

## Introduction

For the first nineteen years of my life, I grew up with my brother Joe. He was born in 1921, I was born in 1923. We played in the woods, fields and streams together. We went to school together. We had mutual friends. Our older brother Bill kept us from fighting too much. Our mother let us have pretty much free reign as long as we didn't get into trouble. Our father was a brilliant mechanic and inventor—sort of the absent minded professor type. But he loved us and kept us interested in his projects and many that he started for us—like building a miniature golf course in the back yard.

The three of us. Joe on the left, Dorothy in the middle and Bill on the right.

Picture on the right, circa 1923  
Below, 1926.



Without realizing it, Joe was interested in Project-Based Learning from an early age. I wanted to learn to swim. Joe didn't want to tell me how or show me how, so he simply pushed me off the low bridge into the swimming

hole in Oriskany Creek. I learned to swim, or at least dog-paddle very quickly.



Our house in Oriskany

Friend Augusta Talbot, Bill Oakey, Sr. with Joe;  
Mother with Dorothy; Aunt Senie with Bill.



I rarely saw Joe after I was married in December of 1942 and he and Bill each married a few weeks afterwards. United States was on the brink of World War II and we went our separate ways. Our father had died and my mother and new sister, Mary, and our elderly Aunt Senie had moved to New Hampshire from our latest home in Oak Park, Illinois, near Chicago.

After the war, Joe went to college mostly funded by the GI bill and became a different person, not the boy I grew up with. He hadn't liked school when we grew up in Oriskany, New York. He barely passed some subjects. But suddenly he was interested in education and tried to reorganize many things at Keene Teachers College in Keene, New Hampshire.

Just before he died in May, 2008, Joe was interviewed by Larry Benaquist from Keene Teachers College as part of the celebration of the school's 100<sup>th</sup> anniversary. When I watched the tapes of that interview, I was amazed by how much Joe had accomplished in his life and how well known and loved he was in the education field. Yet his life had never been documented. I was never involved in education, but will try to collect information from many sources so that Joe Oakey can be remembered—at least by his family. I am indebted to Larry Benaquist for getting so much of the sequence of Joe's life during this interview.

I also want to thank my sister, Mary, for her patience in answering questions and chasing down facts while she was still recovering from Joe's death.

It was surprising and pleasing to me when I spoke to people associated with Autodesk and Project Lead the Way how much they had loved and honored Joe and were willing to help.

Dorothy W. (Oakey) Crumb

## **My Brother Joe Oakey**

Joseph Hall Oakey was born in Utica, New York, on April 6, 1921. He grew up in Oriskany, New York with his sister Dorothy Winslow and his older brother William Edgar. His brother Bill was very smart and liked by all of his teachers. The Oriskany School was small and Joe had many of the same teachers that Bill had had. It was not unusual for teachers to expect great things from Joe just because he was Bill Oakey's brother. But Joe was not terribly interested in school. He had a bad experience in fifth grade when pupils were asked to bring an animal to school that they were interested in. He brought a little garter snake in a paper bag. When he pulled the snake out, the teacher panicked and screamed for him to put it back and get rid of it. She hit Joe with a yardstick until the stick broke and he decided he never wanted to work for that teacher again. He lost all interest in school. When he graduated from Junior High (as it was called in those days) one of his teachers gave him a balloon so he could drift over those clouds.

Joe's father, William Edgar Oakey, was a mechanical engineer and inventor. He had learned about machinery as a boy and young man by buying old junked automobiles that wouldn't run. He would pull them home with a team of horses; take two or three old cars and make one that would run. He would also help people repair their cars. During the first World War, he worked for The Savage Arms Corporation in Utica, N.Y.

Both Bill and Joe often worked with their father in his machine shop in a large building behind the house in Oriskany. By the time he was in his early teens, Joe could take apart and put together and operate the machines in the shop.

Joe's mother, Dorothy Simonton Oakey, was very interested in the work of Eleanor Roosevelt. She worked on programs for the poor. An older sister of his father, Aseneth Oakey, lived with the family and did a lot of the housework and cooking. So Joe's mother had free time to devote to this undertaking. She raised airdales for a time, then was given her first Kerry Blue Terrier. She

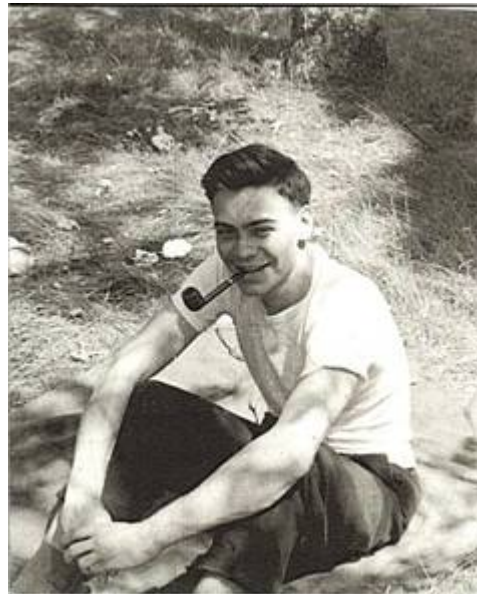
raised and showed this breed of dogs for the remainder of the time that they were in Oriskany.

The house seemed to be the center of the town. There were always children going in and out. Joe's mother was an accomplished piano player and people liked to gather around the piano and sing. The same was true of his father's shop. There was a big metal turntable in the floor. You could drive a car on it, then push the car around so that it was headed out the door. Kids liked to push the turntable around and play with things in the shop. The house was on a hill and it was not illegal to have fireworks at that time. So people would gather on the lawn to shoot the fireworks up over the town. The smaller children ran around the lawn with sparklers—or collecting fireflies.

Joe as Teenager



Brother Bill



The Great Depression started in 1929. Joe was eight years old. His father had had a lot of work because a lot of manufacturing had gone from hand labor into machinery. He invented machines for many companies so that they could advance in this field. Joe hated school; it wasn't much of a challenge to him. He would rather spend his time repairing electric trains or

bicycles or any other mechanical device that wasn't too complicated. He spent a lot of time with his father in the shop. By the time he was 13, in the middle of the depression, he was helping him on many jobs. His father taught him mechanical drawing and by the time Joe was a sophomore in high school, he was his father's draftsman. His advisors in school would not let him sign up for drafting because those courses were vocational and he should take only college-prep courses.

Joe's father suffered his first heart attack when Joe was a junior in high school. There were three important jobs being worked on. One involved a machine to make oversized nails. Another was a machine to extrude mechanical pencil barrels and the third was a high-speed thread-rolling machine. Since his father was unable to travel, the job fell to Joe to go to the plants with his instructions. Joe would return to his father with any problems he had encountered and the two of them would go over the plans and make necessary upgrades. Joe would return to the company the next day with solutions and further plans.

At first there was considerable opposition from the engineers who didn't like taking instructions from a 15 year old boy. But they knew the instructions were coming from his father and they eventually listened. Joe finally developed the confidence he needed to confront opposition when necessary.

Joe's father's health had not improved sufficiently by the start of the school year so that he felt Joe should not return to school, but should continue working for him. Joe was delighted because he didn't like school and he loved the work he was doing. School was not interesting and challenging like the machine design was.

Joe returned to school at Christmas time and school took on a new meaning. He was able to make up the lost work and graduate in June of 1938. Not only did he graduate, but he graduated with honors in math and science and represented the school in a state mathematics competition.

By the time of his last years in high school, the family was living in Evanston, Illinois. When he graduated, he took a job with Filshie Lead-headed Nail Company in Chicago. When World War II started, there was a shortage of lead, so for eight months, Joe installed large water softeners for the Vader Water Softening Company, He had two other jobs, one with a company that made bomb loading machines and one that made synthetic rubber.

On February 14, 1940, Joe's father had a heart attack on his way to work and died. Joe and his father traveled together to Chicago from Evanston, but had changed trains to go to their separate businesses. So his death shortly after the transfer was extra hard on Joe.

When the United States went to war, Joe tried to enlist at a Navy recruiting station because he wanted to fly airplanes. They found he was colorblind and they would not accept him. He then tried the Air Force. When he had his physical exam an x-ray showed that the lead he had worked with had caused spots on his lungs. They told him he would die young and should go out in the country to get fresh air and eat well.



Joe with his P-39



Kerry and Joe

Joe was, at that time, dating a nurse. She insisted that he have tests at the hospital where she worked. They found nothing wrong with him. He then went to the draft board. Their tests showed nothing wrong either. He was drafted into the Army. He went to Rantoul, Illinois.

Joe's sister Dorothy had married Lloyd Crumb in December of 1942. Joe married Kerry Batchelder in 1943 in Oak Park, Illinois. Bill married Sara Louise McKinney in Clinton, NY in April of 1943. Joe had a baby sister Mary, who was born in June of 1937. His mother was unhappy living in Chicago and answered an ad to run a summer lodge in New Hampshire. So New Hampshire became the family center where various members of the family often met. Joe even ran a boys' camp there for a year or two.

After Rantoul, Joe was transferred to Shepherd Field in Texas. He was a machinist and did maintenance work on airplanes. He took placement tests and scored so high on them that he was called in to see if he was cheating. This was his first inkling that he had above average intelligence.

Joe trained as a Link trainer operator. This was a machine that simulated a real airplane and taught pilots how to fly. Joe would have helped teach the would-be pilots. But there were no openings for an operator. They wanted to send him to a cook and bakery school, but he refused and was sent to a mechanist school at Chanute Field, Illinois. He knew everything there was to learn at the school. After four or five months, he was sent to St. Louis embarkation camp and on to the South Pacific. He helped maintain P-39s for the Army Air Force. He was Crew Chief for the Commanding Officer at the base. There were no parts for the airplanes, so if an engine needed fixing, it was returned to the States for repair.

They cleared the Japanese from one section of an island, then set up their base. Because our planes blocked ships and planes from bringing supplies to the Japanese, they would raid the US base for food.



After the nuclear bomb was dropped on Japan, Joe came home and was honorably discharged. He returned to Chicago and found a job as draftsman for a company that made weather instruments. He was really interested in diesel engines, but couldn't get a job with those companies without a college education. He went to the Illinois Institute of technology for one year. Because his mother and young sister were living in New Hampshire, he considered going to the University of New Hampshire. A friend suggested he try Keene State College.

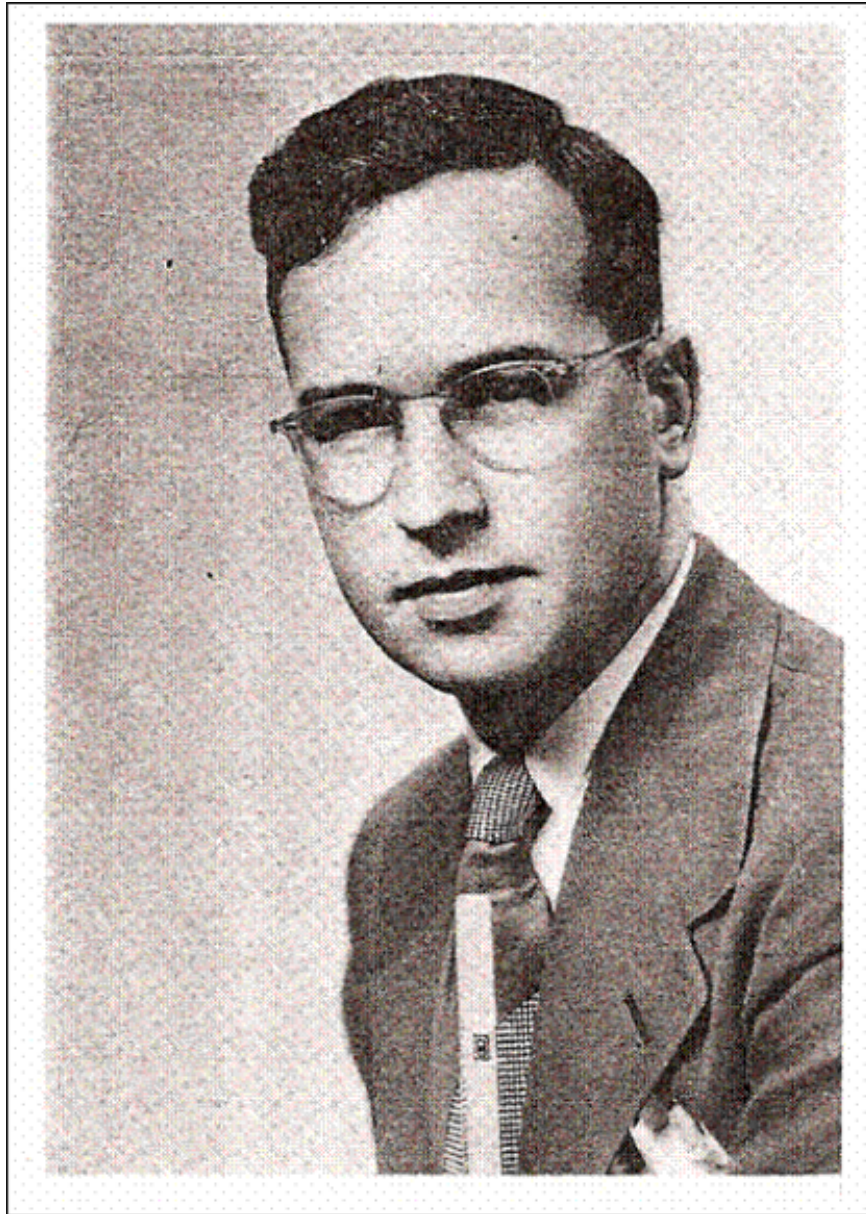
Joe talked to the admission director about developing classes to teach math and science. He would like to teach the students ways to use the math and science they learned rather than just learn the subjects. The kids were quitting after two years of engineering because they had no idea of application.

Kerry and Joe found a one bedroom apartment on the second floor of a house right next to campus. When Joe began his Junior year in college, he found many things he wanted to change. Many of the students and teachers agreed with him, but some thought he was a communist. He became active in the student council. The women had to be in by 9:00 pm and they wanted to change that to 10 or 11 so they could go to movies and parties. They were able to make that change for weekends. Even though he was not a smoker, Joe argued with the Dean that since the faculty could smoke in Parker Hall, the students should also have a place to smoke. At graduation, there was a ceremony patterned after the Vassar rose march. This upset the boys who refused to carry roses. Joe was part of the student council who worked to accomplish these things.

For a newspaper, there was only a mimeographed sheet. Joe wanted a real newspaper and the students would buy it. The Dean did not think the students would pay, but the vote was overwhelming in favor of paying for it through the activity fund. The newspaper was called *Monadnock*. Joe was news editor. It was very successful.

Joe was President of the Senior Class and often was asked by Keene's President to represent him at various functions, such as

installation of a new college president. It was a good experience for Joe to learn to meet and talk with people. He also learned to talk with the press representatives. Following is the President's Message that Joe wrote and delivered at graduation:



## PRESIDENT'S MESSAGE

Fellow Students:

I feel we are very fortunate to be entering the teaching field in what I consider the golden age of education in the United States.

In the past few years, our popular and professional magazines have been flooded with articles which all asked or tried to answer one basic question, "What is wrong with education?" The answer is simple: nothing has been wrong with education; it has been doing exactly as the nation has demanded. In a superficial society, the schools have been teaching trivialities in a trivial way. In the past few years, however, our nation has had thrust upon it grave responsibilities. This has brought about, whether we wanted it or not, a growth from national adolescence to a national maturity, and the population is accepting it as such. The public now is demanding the same growth in our educational system; and they shall have it! Students today are a part of that public. Gone from our campuses are the raccoon-coated, goldfish-swallowing, rah-rah students of yesterday. In their place are rational, socially conscious students demanding, and getting, social responsibility.

In the public school area, the students, parents and educators are demanding the removal of the ivory tower ideal, and the substitution of a realistic approach to life and society. A few forward looking educators recommended this change over fifty years ago, but such a social change cannot be brought about until an awakened public demands it. The demand is now evident.

Yes, you and I are living in a young nation that is now undergoing the transition between adolescence and maturity. We will be present when the educational system is developed for this newly awakened nation; we are indeed fortunate.

Joseph H. Oakey  
President, Class of '50

In his final year at Keene, superintendents would come and interview the graduating students. But Joe was never called for an interview. He started student teaching at Keene High School. When he gave the exams at the end of the quarter he found the students hadn't learned anything. He talked to the principal about it. The principal told him he had now learned how not to teach and

to go back and learn how to teach the students. He did some substitute teaching for a while, then he taught at Pittsfield, New Hampshire, for two years. He set up a darkroom and started an art class. He was offered a job at Hillsboro. The Hillsboro superintendent went to visit the photography lab in Pittsfield and a student asked, "How do you like our lab?" The superintendent liked the fact that the student called it "our" lab and he also liked seeing Joe reading some literature in the math class.

Joe taught at Hillsboro for the next two and a half years. He and Kerry asked his sister Mary to live with them and she finished her high school at Hillsboro. He left to become principal of Canaan High School. Joe liked working in a farming community. Student photographs were being taken at the end of the year, but they couldn't get them done so that they could have them for Christmas. Joe skied out to several farms to take the pictures. He liked visiting with the parents and got coffee and cookies at nearly every house.

Joe decided to have a school dance, which hadn't been done before. Not only did the kids come, but all the parents. The women went in one room and talked recipes and other projects while the men got together in another room. The dance was a big success.

He got along well with the parents and the board. But the janitor was very lazy and inefficient. Joe tried to get him fired, but his wife was on the school board. Joe finally convinced the superintendent it had to be done by showing him some of the shoddy work. All part of being a principal.

Stowe, Massachusetts, had a problem school with some violent students. They had heard about Joe and the Superintendent came to Canaan to interview him. He even went around town and talked about Joe with people he met. Joe went to Stowe and turned the school around. In the three years that he was in Massachusetts, he built a good reputation. But the Superintendent left and the new one did not want to give Joe the promised raise. Joe was interviewed at Lynnfield, Massachusetts. His Superintendent at Stowe said to forget it; Joe didn't stand a chance, they wanted a

Harvard graduate. The day after the interview Joe had a call that he had the job.

He spent two years in Lynnfield and really liked it. However, in 1961, he had a call from a superintendent in Niskayuna, New York. They had heard that he was doing great things in the educational field. Joe spent a day in Niskayuna going through the high school and middle school. General Electric had two laboratories in town. The philosophy of the community was great and the students were smart.

Joe spent ten years at Niskayuna. GE had its own computers. Joe had a land line from school to their computers. He tried to get GE to donate its old computers to the school because the students had become so proficient on them. He had a call from the president of IBM who talked to him about what he was doing. When he described what was going on, IBM gave him three new computers and three punch card machines. He hired a woman programmer to help the kids. Joe ran the school more like a college campus. He gave the seniors a room of their own. He and the teachers had to have permission to go in. One day, Joe had a visitor he was showing through the school. He knocked on the door and asked if they could enter. The student checked with the others, then came back to the door. He told Joe he couldn't come in. Joe started down the hall and the visitor couldn't believe what he had seen. Then the student called to them and said they could come in, he was just seeing what would happen.

Joe was next offered a job as Commissioner of Education of Vermont. He thought this would be a chance to change education in a whole state. It was a mistake. The only way to get programs going was to get superintendents and principals to change. They wouldn't. He had talked to the governor about the job and the governor asked him what would happen if he and Joe had a disagreement. Joe said he would go to the legislature. The governor said that was fine, the last Commissioner had gone to the press. Joe said he had been told long ago never to argue with a man who gets ink by the barrel. The teachers were very interested in

Joe's ideas, but they never could get the backing of the superintendents. He was even able to get funding for some of his projects from the Federal government.

He was offered a job with the U.S. Department of Education going around the country to check on the success of President Nixon's educational program. Joe's political leanings were definitely not toward Nixon. George McGovern also offered him a job in Washington, but Joe turned it down.

Joe sat in on committees in Washington concerning education. He left the position in Vermont and wanted to go back to affecting education. The federal government asked him to visit seven states and two territories to find out how block grants would work. One of the territories was the Micronesian Islands in the Pacific Ocean. They had had no education under the Japanese. The Department of the Interior had started schools, but they were not working. Hiring an American for two years who became discouraged and left was not the solution. Joe recommended getting a Micronesian to start the system and getting an American to help.

He was still living in Vermont and it was ten below zero. One night he had a phone call from people sitting around a pool enjoying the sun. They could not find an American willing to be a subordinate and wanted Joe to take the position. He wanted to think about it. They informed him that there was a meeting at the United Nations in two weeks concerning this problem. He made the decision to take the job.

In 1972, Joe and his wife Kerry and two children went to Micronesia. The schooling was still too poor to send his children, Roger and Sandy, to school there, so they went to Hawaii to a private school. They all made many friends among the Micronesians. When Roger came on vacations, he often went diving with Micronesian children. Joe found out what role reversal was one day when a woman in a store said, "Oh, you are Roger Oakey's father. "

Joe arranged for one Micronesian couple to come to the United States and study at Keene State College. For a while they stayed with his sister Mary and her husband Fred. They have kept in touch with Mary via email. When she told them he had died, they wrote how sorry they were. “We will never forget Joe as he was the instrument of our ability to get a college education.”

Kerry developed a brain tumor the first year that they were in Saipan and returned to Hawaii for an operation. Then she went to New Hampshire to live with Joe’s sister until she recovered. She and Joe were divorced shortly after that, and in 1975 he married Betty Tuck.



Reality



Joe and Betty

In Micronesia, Far West Laboratory, a company from San Francisco, was working to set up the legislature. There was no such thing as personal property there. If you needed a jacket, you just took whatever was available. The Micronesians would interview a group of people for a job and then hire one of their cousins. The people did not want to work from 9 to 5 because they felt it wasn’t necessary. The ground was so fertile, they put in a

seed and it grew. Fish were plentiful for food. Why work such long hours? These were all problems Far West Lab was trying to solve.

The Far West Lab wanted to hire Joe to go to Samoa. They were losing teachers. The teachers would come to the United States for training and wouldn't want to go back. Samoa operated on a Chief system. Joe would try to teach the legislators how to write and introduce a bill. They would accomplish that and then go back to the Chief who would tell them how to vote.

In 1977, Joe and Betty decided to sail to Samoa from San Francisco. They had a sailboat named Reality that was 35 feet long and had dark red sails. Betty also had a job in Samoa. On the way to Hawaii, they ran into a storm and Betty was thrown against a navigation table and broke some ribs. She had to stay at a hospital in Hawaii, so Joe hired two young boys to help sail. Joe insisted there should be no drugs or alcohol, but one boy brought drugs aboard and was very unreliable. He often slept on watch. He left the radio and other things on all night and ran down the batteries so they could not communicate. They could not run the refrigerator and had to eat dried food. When the boy slept, they would get way off course so the trip took much longer than it should have. They were gone most of the summer and no-one knew if they were alive or dead. When they finally arrived, they could not go into the harbor without a coast guard escort, but they could not contact them. Betty saw the red sails and called the coast guard. Betty and Joe were then able to communicate and she asked if there was something he wanted. He said he wanted something cold, so she bought popsicles and took them to the boat. They lived on the boat in Samoa, but Joe didn't like it and never cared for sailing after that.

His sister Mary said later they could joke about the summer when they were "out of touch with Reality."

Joe did consulting for a while around San Francisco. His interest in schools was curriculum. He had a call from Texas Instruments. They said that they had developed a small computer and wanted to know how they would work in schools. Joe went to



work for Texas Instruments training people how to use the computers. But sales people didn't like to sell them. It was the early days of computers and it took too long to explain and sell them. They could make more money selling other appliances. At that time, Texas Instruments had color computers and IBM still had black and white. IBM was afraid that computers would cut into the sales of their word processors.

This article appeared in the Texas Instrument newsletter:

### **One of our best—Joe Oakey**

Joe Oakey describes himself as a “change agent.”

He explains, “Computers are emerging as major components of change. They're information machines, and that's what education is all about—problem-solving with information as a base.”

“I see myself as a ‘change agent’ striving to improve the organization of schools and the delivery of education services, using the computer as a key tool.”

Because of Joe Oakey's unique philosophy and background, he understands the computer training needs of educational institutions. A former public school principal and college professor, Oakey is a Northwest Regional Educational Support representative for the TI Learning Center. According to Northwest Regional Manager Mark Sturges, Oakey's most outstanding professional feature is his knowledge of the academic community and his ability to work with it at all levels.

“My work at the Learning Center is fascinating,” Oakey said. “It's great being on the cutting-edge of new fields like artificial intelligence and being able to represent them to colleges and universities. And, the enthusiasm with which our programs are received by educators makes my work even more rewarding.”

A group of people was using a drafting program called AutoCAD. The group got together because home computers were a success and needed software. The new company was called Autodesk. They needed a training manual. Joe had written a manual for Texas Instruments to use AutoCAD. When people at Autodesk saw the manual, they invited Joe to lunch. They hired him to write a manual that could be used by IBM machines. When

he completed the manual, Joe was invited to another lunch. He was sitting next to the president who offered Joe a job. He was hired as a customer service consultant to teach people how to use the software. He was employee number 63. Autodesk was new and didn't have much money to pay him, so they gave him stock options. The company grew and their products are now used around the world.

Autodesk wanted to get into education, so Joe switched to that department. He went around and talked to schools all over the country about computer drafting. The man who was head of the department was interested in book publishing, so left Autodesk in 1990 and started his own publishing company. Joe took over his job and set up programs in community colleges. He spent ten years with the company, eight of it in education sales. He traveled all over giving speeches, including Canada and other foreign countries. He showed an airport design that could easily tell how long it would take to get from the parking garage to various gates in the airport, as well as other time-saving problems. One group of people wanted to build an apartment complex next to a historic Frank Lloyd Wright building. With AutoCAD, the real estate company showed how the two buildings would look beside each other and sold the idea.

*The following is quoted with permission from CADalist Publications LTD from the September 1989 issue of CADalyst.*

[www.cadalyst.com](http://www.cadalyst.com)

“Under Joe Oakey, Autodesk’s Education Department continues to foster some of the most long-sighted programs in the American software industry. Oakey’s easy good nature, bright eyes and head of snowy hair may make him look like everyone’s favorite uncle, but Autodesk already owes much of its current market dominance to the skill and vision of this gentle one-time teacher.

Oakey’s staff are involved in five specific programs in support of all North American AutoCAD sales to educational institutions. The Triple T program (for Training Teacher Trainers; CADalyst, Oct.87) held sessions in nine centers in the US and Canada in 1989, helping over a hundred educators to prepare and improve their in-service programs. These programs in turn

trained 5400 AutoCAD instructors and supported their CAD curriculum development. At the base of this pyramid almost 150,000 students learned about AutoCAD in classes that year alone.”

Joe was past retirement age and the President of Autodesk asked him what he would like to do. Joe wanted to create a foundation to propose programs in schools called Project-Based Learning.

In 1990 Joe was the first President of Autodesk Foundation after successfully establishing and building the education department of Autodesk into one of the company’s most successful units. He was named an Autodesk, inc. Distinguished Fellow.

*In a flyer produced by the new Autodesk Foundation, Joe, as first president wrote the following:*

“As President of the class of ’50 at Keene Teachers College in New Hampshire, I addressed my classmates with the following optimistic words: ‘You and I are living in a young nation that is now undergoing the transition between adolescence and maturity. We will be present when the educational system is developed for this newly awakened nation; we are indeed fortunate.’

This year I celebrate 41 years of work in education, and my prediction is at last coming true. There is a loud and clear call to action which is being sounded nationwide: Public schools must be brought into the information age through radical restructuring; the responsibility for our schools belongs to each and every one of us and the time to act is now!

Through the Autodesk Foundation I have set out on an ambitious program to improve the quality of education for students in America. By designing model educational programs and establishing partnership to disseminate their successes nationwide, we plan to do our part in bringing schools into the information age.

However, real and lasting change will come about only if many forward-thinking educators, business leaders and community leaders work together in a spirit of cooperation and collaboration. We hope that our efforts will inspire other corporations, educators and organizations to play an active role in transforming our educational system.”

Joseph H. Oakey

*In the same flyer from Autodesk Foundation:*

“ABOUT THE FOUNDATION’S PRESIDENT

As President of the Autodesk Foundation and a Distinguished Fellow of Autodesk, Inc. Joseph Oakey draws on a unique background of professional experience in both business and education.

As an educator, Dr. Oakey has been teacher, professor, principal superintendent and state commissioner of education. He has served on the White House Committee for National Goals for Education and has also served as a consultant to many agencies and organizations, among them, General Electric, Eastman Kodak, Encyclopedia Britannica and the American Management Association.

Dr. Oakey’s achievements as a business strategist and social philosopher have resulted in his appointment to the National Advisory Committee for the Center for Law and Education, the National Advisory Council for the International Technology Education Association and the Boards of Directors for the Microcad Division of the National Computer Graphics Association, the Consortium for Manufacturing Competitiveness, the Alliance for Manufacturing Productivity and the Beryl Buck Institute for Education.”

In 1995, Autodesk Foundation received a \$237,000 grant to implement project-based learning programs in public schools in Marin County, California. This increased the number of schools that were already involved with project-based learning. At that time, Joe was president of Autodesk Foundation and remarked, “This grant will provide more schools with the opportunity to increase the breadth of their students’ education. With more students and teachers involved in project-based learning, we are confident that our school system will better prepare students for the challenges they’ll face upon completion of their education.”

Because students in the program knew that they were doing something real and making a difference, they were able to make meaningful connections between what they learned in classes and life outside the classroom. Through project-based learning, implementing real solutions to real problems with contemporary technology and applied logic, teachers noted students retained

information better and were more able to show their individual and collective strengths.

*Bob Pearlman, who succeeded Joe as President of Autodesk Foundation, has given permission to use material that Joe provided for PBL NEWS in the summer of 1997. The following six paragraphs from that publication are how Joe expressed his feelings about Project Based Learning:*

“Meeting goals, solving problems, cutting through meaningless activities brought about in me new ways of looking at and doing school work.

What has this to do with my passion for Project-Based Learning? I consider the six months I spent working in the private sector as my father's representative the most valuable of my total educational experience. First, it had real meaning. Prior to that work, math was easy for me, but not interesting. When I learned, in machine design, some real-world applications of mathematics, the subject suddenly came to life for me.

Similarly, English no longer was just English, but a process of communicating ideas and concepts to others in a way that allowed them to understand without ambiguity. And engineering, I had learned, cannot be ambiguous. Listening and understanding others was critical, especially as a youngster dealing with experienced adults.

When I returned to school, it was easy to see what was meaningful and what was just busy work, and to focus on the former. It is clear to me that students who have been involved in valid Project-Based Learning from a young age will learn valuable content much more readily and apply it much sooner.

I am also extremely supportive of meaningful apprenticeships for all high-school students, to allow them to learn how to apply the knowledge obtained in the classroom. It was an accidental part of my education, but what I gained from it has made me hope that we will eventually see it as a planned part of the intellectual development of all students.

For these and other reasons I have become an advocate of educational experiences that integrate the disciplines and provide students with the desire to learn because learning has meaning. To me, that means Project-Based Learning. The pioneering work started by the Autodesk Foundation, as well as others, has proven the value of this approach. And so I turn, once again, to my lifelong mission of working to create better learning experiences and environments, and to improve these practices.”

JHO

One day while visiting his sister Mary in New Hampshire, a solar car went down the street. Mary told him that that was Bill Bigelow and that he had his Peterborough High School students design and build the car. They had entered it in a competition and won over colleges like Harvard and MIT. Joe went out to talk to Bill about his project. Joe then arranged for Bill to fly out to California for a week and talk to teachers all over the country about what they had done. Joe found other teachers around the country and invited them to California to teach teachers.

*The following material about Project Lead The Way was sent by Gary Adelson:*

Joe retired from Autodesk Foundation at the end of 1996 and became President Emeritus. But he soon became involved in another great new educational program called Project Lead the Way. The timing for Joe to join the PLTW team could not have been better. Joe’s commitment to Project Based Learning and his engineering background was a perfect fit for this new program.

Project Lead The Way had been developed in the Shenendehowa CSD in Clifton Park, NY. Richard Blais, the Director of the Technology Department had joined the district with a promise [some thought it a threat] to change some of their traditional programs in order to prepare students for the technical jobs they would find when they graduated high school. He persuaded some of the teachers in his department to work with him to modify several existing state sponsored pre-engineering courses to reflect changes he knew of through his reading and meetings with working engineers. Starting in the late 1980s their efforts took about ten years to catch the interest of one member of an advisory committee he had initiated. That person, Richard Liebich, who owned a small manufacturing company, was interested in the problems facing industry across the country – a lack of sufficient engineers to replace those retiring and support the expansion of new industries being started.

Liebich introduced Blais to his father, a self-made millionaire who shared his son's concern for industry and the country. They persuaded him to hire some teachers to expand their plans and to develop a formal curriculum for a pre-engineering sequence of courses for high school students and to share them with other schools. Dick started working with the Liebich's half time to try to get some schools to try his program, offering them some financial incentives. About that time, he met with a teacher named Ken Ford who had been working part-time to run in-service programs on AutoCad for Autodesk Company. This relationship put him into contact with Joe.

In a matter of months, Joe became part of Dick's small team, developing strategies to get schools involved in the new, but still untried program and to help convince some businesses to support their efforts financially. Joe's commitment to Project Based Learning along with Ken Ford's knowledge of AutoCad helped strengthen the program's approach to teaching pre-engineering

courses, and got us in the door with a number of businesses.

Joe was one of the key players in the development of PLTW and Ken Ford helped structure its approach to curriculum development and instructional processes. Joe preferred these terms to those frequently used by educators. He particularly became irritated when anyone used the word ‘pedagogy’ which is meant to summarize the accepted techniques involved in instruction. Joe did not feel that traditional teaching methods were effective and maintained an almost religious commitment to project orientation. He may even have influenced the selection of the programs overall name - Project Lead The Way.

From its official beginning in 1997 until June of 2007, the program grew from its first dozen schools in New York State to over 2000 schools across all 50 states enrolling over 200,000 students annually. Joe had an assignment to meet with and sign up school districts throughout California and neighboring states.

Along with its high school sequence, a program for students in grades 6-8 was added and numerous other positive curriculum initiatives made.

Joe attended all leadership meetings often providing key ideas. He was also instrumental in helping find outstanding speakers for a number of conferences held to train school guidance counselors to help enroll students in the program.

The following is quoted from Project Lead the Way’s web page to help explain the goals of PLTW:

“Project Lead the Way (PLTW) offers a dynamic high school program that provides students with real-world learning and hands-on experience. Students interested in engineering, biomechanics, aeronautics, and other applied math and science arenas will discover PLTW is an exciting portal into these industries.

PLTW’s premier high school program, Pathway To Engineering™ is a four-year course of study integrated into the students’ core curriculum. The combination of traditional math and science courses with innovative Pathway to Engineering courses prepares students for college majors in



engineering and E/T fields and offers them the opportunity to earn college credit while still in high school.

Pathway To Engineering™ courses engage high school students through a combination of activities-based, project-based, and problem-based (APPB) learning. APPB learning not only creates an environment for applying engineering concepts to real problems, but also prepares student to:

- Solve problems
- Participate as part of a team
- Lead teams
- Speak to a public audience
- Conduct research - Analyze data
- Understand real-world impacts
- Learn outside the classroom

No matter where students pursue their collegiate training in engineering, Project Lead The Way provides an excellent foundation for addressing and implementing real solutions to real problems with contemporary technology and applied logic.

In the last years of his long productive career in education, Joe concentrated on the State of Washington. Shepherd Siegel volunteered the following information concerning his work with Joe:



Joe in Washington, March, 2005

**“Well here is a brief recounting of my relationship with Joe Oakey, one that I treasure, one that means a lot to me:**

Shortly after I was entering service with Seattle Public Schools (September 1996) as their Career + Technical Education Manager, one of my staff people, Dale Brown, acquainted me with this new pre-engineering program, *Project Lead the Way*. Dale had been working closely with Joe, and with very little assistance from me, successfully brought PLTW to Ballard High School, making that the first high school in the state of Washington to adopt the curriculum and roll it out. A few years later, in the early 2000s, Dale had retired but I contacted Joe because I needed help spreading the program to more schools. Joe offered me a deal: if I would connect him with some higher education folks in Washington State, he would help me get the program into more high schools.

On July 3 of that year, Joe, Nancy Verheyden (from the Seattle Community College District) and I got together and brainstormed for a few hours: what would it take to connect these growing high school pre-engineering programs to all eight colleges of engineering in our state, and to the engineering tech programs in our community colleges? Thus was born WASCEE, the Washington State Coalition for Engineering Education. With the help of people like George Simmons (Engineering Dean of Seattle University), Terry Byington (an industry lobbyist), and a small grant from the State Board for Community and Technical Colleges, we launched a series of statewide meetings that included high school, college, government, and industry folks, and successfully gave engineering education a 'push' in the state. Through these efforts, today there are approximately 70 Project Lead the Way middle and high school programs in Washington. There is also a new STEM (Science, Technology, Engineering & Mathematics) position at our state department of education. The person in that position is also the state director for PLTW, a position I held as a courtesy to Joe until our state department could properly accommodate that role. Joe was a mentor and leader who came up to Seattle and Washington State frequently to help us propel our state to this success. The legacy lives and continues. Articulations with Washington State University and Seattle University are imminent. Within the next few years, we hope that these articulations between K-12 and higher education will mean that the engineering student seats in our colleges will be filled, and will be filled with students with an authentic passion for engineering: they will finish their studies as engineers, and go on to help build a new and sustainable world. This new generation of engineers can and should be as much female as male, and represent all the cultures that live here in the United States. Thank you, Joe!

A couple of side notes. All professional accomplishments aside, Joe was quite a character-- lucid, sharp, directed, funny, with a genuine appreciation of other people. I spent a lot of one-on-one time with him, and considered him a

**mentor...I was always asking him to help me understand my own potential. The stories I always remember had to do with his becoming the state's commissioner of education in Vermont, and his sailing trip, which was not without its dangers.“**

When he retired, this notice appeared in the PLTW Newsletter: “Joseph Oakey, a trusted mainstay and respected advisor to Project Lead the Way (PLTW) has accepted the role of Director Emeritus with the organization effective January 1, 2003. In this capacity Joe will work on special assignments for Project Lead the Way, relinquishing his current primary responsibilities in developing the California network of schools.”

Joe’s wife Betty had the beginnings of Alzheimer’s disease. It got to a point where Joe couldn’t travel any more.

Joe received many awards and honors in the education field. He received an Honorary Doctor of Humane Letters from Keene State College in 1972. In April, 1996, at the regional meeting of the Marin County Board of Supervisors, he and Judy Morgan of Autodesk were presented the Western Fairs Association award for Excellence in Education. In 2000 he received The Alumni Achievement Award from Keene for his impact on Education in this country and abroad.

Joe’s son Roger and Betty’s two girls, Jennifer and Laura got together. Joe didn’t like California because it was too busy and too crowded. He wanted to get back to New England. Joe had developed health problems and Roger, who lived in Colorado, was afraid if Joe lived in Colorado the high elevation and lack of oxygen would not be good for him.

Betty’s condition was getting worse and he could no longer take care of her. Jennifer agreed Joe should leave and she would take on the responsibility of her mother.

Joe had been doing some consulting for Project Lead the Way in Albany, New York since 1999, so they all decided Keene, New Hampshire would be the best place for him to live. He moved back to Keene in August, 2006. Mary and Fred Fosher, his sister

and brother-in-law acted as care givers. They drove him to medical appointments and helped him find his first apartment. They tried to get him into Langdon Place, an assisted living facility, but there was a waiting list. He was hospitalized for a short time and was released for rehabilitation at Langdon Place. After that, he was able to secure an apartment there and Mary and Fred got him set up and still saw him nearly every day.

He planned to continue work with Project Lead the Way and did communicate with various people from the organization, then attended one final meeting in New York State. But his health was gradually getting worse and he had to give up his lifelong passion for education. He had a massive heart attack and died on May 4, 2008. His ashes were spread near a lovely stream in Vermont.



Joe's son Roger and step-daughters Laura and Jennifer

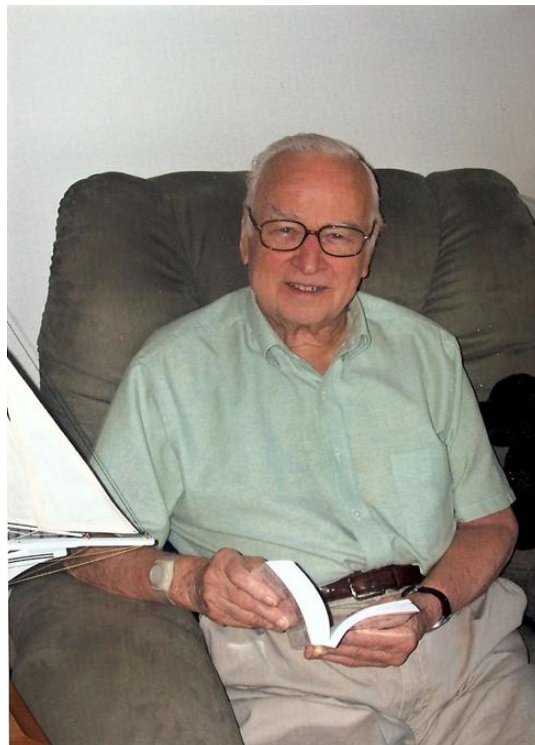


Neil Tebbano of Project Lead the Way sent an announcement of Joe's death to people involved in the project. Among other things, he stated, "When the history of Project Lead the Way is written, It will note Joe's profound influence on the program His pragmatism kept us grounded. His wit and wisdom made us smile and reflect. He was the consummate educator and gentleman. He will be missed."

Two of the last pictures taken of Joseph Hall Oakey:

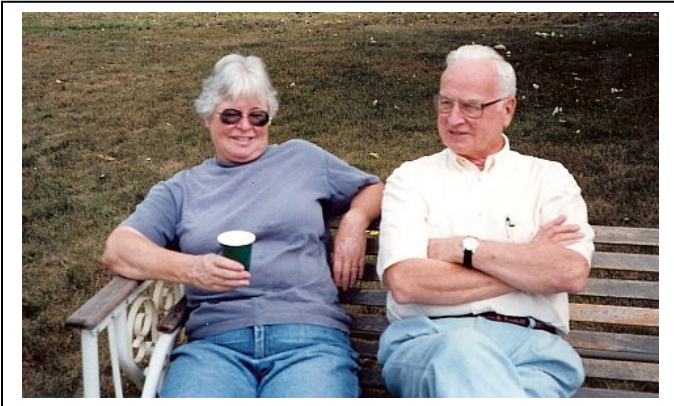


Mary, Dorothy and Joe – October 2007



At Langdon Place retirement home – April, 2008

**Some pictures of Joe and his family:**



Mary and Joe



Joe, Mary and Roger



Joe, Mary, Dorothy  
**More Pictures taken of Joe's family**

Top: Joe and Mary at swimming hole in Surry.

Bottom: Joe, their adopted daughter Sandy and Kerry

Joe and nephew Jason looking at sailboat being built.

