1970 Distinguished Teacher of the Year Dr. William Tessin, Ph.D. Professor of Ocean Engineering College of Engineering

When beginning to speak to an audience, it is customary for the speaker to recognize certain members of that audience who may have special attributes germane to the occasion. I'll not depart from that custom, and so I recognize all members of this audience and address you as

Dear Colleagues:

Mr. Webster defines the word "colleague" as "an associate in a profession or a civil or ecclesiastical office or employment." In this definition, I seize upon the word "associate" because as students and teachers we are associates – as students we are teachers and as teachers we are students. Throughout our lives, none of us can escape being students and teachers all at the same time.

Great honor has been done today. I look upon this honor more in a symbolic sense rather than in a personal sense. It is symbolic because I believe this recognition represents your thoughts and ideas about the University and all those who are a part of it.

There is much evidence to support this belief. A community such as ours could be exactly the way it is described in the pertinent bulletins. It can be as dry as the reading. Or it can be truly exciting, challenging, and give joy to those who are part of it. Let us look at some of the elements which give rise to the excitement and joy of which I speak.

Of late, the word "power" has been used more and more and in different ways. We are all familiar with national power, or political power, or electric power, or a power play. We are now hearing about student power, or faculty power, or what have you. I would like to discuss with you some aspects of power. Power becomes evident only when there is an interaction. We speak of a person having a powerful personality, but one feels this only when there is some kind of interaction. No one would know how powerful a personality may be if that person remained closeted and did not interact.

We speak of the power of nature. Perhaps we do not appreciate such power until we are witness to the fury of a hurricane or a landslide or lightning striking close by. And then

we look closer and discover nature's quiet but awesome power in the will of life to grow and survive. We see a plant crack a rock in its will to grow. In these examples, you see that there must be an interaction and only when this interaction occurs does power appear. It becomes evident in magnitude, in kind, and in scope. One may say that when there is an interaction then one can detect or sense a flow of power. Without interaction we cannot sense power, we can only guess.

If power is to flow and interaction is the means to detect the flow, there must be a receiver, for if there was not a receiver then there would be no interaction. Thus we have a source and a receiver, but which one is which cannot be known until there is an interaction and we thereby detect the power flow.

Let me comment briefly about the receiver. For power to flow effectively and meaningfully, the receiver must possess a resistance. As a simple illustration, consider such a mundane operation as watering a lawn. For a lawn to be effectively and meaningfully watered, there must be a certain grouping of spray heads. The spray heads offer resistance to the water flow. If we remove some spray heads, we remove resistance and no longer will we get meaningful and effective watering of the lawn.

The nature of the resistance is also important. If the resistance is infinite, there can be no power flow and certainly it is neither meaningful nor effective. A burned out lamp bulb has infinite resistance and it does not illuminate. On the other hand, the resistance in the receiver may be zero, in which case the interaction between source and receiver is an explosion – a short circuit, if you will – and no one in their senses can label such a result as meaningful and effective.

In what has gone before, I believe I have shown that power is seen or felt or detected only when there is an interaction, and that some resistance is necessary for a meaningful and effective power flow.

Let me now apply these thoughts and ideas to teaching and learning. Among other attributes, a university has a faculty and it has students. Its purpose is to deliberately create an interaction. The observable events in the interaction determine how meaningful and how effective is the flow of knowledge and truth, the ultimate power of man. At any particular moment there is an identifiable source and an identifiable receiver, yet, although the roles may be and are changed at any moment, there is always interaction.

The excitement and joy I previously mentioned come from this deliberately created interaction in our community. They come about because I believe we are all busy

seeking that proper modicum of resistance which makes the interaction we call teaching and learning meaningful and effective.

The other side of the coin is also worth looking at for, if you are to have a meaningful and effective interaction or flow of power or knowledge, then you must expect some resistance, or better yet, you must expect a challenge.

Between the two extremes of resistance previously mentioned there is a best combination which will assure a truly effective and truly meaningful interaction. I use the word "understanding" for this best combination.

Judging from my remarks, it is obvious I am very pleased to be here and, having addressed you as colleagues, it must also be obvious that I am happy that you are here, too. I am proud to be the symbol of our thoughts and ideas.

I now ask you to join me to dedicate ourselves to seek out that combination which will result in a challenge that will make all our interactions truly meaningful and truly effective.