Interiors by Design in Lubbock, presented \$1,200 to the College of Home Economics in memory of the late Sydney A. Moore. The donation was given on behalf of Lubbock, Midland and Odessa associations of the American Society of Interior Designers.

Moore, a former member of the American Society of Interior Designers, opened Town and Country Interiors in 1948. His wife, Winnie, accepted a plaque signifying the donation. The plaque will be displayed in the trophy case of the College of Home Economics.



FOR IMMEDIATE RELEASE

REF: 8-5-22-90

CONTACT: Chris Patterson

or Gayle Fulcher, (806) 742-2352

LUBBOCK -- Parents, teachers, counselors and social workers may benefit from a seminar titled "The Unmanageable Adolescent" offered by Texas Tech University's Division of Continuing Education.

The seminar is scheduled for 8:15-11:40 a.m. June 9 at Texas Tech in the University Center Mesa Room.

The seminar will cover the characteristics of the adolescent who is not succeeding in a regular school setting; commonalities of the adolescent as viewed by his/her teachers, counselors and administrators; effective versus ineffective approaches "to manage" the child; strategies to change negative behaviors to positive behaviors; and school liaison activities with other settings such as homes, hospitals and community agencies. Five case studies also will be presented.

Jeannine C. Foster, Ph.D., will conduct the three-hour seminar. Foster is a full-time teacher of at-risk, alternatively placed students in the Comal Independent School District. She also is a counselor who works as a liaison with hospitals, parents and community agents who seek to have students successfully return to their home schools.

The seminar is approved for Advanced Academic Training, Licenced Professional Counselor and Texas Association of Alcohol and Drug Abuse Counselors credit.

Advanced registration for the seminar is \$15. On-site registration is \$20. Registration may be completed by telephoning (806) 797-7203 and charging the fee to MasterCard or VISA. Registration also may be mailed to: Division of Continuing Education, 3223 S. Loop 289, Suite 115, Lubbock, Texas, 79423; or fees may be paid in person between 8 a.m. and 5 p.m. (excluding the noon hour) at either the South Loop 289 location or the Continuing Education Building at the corner of 15th Street and Akron on the Texas Tech campus.

For more information contact the Division of Continuing Education at (806) 797-7203.



FOR IMMEDIATE RELEASE REF: 9-5-22-90

CONTACT: Chris Patterson

or Gayle Fulcher, (806) 742-2352

LUBBOCK -- A workshop titled "Compulsion, Co-dependency, Control: Breaking the Cycle of Addiction" will be held June 15 and 16 at the Lubbock Plaza Hotel, 3201 S. Loop 289.

Co-dependency is defined as a pattern of painful dependence on compulsive behaviors and on approval from others in an attempt to find safety, self-worth and identity.

The workshop is for adult children of dysfunctional families, co-dependent persons, helping professionals, teachers, clergy and others with a personal or professional interest in recovery.

During the workshop, participants will explore and review key concepts of recovery surrounding the issue of co-dependency. Participants will be given the opportunity to address co-dependency patterns of control, anger, guilt, lack of trust, intimacy and other personal issues.

Featured speakers for the workshop are Terry Kellogg, Mary Lee Zawadski and Errol and Rochele Strider.

Kellogg has worked extensively in the training of professionals and treatment of victims of physical, emotional and sexual abuse. He is director of Lifeworks Clinics and serves as the national education consultant for Sierra Tucson Treatment Center.

Zawadski is recognized as a Certified Addiction Professional. Her personal recovery is a factor in her ability to educate and treat chemical/co-dependent people. She is executive director of Self-Discovery Inc., an intensive in-patient program in Roanoke, Ala.

Errol and Rochele Strider currently are touring the country performing "Family Baggage" at conferences and theaters and offering seminars on Creative Recovery Training. Errol Strider has published several volumes of poems and stories and has developed and presented seminar training programs in communication and human organizational development. Rochele Strider has appeared in many off-Broadway productions and is working on an acting manual to enable people to use acting techniques in recovery.

The conference fee for both days is \$69. Attendance for one day is \$40. The fee for full-time students is \$20 per day. Cost of the Friday luncheon is included in the fee.

CO-DEPENDENCY WORKSHOP/PAGE 2

The workshop is approved for Continuing Education Credit, Licenced Professional Counselors and Texas Association of Alcohol and Drug Abuse Counselors credit. Registration may be completed by calling (806) 797-7203 and charging the fee to MasterCard or VISA. Registration also may be mailed to: Division of Continuing Education, 3223 S. Loop 289, Suite 115, Lubbock, Texas, 79423; or fees may be paid in person between 8 a.m. and 5 p.m. (excluding the noon hour) at either the South Loop 289 location or the Continuing Education Building at the corner of 15th Street and Akron on the Texas Tech campus.

Sponsors of the workshop are Allen and Associates of Amarillo, Charter Plains Hospital, Lubbock Council on Alcohol and Drug Abuse, St. Mary of the Plains Hospital, Southwest Institute for Addictive Diseases, Texas Association for Children of Alcoholics and Texas Tech's Division of Continuing Education.

For more information, contact the Division of Continuing Education at (806) 797-7203.

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FOR IMMEDIATE RELEASE

REF: 10-5-22-90

CONTACT: Myrna Whitehead

LUBBOCK -- Elizabeth G. Haley, dean of the College of Home Economics at Texas Tech University, will be honored with White House Chief of Staff John Sununu Saturday (May 26) at the University of Akron.

Haley and Sununu each will be presented with honorary doctoral degrees as part of the commencement ceremonies at the university in Akron, Ohio.

Haley will be awarded the honorary doctor of humane letters degree, the University of Akron's highest honor. During an afternoon ceremony, Haley will address graduates from the Buchtel College of Arts and Sciences, the College of Fine and Applied Arts, the College of Nursing, the College of Polymer Science and Polymer Engineering and the Community and Technical College.

Sununu will receive an honorary doctor of science degree during a morning ceremony for graduates from the College of Business Administration, the College of Education, the College of Engineering and Wayne College.

Haley served as interim president of Texas Tech and Texas Tech University
Health Sciences Center in 1988-89. She assumed the position following the resignation
of Lauro Cavazos, who was appointed U.S. Secretary of Education by then-President
Reagan.

Before coming to Texas Tech, she served as dean of the College of Home Economics and for 12 years as a member of the faculty at Louisiana Tech University in Ruston, La.

Louisiana Tech awarded Haley the Tower Medallion in May 1989, and the College of Human Sciences at Florida State University named Haley a Distinguished Alumna in February 1989.

Sununu served three consecutive terms as governor of New Hampshire prior to being named Chief of Staff by President George Bush. Sununu received his doctorate in mechanical engineering from the Massachusetts Institute of Technology in Cambridge, Mass. He previously was a professor and associate dean of engineering at Tufts University in Medford, Mass.



> FOR IMMEDIATE RELEASE REF: 11-5-23-90

CONTACT: Kippie Hopper

[EDITOR'S NOTE: The media is invited to attend any portion of the Kite Retreat May 25-28 in Junction. For more information, telephone (806) 742-2136 or contact Betty Street at the Texas Tech University Center at Junction, telephone (915) 446-2301.]

LUBBOCK -- More than 100 kite enthusiasts from across the United States, Japan, West Germany and France will meet this weekend in the Texas hill country to build and fly kites.

The second annual Texas Tech University Kite Retreat is scheduled for Friday through Monday (May 25-28) at the university's center at Junction.

The public is invited to watch a kite flight from 3-5 p.m. Sunday at a 40-acre flying field adjacent to the Texas Tech campus in Junction. Enthusiasts will fly kites ranging from large parafoil kites to 20-foot long versions that resemble California Condors to miniature kites that are less than three inches wide.

International kite-builders will join others from Colorado, Washington, Oklahoma, Illinois, Pennsylvania, Arizona and Texas to demonstrate their crafts during presentations at the retreat. The artists make kites of various sizes and shapes with materials including paper, plastic and cloth.

Two Texas Tech artists whose kite-building work has been featured in Smithsonian magazine will be among the presenters. Associate Professor of art at Texas Tech and Assistant Director of the Junction campus Betty Street will explain how to make fold-and-dye kites. Another Texas Tech faculty member, Bill Lockhart, will teach participants how to construct heat-sealed plastic kites.

Registration for the Junction Kite Retreat continues through Friday (May 25). A \$95 registration cost includes workshops, housing and meals Friday through noon Monday. Participants can purchase additional materials for building kites at the Junction campus, located about 120 miles northwest of San Antonio. For more information, contact Betty Street at (915) 446-2301.



FOR IMMEDIATE RELEASE

REF: 12-5-23-90

CONTACT: Chris Patterson

[MEDIA ADVISORY: Members of the media are invited to attend any or all of the events of the second annual National Cowboy Symposium and Celebration May 31 - June 3 at Texas Tech University. For complimentary passes to special events, contact Chris Patterson, Office of News and Publications, (806) 742-2136, or Alvin Davis, executive vice president and general manager of the Ranching Heritage Association, (806) 742-2498.]

LUBBOCK -- It's an unusual sight -- a true, working cowboy, straight off the ranch, at a university symposium. But the phenomenon occurs each year about this time at Texas Tech University's National Cowboy Symposium and Celebration.

The one-of-a-kind event, scheduled for May 31 through June 3 in Lubbock, mixes ranchers and cowboys with poets, storytellers, musicians, historians and scholars in an effort to pay homage to cowboy culture and the western folk heroes of America.

The event, unlike others that feature only cowboy poetry, is comprehensive in its explorations of the traditions of the American frontier, said Alvin Davis, chairman of the symposium.

"The large number of participants and the wide range of disciplines represented in the symposium should appeal to anyone interested in the American West," he said.

In addition to poetry and music performances, sessions held throughout the day on June 1 and 2 (Friday and Saturday) will include topics such as "Cowgirls and Western Women," "Western Movies and Television," "Western Photography," "Hank the Cowdog: A Children's Session" and "Ranch Owners and Managers."

Evening performances scheduled for 7 and 9 p.m. June 1 and 2 (Friday and Saturday) in the University Center Allen Theater will feature performers such as musicians Red Stegall of Azle and Don Edwards of Weatherford, poets Gary Morton of Lincoln, N.M., and Kim Strong of Davenport, Calif., and storytellers Ace Reid of Kerrville and Monte Jones of Sonora.

Tickets to evening performances are \$5 for adults and \$2.50 for children under age 12.

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COWBOY SYMPOSIUM/PAGE 2

The four-day event will begin at 7:30 p.m. Thursday (May 31) in Texas Tech's University Center with a reception and the opening of an exhibit, which will feature cowboy arts, gear, crafts and trappings, and a book fair. A cowboy dance featuring Rick Sudduth and his Blue Denim Band will begin at 9 p.m. in the Coronado Room of the University Center. A single ticket fee of \$5 for adults and \$2.50 for children will gain admittance to the dance and to symposium day time sessions on June 1 and 2 (Friday and Saturday).

The opening session of the symposium will begin at 9 a.m. June 1 (Friday) in the University Center Allen Theater. Joe Frantz, author and historian at Corpus Christi State University, and Bill Hervey, former president of Wrangler, will be the keynote speakers. The session also will feature a memorial tribute to Tom Blasingame, who worked as a cowboy until he died at the age of 91 in December 1989.

Following the opening session, concurrent sessions will continue until 5 p.m. and will resume at 9 a.m. June 2 (Saturday).

The last day of the event, June 3 (Sunday), will begin with a breakfast at 9 a.m. at the Livestock Pavilion of the Panhandle South Plains Fairgrounds. Meal tickets are \$3. The meal will be followed by a cowboy non-denominational church service featuring gospel singer Susie McEntire Lucksinger of Atoka, Okla. Her husband, Paul Lucksinger, will deliver a motivational message.

A celebrity cutting and team roping event will begin at 1 p.m. June 3 (Sunday) in the Livestock Pavilion of the Panhandle South Plains Fairgrounds. The arena performance will include a cutting horse demonstration, sheep dog demonstration, trick roping and musical numbers. Ticket prices are \$5 for adults and \$2.50 for children.

For more information or for advance tickets, contact the National Cowboy Symposium, Ranching Heritage Association, P.O. Box 4040, Lubbock, Texas, 79409, or telephone (806) 742-2498.



FOR IMMEDIATE RELEASE REF: 13-5-24-90 CONTACT: Chris Patterson or Deborah Palmer, (806) 742-2352

LUBBOCK -- The Texas Tech University Legal Assistant Advisory Board awarded the summer 1990 Neva Denny Memorial Scholarships to Anna Walker and Guy L. Hawkins, both of Lubbock. Funding for the scholarship is donated by the West Texas Association of Legal Assistants.

Each semester the scholarship aids two students enrolled in Texas Tech's Legal Assistant Certificate Program. The scholarship covers the students' registration fees and required textbooks for one legal assistant course.

The Neva Denny Memorial Scholarship was established in 1984 for Jeneva M. Denny. She was a legal assistant for 30 years at the law firm of Crenshaw, Dupree and Milam.

The Division of Continuing Education at Texas Tech offers the Legal Assistant Certificate program which provides a basic understanding of substantive and procedural law, legal research and writing skills, drafting of legal instruments and client interviewing techniques. Completion of the program prepares participants to work in private law offices; banks; government agencies; real estate, title insurance or abstracting firms; insurance companies; and other businesses.

The deadline for applications for the next Neva Denny Memorial Scholarship is July 6. For more information, contact Tricia McCoy at the Division of Continuing Education, (806) 742-2352.



CALENDAR WEEK MAY 25-JUNE 1

REF: 14-5-24-90

CONTACT: News and Publications

(MEDIA ADVISORY: This Texas Tech calendar is compiled to let you know of upcoming events and releases and to serve as a reminder of releases already sent. If you need more information, call News and Publications at 742-2136.)

MAY 28 University and health sciences center closed for Memorial Day

MAY 29 First summer session classes begin at School of Law

MAY 31 National Cowboy Symposium and Celebration

Texas Tech University Center through June 3

(release ref: 11-5-23-90)

JUN 1 Ex-Students Association Board of Directors meeting

Marriott River Center in San Antonio through June 2

Texas Tech Excellence Scholarship recipients picnic sponsored by the Office of New Student Relations 12:30 p.m., University Center north outdoor patio

(release will be mailed)

FOR IMMEDIATE RELEASE REF:

RESEARCH HELPS TO END LIFETIME OF SILENCE by Jennifer LeNoir

LUBBOCK -- When a person is unable to speak or move most of his or her body, communicating ideas to others in a clear and precise manner becomes one's most urgent need.

One severely physically disabled 21-year-old Lubbock resident, "Terry," finally is communicating his thoughts to others for the first time in his life. For the past seven years, the young man has lived in an institutionalized environment at the Lubbock State School.

The communication breakthrough has been made possible through the help of several students and faculty members at Texas Tech University's colleges of Engineering and Education.

"Terry," whose parents requested that he not be identified, has profound scoliosis or curvature of the spine and severe spasticity, a loss of muscle control. Until Texas Tech engineering students designed an "eye tracking device" to help him convey his thoughts to others, he had never communicated with other people.

The result of the adaptive computer equipment has changed Terry's quality of life to the extent that he now attends a public high school in Lubbock.

Terry's previously crude attempts at communicating any understanding involved him winking an eye and another individual offering verbal options of what he might be thinking, said Oliver Hensley, Ph.D., Texas Tech professor of education.

The Texas Tech team of faculty and students used a multi-disciplinary approach to conceive and implement the senior design project. The team focused on the dilemma of how Terry could convey his imprisoned thoughts to others.

Because of the multiple physical disabilities, messages from Terry's brain become garbled and uncontrolled before they are spoken. After two years of concentrated interdisciplinary research, the engineering team discovered a way to free Terry's thoughts. Team members designed and built a "synthetic speech communications system," specifically for him.

ENGINEERING RESEARCH/PAGE 2

The synthetic speech communications system uses a "corneal reflection method," which involves tracking light that is reflected off the cornea in one of Terry's eyes. A stationary source of light causes a bright spot to appear on the cornea, explains Eddie Arrant, Texas Tech electrical engineering lecturer.

By knowing where the spot of light is located on the eye, researchers can determine what part of the computer's communication grid or pictorial graph the eyes are focused on, Arrant said.

In addition, the communications system uses a voice synthesizer, called "Vocaid," which is used to pronounce phrases, such as "I would like to use the bathroom" or "I am in pain." The synthesizer also can pronounce the alphabet and numbers, he said.

"Although the vocabulary of 'Vocaid' is limited, it is extremely useful for people with severe handicaps," Arrant said.

Attached to the system is a video camera with a zoom lens, used to obtain a video signal from the eye. The system is connected to a personal computer, which digitizes a picture of a person's eye movements.

In simple terms, Terry focuses on a pictoral graph or symbol representing his desired communication. The computer then presents to Terry the "Vocaid" menu, a vocal aid composed of graphics or communication symbols. The computer analyzes the eyes' "gaze-point" and transmits data to another computer circuit. The process eventually activates the desired button of the voice synthesizer, allowing Terry to "talk."

Since Terry has begun communicating, other people are interacting more with him by asking about his thoughts and opinions. Terry's mental outlook and self-esteem thus have improved, said Hensley, who initiated the plan to develop orthotic devices for severely handicapped children.

The technology created by the senior projects team opens up a new area of basic research related to communicating with severely and profoundly disabled children, he said.

The project's completion required more than 400 student hours in designing, fabricating and testing the speech communications system.

ENGINEERING RESEARCH/PAGE 3

"Now that we understand the system's parameters, it can be modified for use by additional children with severe and profound handicaps," Hensley said. "We established a new protocol or system of assessment for the severely handicapped through focusing on the individual student."

Similar senior design projects at Texas Tech annually are supported by the National Science Foundation (NSF), which seeks to aid persons with disabilities through engineering research.

Texas Tech engineering researchers participated in a similar NSF study during the late 1970s that involved the assessment of human rehabilitation techniques. That experience interested several industrial engineering researchers in the area of orthotic devices for the multi-handicapped, said Richard A. Dudek, a Texas Tech Horn professor and faculty emeritus in the department of industrial engineering.

"We ought to be designing devices that are adaptable to specific individuals, rather than designing a standard device that attempts to adapt the person to the device," Dudek said.

The synthetic speech communications system is valued at more than \$20,000. The cost for equipment were shared by the NSF, Texas Tech and the Texas Rehabilitation Commission.

"Projects like this also are important to engineers because they provide us with the opportunity to analyze the movements of individuals so we may begin to define the envelope of capabilities for persons with disabilities," he said.

Don Foreman, a former Texas Tech graduate student in the College of Education, conceived the idea of adapting an orthotic device for Terry. He currently is a teacher at Dunbar High School in Lubbock.

Members of the senior design project team are: 1988 graduates Bobby Hudgens, from Lubbock; Greg Hatfield, from Rockwall; Reese Wright, from Brownfield; 1989 graduates Ka Lam William Chio, from Bangkok, Thailand; Chow Ming Wong, from BKT. Maluri; and 1990 graduates Greg Grant and Barry Nusz, both from Amarillo.

Other Texas Tech professors involved in the project are: Michael Partin, associate professor of electrical engineering, and Donna Reavis, project associate and professor of education.