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NOTE

TECHNOLOGY TRANSFER [UNIT-V]

TECHNOLOGY TRANSFER INCLUDES TWO MAJOR WHICH ONE IS TECHNOLOGY & OTHER IS TRANSFER.

TECHNOLOGY CAN BE DEFINED AS USE OF KNOWLEDGE, SKILLS & ~~ANDEX~~ ^{ANDEX} ~~TACTICS~~ ^{TACTICS} WHICH REFERS TO A NEW OR BETTER WAY OF ACHIEVING THE VARIOUS END NEEDS OR THE COMBINATION OF TYPES OF KNOWLEDGE INDISPENSABLE TO CARRYING OUT THE NECESSARY OPERATIONS FOR THE TRANSFORMING THE FACTORS OF PRODUCTION INTO PRODUCTS OR THE PROVISIONS OF SERVICES.

WHEREAS TRANSFER MEANS THE FLOW OF SUCH KNOWLEDGE, SKILL METHOD OR TECHNIQUE FROM THE SOURCE TO VARIOUS END USERS.

TECHNOLOGY TRANSFER

INTERNALIZED

EXTERNALIZED

INTERNALIZED FORM REFERS TO INVESTMENT ASSOCIATED TECHNOLOGY TRANSFER WHERE CONTROL RESIDES WITH THE TECH. TRANSFER. EXTERNALIZED FORM REFERS TO ALL OTHER FORMS WHERE CONTROL RESIDES TO THE LOCAL LEVEL.

CAUSES OF TECHNOLOGICAL CHANGES

- ① MANAGING INCREASED COMPETITION.
- ② SURVIVAL OF THE ORGANISATION.
- ③ COMMUNICATION REVOLUTION.
- ④ REDUCING GEOGRAPHICAL BARRIERS.
- ⑤ ESTABLISHING THANE LINKS GLOBALLY.
- ⑥ SUSTAINABLE GROWTH & DEVELOPMENT.
- ⑦ TRANSFORMATION IN BUS. OPERATIONS.

Medium Of Technology Transfer

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1. THROUGH BUSINESS FIRMS.
2. THROUGH GOVERNMENT.
3. NON PROFIT ORGANIZATION.
4. UNIVERSITIES
5. INTERNATIONAL ORGANISATION SUCH AS WORLD BANK, ADB, USAID etc.
6. MOBILITY OF CHANGE AGENT FROM ONE PLACE TO ANOTHER.
7. TECHNOLOGY SUPPLIER.
8. THROUGH WEB.

Issues Related With Technology Transfer

- ① Is the technology APPROPRIATELY TRANSFERABLE FOR large Scale Production?
- ② How DOES the technology transfer take place?
- ③ How CAN a large No. OF people be trained to make USE OF the technology?
- ④ WHAT WILL BE the GAINS for the DEVELOPERS OF the tech.?
- ⑤ SHOULD THE TECHNOLOGY BE TRANSFERRED WHOLESALE OR IN Parts OR SHOULD the TRANSFERORS THEMSELVES ENHANCE their R & D EFFORTS?
- ⑥ WHAT WILL BE the COST OF TRANSFER OF technology & BENEFITS to the TRANSFEREE?

THE ISSUES HERE IS NOT ONLY OF technology Transfer BUT ALSO the AVAILABILITY OF Resource, INCLUDING HUMAN Resource, WITH the Recipient. Major Resources CAN BE Categorized AS Follows:-

- CAPITAL Required for the PURCHASE / support OF technology.
- AVAILABILITY OF Raw Material Res. for the USE OF the technology.
- INFRASTRUCTURE facilities.
- AVAILABILITY OF Skilled HUMAN Resource for the USE

Impact Of Technology Transfer

[illegible]

2. Policy to Create Incentives to Increase Investment in Human Resources / Software Technology.

- ① Increase In Demand & Demand Of Old Market.
- ② Accumulation Of Capital & Cheaper Labour.
- ③ Increased Competition leading to New Product Development.
- ④ Innovation As well As Better Access to Capital.
- ⑤ Long term Employment Generation.
- ⑥ Increase In Demand For Governmental Infra. like For Education, Health Or Housing & etc. provided.
- ⑦ Better Living Standards.
- ⑧ Export Earning.

- ① Discriminative to some Extent/Prevalent.
- ② Resource Incentives for Improvement R&D.
- ③ Redeployment Problems Due To New Technology.
- ④ New Skill Requirement.
- ⑤ Emergence Of New Competition In Domestic Market.
- ⑥ Problems Due to Restructuring Or org. Chg Or Tech-changes.
- ⑦ Human Resource Related Issues :-
 - Obedience
 - Wage Disparity
 - Resistance to change
- ⑧ Lack Of Firm Personnel Quality & Productivity.
- ⑨ Doubts About The Creation Period.
- ⑩ Delay In Decisions.

Micro & Macro Level Issues

Micro & Macro level impact

The Impact of Technology Transfer Has A Great Influence On
The Recipient Country As It Rec. the Transfer, the Transfer,
& Post Transfer Support Focused With Continuous Efforts To

LEARN & ABSORB the BEST POSSIBLE

2.1) MICRO LEVEL JOURNALS (i.e. 'TECHNOLOGY TRANSFERS') - MICRO

MEANS THE COMPANY OR A CORPORATION WHICH INITIATE OR IMPORTS THE TECHNOLOGY FOR THE FIRST TIME IN THE COUNTRY:-

- ① Prior Knowledge & Information Preparedness.
 - ② Major Documentation (Prepare whole documentation, prospects & formalities)
 - ③ TEething Troubles Associated With Being the First. (How to Start Up the technology, it req. lots of try & skills)
 - ④ IMPACT OF HUMAN POOL (stress & burden ON HUMAN Resource getting big. It's NOT the only thing, you HAVE to practice it.)
 - ⑤ CHAMPIONS OF FURTHERANCE (You Establish Yourself & Now OTHER COUNTRIES Looking towards you these trained personnel introduces New technology & they give try to others org. as a Resource Person.)
 - ⑥ SPILL OVER OR LICKAGES. (Secret OF Your org. is Being Lickage to the other org. coz of Money & some attractive packages.)
 - ⑦ BENEFIT BENEFITS ON Socio Economic Ground. By & through Government (Govt. Provide Some Benefits the org. who Giving Something New & First in their field Related to the technology coz these are the Major Source of Employment & Export Promotion)
 - ⑧ Latest UPGRADATION Due to technical soundness. (You ARE the first one who introduce New technology & Now givg your Responsibility to upgrade that technology)
- ADVANTAGE OF BEING the LEADER. (Increase Strongest Emergence of Market Leader, MONOPOLY AT Introductory Stage)

137 Major Level Impact Of Technology Transition :-

① Socio Economic Benefits to the Recipient Country.

(Increases Std. Of Living, Technosophistication, Infrastructure Dev., Capital Foundation, Employment Generation.)

② Political Advantage to the Recipient Government.

(Cross Mov's, Good Trade Links, Trade Agreement, Impact Of UNO.)

③ Technological Advantages :-

(i) Create Your Own technology with the Import technology (ii) Import-Import technology Advance.

④ Culture Advantage :-

Culture Value Exchange

Innovative Technology

INNOVATIVE TECHNOLOGY PREFERS TO THE IMPROVEMENT, SOPHISTICATIONS, BETTER USAGES ETC. BROUGHT IN THROUGH CREATIVE, INNOVATIVE & NOBLE IDEAS & EXPERIMENTS, SO THAT LARGER BENEFITS CAN BE EXPLORED AT A VERY WIDE RANGE WITH LOWERING OF COST & IMPROVING ON THE PRODUCTIVITY AS WELL AS PROFITABILITY. IT WILL BE CATEGORISED UNDER FOLLOWINGS :-

(i) AUTONOMOUS INVENTIONS :- THESE INVENTIONS ARE THOSE INVENTIONS WHICH ARE BASED ON ORIGINAL IDEAS WHICH IS DEVELOPED SYSTEMATICALLY IN A SCIENTIFIC PROCESS INVOLVING ENGINEERED DATA IDEA TAKING SHAPE THROUGH R&D EFFORTS, LAB TESTING, EXPERIMENTING WITH THE INVOLVEMENT OF TECHNOCRATES.

Ex :- Sony CHANDY (AM) PANASONIC (VIDEO CAMERA)

(ii) INDUCED INVENTIONS :- THESE INVENTIONS ARE KNOWN AS "INSPIRED BY" INNOVATIONS WHICH ARE BASED ON THE FEELINGS & FEEDBACK OF END USERS WHO SUGGEST OR GIVE IDEA ABOUT THE

Improvements they would like to have.
↳ Medical Equipments.

BENEFITS & PROBLEMS IN AUTONOMOUS INVENTIONS

- BENEFITS :-
- ① CREDIT NAME & FAME OF THE INVENTIONS
 - ② R. ORIGINAL COPYRIGHT & PATENT & IPR.
 - ③ CONTRIBUTION TO THE Socio-economic Cause Being the Breakthrough Technology.

- PROBLEMS :-
- ① Huge Investment & Lot Of Patience
 - ② LACK OF FUNDS
 - ③ DIFFICULTING IN KEEPING VIGILANCE OVER THE UNAUTHORIZED Users WORLD OVER.

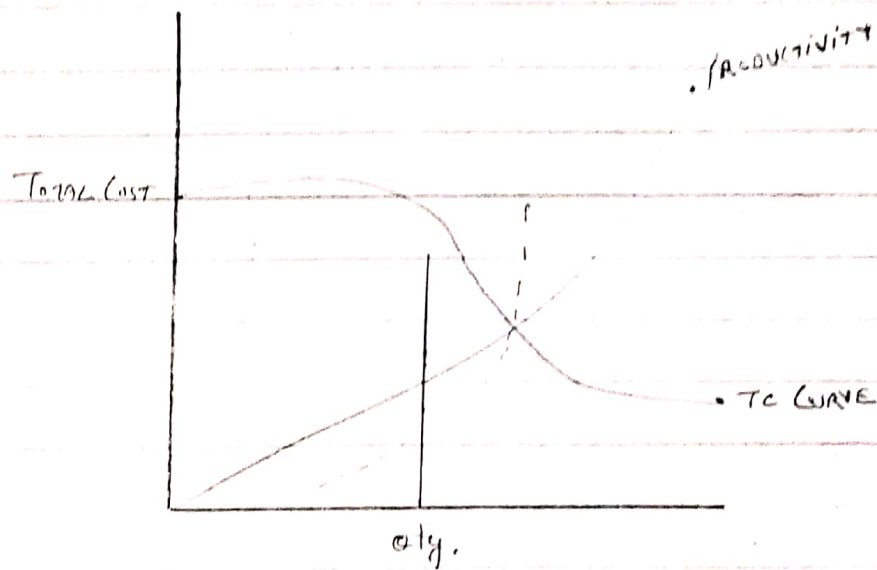
BENEFITS & PROBLEMS OF INDUCED INVENTIONS

- BENEFITS :-
- ① HIGHEST LEVEL OF CREATIVE IMPROVEMENTS
 - ② DRASTIC REDUCTION IN THE COST.
 - ③ USED BY VERY LARGE SEGMENT OF PEOPLE & USER.
 - ④ VERY HIGH DEGREE OF PRODUCTIVITY & PROFITABILITY.
 - ⑤ MUCH MORE POPULAR THAN ORIGINAL MODEL.

- PROBLEMS :-
- ① INCREASE MIMIC PRACTICES & LOSS TO IPR.
 - ② NO GUARENTEE OF DURABILITY
 - ③ DISCOURAGEMENT TO THE R&D EFFORTS OF THE ORIGINAL PRODUCER.

CONCLUSION :- PROTECTION OF IPR & MIMIC PRACTICES, AUTONOMOUS & INDUCED INVENTIONS BOTH SHOULD BE CO-EXIST IN A COUNTRY.

IN CASE OF NEW TECHNOLOGY THE JUSTIFICATION PERIOD IS CONSIDERED TO BE VERY IMPORTANT EXTENT WHICH FROM THE INSTALLATION TO THE ACHIEVEMENT OF NORMAL BEP PRODUCTION LEVEL. IT MAY RANGE FROM 1 MONTH TO 4-5 YEARS, DEPENDING UPON THE COMPLEXITY & AVAILABILITY OF RESOURCES, IN ANY CASE THE INITIAL PRODUCTIVITY LEVEL IS ALWAYS THE QUESTION MARK.



ISSUES :- (1) FOR MANAGING THE LOW PRODUCTIVITY LEVEL AT INITIAL STAGES, IT IS ALWAYS BETTER TO PLAN THE TRAINING INTERVENTIONS JUST BEFORE & AFTER THE INSTALLATION ITSELF.

- (2) THE PLANNING & ORG. OF RESOURCE ALLOCATION SHOULD BE Meticulous & JUST IN TIME TO REDUCE THE IMPACT OF COST.
- (3) READINESS TOWARDS THE STARTUP PROBLEM IN TERMS OF MAINTENANCE & REINFORCE LEARNING.
- (4) INTEGRATED TEAM EFFORTS FOR REDUCTION IN THE JUSTIFICATION PERIOD.
- (5) AFTER ACHIEVING THE BEP EFFORTS RELATED WITH REACHING THE OPTIMUM PRODUCTIVITY & PROFITABILITY LEVEL MUST KEEP ON.
- (6) SUPPORT SYSTEM FOR CONTINUOUS IMPROVEMENT & WORK TEAM

- Motivation for Maintenance of the Level.
- ⑦ Efforts for Monitoring & Controlling the Various Resources
 - ⑧ Ingenious Efforts to Bring Improvement in the Existing New Technology as per the Organizational Needs & Budget.

TECHNOLOGY TRANSFER & QUALITY OF WORK LIFE
 AS FAR AS QWL AS CONCERN IN RELATION WITH THE NEW
 TECHNOLOGY MANAGEMENT INITIAL STAGES ARE ALWAYS FULL OF
 STRESSES, STRAINS, CONFLICTS, RESISTANCE & ATTITUDINAL CONFS,
 THESE PROBLEMS EFFECTS THE QWL IN MULTIFACETED MANNER -
 CERTAIN IMPACTS ARE POSITIVE BUT MOST OF THEM ARE NEGATIVE
 IN NATURE. HENCE MANAGER HAVE A TIGHT TIME DEALING SUCH
 ISSUES IN DAY TO DAY ADMINISTRATION OF NEW TECHNOLOGY.

ISSUES: ① PLANNED & SYSTEMATIC APPROACH TO CHANGE: ② PREPARING HUMAN
 RESOURCE FOR ACCEPTANCE OF NEW TECHNOLOGY ③ ENHANCE AWARENESS
 ABOUT BEING IN OR OUT ④ CHECKING OUT AN ACTION PLAN FOR STEP
 BY STEP EXECUTION OF CHANGE.

② INITIATING THE RIGHT TRAINING INTERVENTION FOCUSING ON UNLEARNING,
 LEARNING & RELEARNING.

③ COPING STRESS & RELATED CONFLICTS: ④ COPING PROVIDING
 COUNSELLING & SUPPORTIVE HR METHODOLOGIES. ⑤ USING STRESS
 RELAXENTS ⑥ ORGANISING FORMAL & INFORMAL BRAIN STORMING &
 PROBLEM SOLVING SESSIONS. ⑦ INITIATING CONFLICT RESOLUTION
 MECHANISM. ⑧ STRENGTHENING HUMAN RELATION & TEAM BUILDING.

④ SCHEMATIC MOTIVATIONAL PROGRAMME (REWARD, INSPIRATION, BOOSTUP)

⑤ INITIATING EMPLOYEE WELFARE & BENEFITS.

⑥ BEING RESPONSIVE TO EMPLOYEES & THEIR NEEDS THROUGH
 CORPORATE SOCIAL RESPONSIBILITY.

STRONG EFFORTS OF BUILDING WORK CULTURE &
 ETHICAL STANDARDS.

QWL
 ASPECT,
 IS TO

TURNAROUND MANAGEMENT REFERS TO THE MANAGEMENT MEASURES WHICH TURNS A SICK COMPANY BACK TO A HEALTHY ONE.

TURNAROUND MANAGEMENT HAS FOLLOWING ELEMENTS:-

- (i) CHANGE IN TOP MANAGEMENT.
- (ii) INITIAL CREDIBILITY BUILDING ACTIONS.
- (iii) NEUTRALISING EXTERNAL PRESSURE.
- (iv) INITIAL CONTROL.
- (v) IDENTIFYING QUICK PAY OFF ACTIVITIES.
- (vi) QUICK COST REDUCTIONS.
- (vii) REVENUE GENERATION.
- (viii) ASSET LIQUIDATION FOR GENERATING CASH.
- (ix) MOBILISATION OF ORGANIZATION.
- (x) BETTER INTERNAL CO-ORDINATION.