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TOPIC: CURRICULAR IMPLICATIONS OF MANPOWER DATA (EDUCATION AND EMPLOYMENT, WHERE IS THE BALANCE?)

INTRODUCTION: IN AT LEAST ONE OF THE GROUPS MEETING HERE THIS MORNING, THE SPEAKER IS EXPOUNDING THE PHILOSOPHY THAT MANPOWER DATA, AND EMPLOYMENT NEEDS AND OPPORTUNITIES HAVE NOTHING TO DO WITH EDUCATION. THERE ARE THOSE THAT WILL GO SO FAR AS TO SAY THAT EMPLOYMENT IS A CONSEQUENCE OF EDUCATION AND NOT A REASON FOR IT. THE GROUP IN THIS ROOM IS HOPEFULLY MADE UP OF INDIVIDUALS THAT SEE A MUCH CLOSER CONNECTION BETWEEN EDUCATION AND THE LABOR MARKET.

HAVING BEEN EDUCATED AND HAVING WORKED AS AN ENGINEER, AND NOW WORKING IN THE VOCATIONAL EDUCATION FIELD, I SEE A DIRECT CONNECTION BETWEEN EDUCATION AND THE WORLD OF WORK. IN FACT, I WILL GO AS FAR AS TO SAY, IF YOU HAVE TO CHOOSE BETWEEN FOUR YEARS OF LIBERAL ARTS AND WORKING, THEN YOU BETTER GO TO WORK. I FEEL VERY STRONG THAT WE SHOULD TAKE A CLOSE LOOK AT OUR EDUCATIONAL STRUCTURE AND TRY TO DO SOMETHING ABOUT THAT 50 PERCENT OF THE FRESHMAN CLASS THAT LEAVE BEFORE GRADUATING WITHOUT ANY OR WITH MINIMAL WORKING SKILLS. MANY STUDENTS CAN'T AFFORD TO SPEND FOUR YEARS "ROUNDING OUT" BEFORE EMPLOYMENT. HOW ABOUT TEACHING THEM THE SKILLS FIRST AND THEN ROUNDING THEM OUT WITH THE FRILLS LATER. THAT WAY IF THEY DROP OUT OF COLLEGE, THEY WILL BE ABLE TO

BECOME GAINFULLY EMPLOYED , AND SUPPORT THEMSELVES WHILE FINISHING THEIR COLLEGE PROGRAM .

BUT , GETTING BACK TO THE ASSIGNED TOPIC , JUST WHAT ARE THE IMPLICATIONS OF MANPOWER DATA ON THE CURRICULUM ? TO ME THEY ARE DIRECTLY CONNECTED . WE HAVE AN OBLIGATION AS EDUCATORS TO PREPARE OUR STUDENTS (NO MATTER HOW WELL ROUNDED) TO BE ABLE TO GAIN EMPLOYMENT AND PROGRESS IN THEIR CHOSEN FIELD OF ENDEAVOR . IT IS A TERRIBLE INJUSTICE TO EDUCATE OR TRAIN (AND TO SOME THERE IS A DIFFERENCE) STUDENTS IN DEAD END OR NON-EXISTING OCCUPATIONS . WE SHOULD BE CLOSELY IN TUNE WITH THE NEEDS IN THE WORLD OF WORK AND COUNSEL OUR STUDENTS INTO THOSE SUBJECTS THAT WILL BE OF MOST USE TO THEM . WE SHOULD ALSO BE AWARE OF THOSE FIELDS THAT FACE RAPID CHANGE , AND DO WHAT WE CAN TO MAKE THE STUDENT'S EDUCATIONAL EXPERIENCE BROAD ENOUGH TO ASSURE HIM FLEXIBILITY IN ADAPTING TO THE CHANGING NEEDS OF HIS EMPLOYMENT .

WE DO LIVE IN RAPIDLY CHANGING TIMES . LET ME GIVE YOU A FEW EXAMPLES OF WHAT I MEAN :

COMMUNICATION :

COLUMBUS DISCOVERED AMERICA , BUT IT WAS NOT UNTIL 300 YEARS LATER THAT THIS INFORMATION BECAME GENERALLY KNOWN .

WRIGHT BROTHERS MADE THEIR FIRST SUCCESSFUL AIRPLANE FLIGHT , BUT IT TOOK 30 YEARS FOR THIS INFORMATION TO BE REALIZED AROUND THE WORLD .

NEIL ARMSTRONG STEPPED ONTO THE SURFACE OF THE MOON
IN 1969 AND 600 MILLION PEOPLE WATCHED HIM.

IN A RELATIVELY FEW YEARS:

60 MILLION JOBS WILL ALTER OR BECOME OBSOLETE.

CHECKING ACCOUNTS WILL BECOME OBSOLETE--COMPUTERS
WILL ADD TO OR DEDUCT FROM YOUR ACCOUNT AS YOU
EARN AND SPEND MONEY.

LIBRARIES WILL HAVE INFORMATION STORED AND AVAILABLE ON
A DIAL ACCESS SYSTEM, NATION OR WORLD WIDE.

LANGUAGES WILL BE TRANSMITTED INSTANTLY BY COMPUTERS
IN BOTH WRITTEN AND VERBAL FORM.

CHILDREN NOW IN SCHOOL CAN EXPECT TO CHANGE THEIR
VOCATIONS AN AVERAGE OF THREE TIMES DURING THEIR
WORKING YEARS.

TECHNOLOGICAL CHANGE:

CHEMICAL FIELD: 40% OF SALES ARE FROM PRODUCTS THAT
DIDN'T EXIST TEN YEARS AGO. 500 NEW PRODUCTS BEING
BROUGHT OUT IN A YEAR'S TIME.

BELL AND HOWELL: 80% OF SALES ARE FROM PRODUCTS THAT
DID NOT EVEN EXIST FIVE YEARS AGO. ONLY 2% FROM
PRODUCTS THAT EXISTED TEN YEARS AGO.

GENERAL DYNAMICS: 95% OF SALES FROM PRODUCTS THAT
DIDN'T EXIST TEN YEARS AGO.

DU PONT: 50% OF SALES ARE FROM PRODUCTS THAT HAVE DEVELOPED DURING THE PAST TWENTY YEARS.

BUSINESS AS A WHOLE: MORE THAN 20% OF ALL SALES ARE PRODUCTS DEVELOPED SINCE WORLD WAR II.

IN LESS THAN TEN YEARS, THREE FOURTHS OF OUR LABOR FORCE WILL BE PRODUCING GOODS AND SERVICES THAT HAVE NOT YET BEEN DEVELOPED.

THERE IS PRESENTLY AN IMBALANCE IN EDUCATION--TOO MANY PH.D.'S AND TOO FEW TECHNICIANS AND MECHANICS. AS A RESULT, JOB REQUIREMENTS GO UP TO MEET THE QUALIFICATIONS OF THE APPLICANTS. MANY OF THESE "OVER TRAINED" COLLEGE GRADUATES BECOME DISSATISFIED IN THEIR JOBS WHEN THEY REALIZE THAT THEY COULD HAVE ACCOMPLISHED THE WORK FOR WHICH THEY WERE HIRED WITH LESS THAN THE FOUR OR MORE YEARS OF COLLEGE PREPARATION THAT THEY HAVE ACTUALLY TAKEN.

THERE ARE ALSO SOME PSYCHOLOGICAL IMPLICATIONS INVOLVED WITH THE TECHNICIANS THAT COME INTO THEIR JOBS THROUGH THE "BACK DOOR." I MENTIONED EARLIER THAT APPROXIMATELY 50% OF ENTERING FRESHMEN DROP OUT BEFORE COMPLETING THEIR DEGREE. IN THE ENGINEERING FIELD THIS DROPOUT RATE IS CLOSER TO 80%. MANY OF THESE DROPOUTS, ESPECIALLY FROM THE ENGINEERING AND SCIENTIFIC FIELDS, FIND EMPLOYMENT AS TRAINEES AND EVENTUALLY BECOME QUALIFIED TECHNICIANS. WITH THE STIGMA OF BEING A "DROP OUT" THEY MANY TIMES HAVE MORE DIFFICULTY BECOMING EFFECTIVE WORKERS THAN THE INDIVIDUAL THAT STARTED OUT TO BECOME A TECHNICIAN. THIS IS

ESPECIALLY TRUE WHEN THEY FIND THEMSELVES WORKING FOR CLASSMATES THAT WENT ON TO COMPLETE THEIR DEGREE.

THE MANPOWER DATA SUPPLIED FOR USE AT THIS CONFERENCE WERE NOT TOO HELPFUL CONCERNING THE TECHNICIAN LEVEL AND THE MECHANIC OR TRADE LEVEL. THERE ARE SOME DATA CONCERNING JOB REQUIREMENTS IN UTAH FOR DRAFTSMEN, ELECTRONIC TECHNICIANS AND SURVEYORS BUT VERY LITTLE AVAILABLE ON NUMBERS BEING TRAINED ON JOB PLACEMENT. WE DO KNOW FROM OTHER SOURCES, HOWEVER, THAT THE NUMBER OF TECHNICIANS BEING TRAINED IN FORMAL PROGRAMS IN THE STATE EXCEEDS THE EMPLOYMENT OPPORTUNITIES BY APPROXIMATELY 27%, AND THAT THE NUMBER OF GRADUATES FROM FORMAL TRAINING PROGRAMS IN TRADE AND INDUSTRIAL OCCUPATIONS ARE ONLY MEETING 75% OF THE EMPLOYMENT NEEDS IN THE STATE. WE ALSO KNOW THAT DURING 1971 THERE WERE OVER 5000 JOB OPENINGS IN THE STATE FOR AUTO MECHANICS, CARPENTERS, ELECTRICIANS, WELDERS, DIESEL MECHANICS, AND OTHER TRADE LEVEL OCCUPATIONS. THIS IS A CLEAR INDICATION THAT WE ARE NOT TRAINING FOR AVAILABLE JOBS.

IN CONCLUSION, IT IS MY OPINION THAT WE SHOULD PROJECT AS FAR AS POSSIBLE INTO THE FUTURE TO IDENTIFY NEW AND UNFAMILIAR OCCUPATIONS. WE SHOULD TAKE HEED OF THE MANPOWER DATA AVAILABLE AND PREPARE OUR STUDENTS FOR THE JOBS THAT ARE AVAILABLE. WE SHOULD BE VERY CAREFUL NOT TO EDUCATE STUDENTS IN DEAD END OCCUPATIONS, AND WE SHOULD KEEP OURSELVES CURRENT IN THE LATEST DEVELOPMENTS SO THAT WE MAY PASS THIS KNOWLEDGE ON TO OUR STUDENTS.

I WOULD LIKE TO CLOSE WITH A QUOTE FROM GOVERNOR CALVIN L. RAMPTON: "OUR DUTY IN EDUCATION WILL BE UNREALIZED SO LONG AS A SINGLE YOUNG MAN OR WOMAN IN OUR STATE DOES NOT HAVE THE OPPORTUNITY AND THE ENCOURAGEMENT TO OBTAIN TRAINING TO BECOME A USEFUL AND PRODUCTIVE MEMBER OF OUR SOCIETY IN AN OCCUPATION WHICH MEETS HIS OR HER INTERESTS, CAPABILITIES, DESIRES, AND AMBITIONS."