

Figure 7 – Front view of Hydrostatic Transmission and Axle Stand

Building your own laboratory equipment can be a time consuming but rewarding experience. Students respond to any equipment which makes the concept you are trying to get

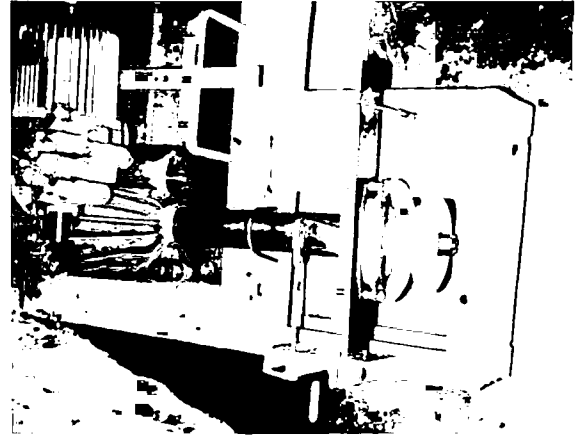


Figure 8 – View of Transmission Stand showing Disc Brake used to measure torque

across easier to visualize. As long as there are specialized areas for which teaching equipment must be built, the instructor will be called upon to build some of his own equipment.

The Present Condition Of Higher Education – A Quotation

HOWARD R. BOWEN, Claremont Graduate School

The following is a quotation from an address by Howard R. Bowen before a luncheon meeting of business leaders in Dallas, Texas sponsored by the Council for Financial Aid to Education, Inc.

Dr. Bowen was formerly president of the University of Iowa and has recently been named president of The Claremont Graduate School, Claremont, California.

"It is no secret that higher education has been in a turbulent period. Some of the stresses in our society – those associated with racial strife, poverty, the war in Viet Nam, the overemphasis on material values, and the oppressiveness of large organizations – have been reflected on the campus. In addition, young people of the present 18 to 25 generation, whether in college or not, have been struggling for adult status and adult freedoms. The outcome of these two sets of forces has been varying degrees of unrest on the campus. The universities have been trying to meet these new conditions and pressures. As yet they have satisfied neither the more militant students who want faster change nor many members of the public who want to continue restraints on the young and who are fearful of open discussion of unorthodox or radical ideas. The universities in recent years have been caught in the middle, and have been subject to criticism, and sometimes abuse from two directions.

"The colleges and universities at this time need special understanding and moral support from the public, from donors, and from political leaders. There are many persons today who would threaten the precious freedom and autonomy of the universities by imposing loyalty oaths, restrictions on freedom of thought and speech, control over what is taught and what is studied, supervision over the selection of faculty and students, and detailed control over internal budgets. There are also some – both private donors and public legislators – who would withdraw financial support as a kind of punitive measure. And unfortunately people are sometimes rather indiscriminating in that they blame the University of Texas, or Rice, or the University of Iowa for what may have happened at San Francisco State or Columbia. For those who are critical of higher education today, I would like to offer several thoughts.

"First, the impression of higher education presented in the mass media emphasizes disorders and conflicts. Disorders have indeed been disastrous at three or four institutions in

California and New York, and have been mildly troublesome at many. However, the plain fact is that disorderly conduct is rare and that the overwhelming majority of students and faculty, 99 percent at least, at most institutions, certainly including the University of Iowa, are performing creditably by any reasonable standard. Indeed, some of the disorder is fomented by persons who are not students at all, but hangers-on. The students with few exceptions are orderly, hard working, morally upright, idealistic, committed to learning, and dedicated to the advancement of American society. No younger generation has ever seen eye to eye with its elders, and this generation is no exception. But in morality, idealism, honesty, and hard work they are superior to any previous college generation and superior to any other major segment of our society. They are far ahead of my own college generation. They are not perfect; some of them make mistakes; some of them are rude and unkempt; sometimes they do and say stupid things. But who doesn't? To indict the whole present generation of students and young faculty – as some are inclined to do – is grossly unfair and irresponsible.

"To those adults who criticize the college generation I would say: Remember that these young people are your sons and daughters and mine, not some abstract collection of people the universities have gathered together. These young people are the way they are not because of what the colleges and universities have done, but because of what their families, their communities, and American society have done. But in fact the current crop of college students is in no sense degenerate. They are on the whole admirable young men and women.

"Second, the established colleges and universities are outstandingly successful in carrying out their mission of education, research, and public service. They have never been more creative, or more stimulating, or more effective in serving society. American higher education is the envy of the entire world. By any criticism – ability of faculty, standards, teaching effectiveness, research and scholarly accomplishment – American colleges and universities are vastly superior to the institutions of ten, twenty, or fifty years ago.

"Third, the universities of America are today woven more closely into the fabric of our society than ever before. Our economy, our government, our military strength, our

churches, our schools, our health, and our cultural life are all utterly dependent upon our institutions of higher education. We simply could not operate our society - it would soon break down - without the educated and trained people the universities produce and without the basic research they perform. Some of our young people are complaining that the universities are too intimately involved with what is sometimes called the 'military-industrial complex.' They may be right. But what they mean is that the universities are overemphasizing vocational and professional training and underemphasizing the broad liberal education intended to enlarge the human spirit and to give understanding of social issues and world problems. However, if they believe that an advanced technological society like ours could function without sophisticated technical training and research, they are dead wrong. To slow down the progress of higher education would be the surest way to weaken our society economically, culturally and morally. If I were a foreign power wishing to destroy the United States, I would not bother with bridges, utility installations, military secrets, and congested cities. I would strike at the heart of America - at the center of its know-how - which is in its universities.

"Fourth, the restless questioning that is found on American campuses today is a reflection of the problems and temper of our society and not of some perversity of the University. As a society we are in the midst of great searchings as to our national role in world affairs, our system of values and goals, and our conception of human rights and human dignity. Our young people are deeply stirred by these issues, and their idealism leads them to strive for improvements in our social order. It is inevitable and desirable that the campuses should become the centers of debate, discussion, and action on these matters.

"It is utterly irrational to fear universities or to penalize them because ideas are discussed there, because new concepts originate there, because people there care about human rights and human quality, or because a true concern exists there for peace and human brotherhood. As a nation, we should thank God that there is at least one place in our society where people can speak their minds, where they can debate issues, where they can be concerned about the meaning of human life, where they can explore the greatest of all questions: 'How should a life be lived?'"

"It is perhaps fitting to quote a passage from the minutes of the Wisconsin Board of Regents written in 1894 at a time when academic freedom was in jeopardy: 'Whatever may be the limitations which trammel inquiry elsewhere, we believe that the great state University of Wisconsin should ever encourage that continual and fearless sifting and winnowing by which alone the truth can be found.' We should never forget that the 'continual and fearless sifting and winnowing' is sometimes a noisy and contentious process. But only when fearless sifting and winnowing is taking place is the university doing its job.

"And so I say, cherish your colleges and universities. They are worthy institutions. Try to understand them, even when they are a bit difficult to understand. Give them adequate financial support. Don't give in to the temptation to starve them at a time when they have never served you more effectively and when their services were never more needed. And keep them from external controls so that they may continue to be influential centers of fresh ideas and so that they may seek the truth without restriction imposed by interest groups and public prejudices."

Ensminger-Interstate Distinguished Teacher Award

The establishment of the Annual Ensminger-Interstate Distinguished Teacher Award of \$1,000.00 and a plaque and the selection criteria were announced in NACTA Journal, March 1969, pages 16-17. The following selection criteria includes the slight modification of October 2, 1969.

I. The recipient to be selected shall:

A. For 1969, 1970

1. Be a NACTA member in good standing for at least one year prior to receiving the Award.
2. Be participating in a program in which the effectiveness of his teaching is being or has been evaluated by his students. This can be either
 - a. The NACTA teacher evaluation program. See the report of the Teacher Evaluation and Recognition Committee (hereafter the Committee). NACTA Journal, June, 1968; or
 - b. A formal system such as may be functioning in his Institution; results to be included in his dossier.
3. Be now primarily engaged in classroom teaching and for at least five years previously has been so professionally involved.
4. Have his administrative officer (department head or dean) prepare a dossier of evidences that would establish him as an outstanding teacher and place three copies in the hands of the Committee chairman (Dr. E. Grant Moody, Agriculture Division, Arizona State University, Tempe, 85281) three months before the NACTA annual meeting (or April 24, 1970). This dossier should include but is not limited to:
 - a. An evaluation of the applicant's qualifications as a teacher which will indicate the extent to

which the teacher makes himself available for student counselling, advisory and other pedagogical activities; attracts, involves and intellectually stimulates students; keeps himself current in both his subject matter and teaching techniques; and is sincerely dedicated to the search for truth and expanding knowledge and recognizes as legitimate and encourages similar dedication among his colleagues. A completed "Teacher Evaluation by Administrative Officer" will be submitted in addition to other evidence including statements by colleagues.

- b. A letter evaluating his teaching effectiveness from a student honor society (or equivalent) of his institution (Delta Tau Alpha, Alpha Zeta, etc.)
 - c. A completed "Teacher Evaluation by Alumni" form with any appropriate additional comments from each of five who are not now enrolled in his school but who have previously been enrolled in his classes.
 - d. A written statement by the teacher identifying his philosophy of teaching and how he makes it effective.
 - e. Other pertinent material.
- B. Beginning in 1971, it is proposed that the recipient will be selected from the eminent ranks of TEACHER FELLOW (proposed requirements to be published). The Ensminger-Interstate Award will thus, annually give special recognition to one of the outstanding teachers in the profession. Selection will be based on:
- I. Nomination by one or more: