

**Access to Microfinance & Improved Implementation of Policy Reform  
(AMIR Program)**

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**Ministry of Education**

**Creating a New ICT  
Spirit in Jordan  
through Education**

**Final Report**

**March 1- 3, 2001**

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**ICT Education Team**



## **Executive Summary**

Jordanian leaders in education, from both the public and private sector, met from March 1-3, 2001, at the Marriott Hotel in Amman, to discuss “Creating a New Information and Communication Technology (ICT) Spirit in Jordan through Education.” Using the state-of-the-art team building and planning techniques used by some of the worlds largest multinational firms, participants worked long hours brainstorming and discussing options.

Twenty-seven participants (nineteen from the ministry, including the Minister, the Secretary General and seventeen General Directors, as well as eight partners from outside the ministry) cooperated to:

- Develop a shared vision of ICT in education in Jordan
- Produce action plans to carry out that vision
- Create a spirit of teamwork between key stakeholders

All day Thursday, participants focused on teambuilding and information sharing. Friday morning, they developed their shared vision and then proceeded, Friday afternoon and Saturday, to develop action plans to carry out that vision. Teams expressed some skepticism and discomfort initially, but later achieved remarkable consensus as well as enthusiasm to carry out the plans.

Participants focused initially on the country as a whole, looking at the situation in education in 2001, including, current resources, opportunities and constraints. Next, to bring alive the face of the customer, participants heard from the key users of the education system: business people, teachers and students. Each of them spoke from the heart as to why is ICT important to them personally? Then they indicated the criteria for effective programs that could guide participants in developing their action plans.

Participants looked into the future to imagine how the situation will evolve by 2005, in the light of His Majesty King Abdullah II’s commitment to widespread use of ICT in education in order to make Jordan a regional hub for this growing section.

The three teams focused on three types of resources:

- Human
- Financial
- Infrastructure



To clarify further the vision, participants then focused on why and how; why, to give direction, and how, to ensure successful implementation. As part of the how question, international expert Jesse Rodriguez presented an overview of the draft business plan for the ministry designed to link the 28 directorates electronically. He also responded to questions from the participants on how best to implement the plan.

Subsequently teams produced action plans on how to use ICT in education, initially focusing on the primary functions of the Ministry

- Instruction
- Outreach
- Administration.

Participants then produced plans addressing the critical resources needed to carry out the vision:

- Human
- Financial
- Infrastructure

Plans are living documents, made to be revised, as new information becomes available. Periodic review allows plans to stay reasonable and move smoothly through time and space, motivating those who carry them out. All participants agreed that the workshop was highly productive in creating a new ICT spirit between the various stakeholders.

This report documents the process of developing a shared vision and identifying steps to realize it. By presenting the participants' actual outputs, it affirms the value of their exceptionally creative contributions. Each reader may draw from the report different conclusions, but its words and pictures capture the exciting spirit of teamwork and cooperation experienced in the workshop.

A journey of a thousand miles begins with the first step. Naturally only sustained commitment can realize the hopes and aspirations of workshop participants. The memory of the enthusiastic participation experienced in the three days together should provide great encouragement to all team members as the journey continues.



## Acknowledgements

The Coverdale Organization has had the pleasure of facilitating the Ministry of Education's workshop, "Creating a New ICT Spirit in Jordan through Education." We would like to thank each member of the team for giving remarkable efforts in generating enthusiasm, good will, creative approaches, and, most important, commitment. Your diverse knowledge, skills, disciplines, experiences and personal interests represent vital resources to this team.

This is your report and we are proud to have facilitated your efforts. You chose to work together, giving wholehearted support, putting in long hours, to make this workshop a success. Each of you chose, individually and as a team, to look for shared purposes and demonstrate respect for each other in producing the contents of this document.

- Abdul kareem Al-Azzam
- Ahmad Shadeed
- Azmi Shaheen
- Daoud Mohammed Tarif
- Fadel Sweidan
- Fawaz Jaradat
- Janette Bermamet
- Hisham Al –Atrash
- Karim Kawar
- Khaled Al-Nabtiti
- Maen Al-Muhaisen
- Maher Jweihan
- Ghazi Al Khreishah
- Mashour Al-Kharabsheh
- Mohammed Bazbaz
- Mohammed Rashed
- Mohammed Al-Qaddah
- Raed Belbesi
- Reyad Al-Nawaiseh
- Rola Habash
- Sa'd Khreisat
- Sattam Awad
- Suleiman Tawaha
- Talal Al-Zu'bi
- Ziad Sabayleh
- Bassam Kahhaleh
- H.E. Dr. Khaled Toukan

### Government of Jordan and Jordanian Private Sector

This report combines the efforts of many Jordanian organizations committed to using education to create a new ICT spirit in Jordan. The rich combination of business and public sector officials reflected the teamwork necessary to developing a shared vision, and more important, to taking steps to make it a reality.

In addition to the Ministry, representatives from the external stakeholders participated actively in achieving the shared purposes of the workshop.

- INTAJ (Information Technology Association of Jordan)
- Jordan Computer Society
- Private sector schools (Orthodox School)
- Princess Sumayya University
- Young Entrepreneurs Association
- National Information Center
- Military schools
- Al- Hussein University

Within the ministry many people contributed their hopes and vision to the workshop design. Not everyone can be physically present at a workshop, but many of their ideas are reflected in the outcomes. Support staff in the Ministry's touching eagerness to serve, from secretarial

staff to drivers, to those who keep the meetings running by providing tea, coffee and za'tar, represents fuel to any team. We thank all these indirect contributors for their input.

### Sponsors

The US Agency for International Development through its highly successful AMIR Program, provided full support to the workshop. Steve Wade, AMIR Chief of Party, attended some of the sessions each day. Although USAID personnel were not present, sometimes our most effective contribution is trusting that others can work most effectively without our own intervention. Everyone realized fully the importance of leaving the development of a Jordanian vision to Jordanians. We appreciate their support and confidence.

### Special guests

The private sector responded admirably to provide participants with faces of their customers. From business, Hatem Al-Zeine, Layth Al-Qasem and Karim Kawar, spoke eloquently about the importance of education to developing the human resources that can ensure Jordan's economic well-being. Business represents the ultimate user of the product of the education system and productivity measures its effectiveness.



While all speakers emphasized the importance of ICT, they affirmed that the spirit of information and communication technology is not in the hardware, but in the critical thinking of people, reminding participants that the essential network is first and foremost a human one.

Next, the following teachers and children spoke from their hearts to the participants of why is ICT in education important to them personally.

#### Teachers

Suheir Al-Bureni  
Arwa Al-Naser  
Mahmoud Al-Jarah  
Anwar Abdel Qader

#### Students

Hebah Mohammed Hussein  
Rana Derasia  
Mohammed Al-Asmer  
Ibrahim Khalid Garbieh  
Mohammed Abdel Karim Qattami



Sometimes we are surprised at how observant and articulate children can be. Their plea for their own futures left a strong impression on all present. The commitment and understanding of teachers, too, reflected the country's awareness of how important ICT is for all Jordanians.

We are very grateful to Ibrahim Osta, Director of INJAZ, the Jordanian affiliate of Junior Achievement, for making arrangements for the teachers' and children's participation.

Jesse Rodriguez, international expert in ICT networks for education, provided vital input both to the workshop design and the planning process. His draft Business Plan for the Ministry provided the framework against which discussions occurred. His insights from similar programs around the world encouraged participants about the tasks before them.

The Business Plan was the result of discussions with many Jordanian experts in order to reflect their own insights and understanding. Jesse worked closely with Jordanian team in preparing the plan, especially Professor Bassam Kahhaleh, as well as Dr. Ziad Al-Qadi, Dr. Ahmed Hiasat, and Baha-Elddin Tahboub, each of whom served as technical resources to the three teams during the action planning.

Nelson Ireland, from Canadian International Development Agency, observed the entire workshop and provided useful comments and encouragement to participants during the breaks. He demonstrated his understanding of the institutional development by his active listening and helpful support.

Professor Safwan Al-Masri from Columbia University in the United States, also joined the team on the last day. His input in the closing session, sharing his admiration for the workshop accomplishments, helped participants to realize how valuable their efforts appeared to an outside observer. This contribution is often one of the most precious gifts we can give to one another: the validation that they are on the right track, is frequently all it takes to keep a team moving ahead.



Finally, an informed press contributes directly to shaping the future by sharing the message events of this kind. Arabic and English language journalists, as well as radio and television crews, covered the workshop and allowed other Jordanians to be better informed about the process of government. We thank each of our guests for their special contributions.

### **Behind the scenes support**

In a workshop, we may only note those participants we see, but many people backstage are necessary for an event like this to succeed. From the ministry, Janet Bermamet chaired the workshop preparation committee, supported by Maher Jweihan in her absence. They gave freely of their time and energy to ensure success, from articulating purposes to structuring the team compositions.

The entire facilitation team contributed to logistics of the workshop, from drafting invitation letters to organizing the interview schedule that ensured participants knew what to expect from the first day. These efforts were in addition to their active participation in facilitation training and their normally busy workload.

During the workshop, the ministry provided equipment and staff to ensure the Arabic transcription, as well as copying.

- Nermin Ziad Al-Labadi
- Azizah Ahmed Al-Fararjeh
- Raja Ahmad Abdul- Hadi
- Khadra Sadiq Abdul-Lateef
- Ahmed Dib'i



Their good-natured support, as well as their commitment to speed as well as accuracy made our task easier. Annie Julesian also contributed to translating the text into English. A minister cannot be absent from his office without the presence of those people who support him. Mohammed Marzuk Wada'an and Mahmoud Al-Rshoud from the front office observed many of the sessions. Their presence made it possible for the Minister to give participants his full attention.

From AMIR, Lina Arafat handled the complicated tasks of workshop logistics, as well as support to the facilitation training. Sameera Qadoura participated in pre-planning the workshop with the Ministry and gave her usual insightful input throughout preparations, ensuring smooth operations. Wafa' Qassis produced the name badges and place markers and Mona Dahtaleh entered them in the contact list. Khalid Shrouf, Ala' Aloul, Samir abu Zanoneh, Faraj abu Nufal worked late to ensure the English-Arabic handouts and other supplies arrived to support the teams' endeavors. Many people in the AMIR office contributed directly to the success of the workshop, from support staff to drivers. In acknowledging their input, we strengthen the entire team.

Basma El Far, initially hired as an interpreter, shifted gears smoothly to where she would be most useful to the team, translating the participants' words from Arabic into English to allow others to share the workshop experience.



**Facilitation Team**

While Coverdale had the lead responsibility for designing and managing the workshop, success would not have been possible without a team effort on the part of all those people trained as facilitators. Three people worked as external facilitators.

- |                |            |
|----------------|------------|
| Hala Taher     | Blue Team  |
| Kifah Al-Omari | Green Team |
| Suheil Shaheen | Red Team   |

In addition, each team also had an external chart manager to ensure materials made it into the transcription process for this report.

- |                     |            |
|---------------------|------------|
| Mohammed Rjoub      | Blue Team  |
| Rima Bakhit         | Green Team |
| Mohammed Al-Ajlouni | Red Team   |



Naser Obaidat, the overall external time keeper, coordinated among the teams during the workshop, and also briefed journalists as they arrived. Baha Tahboub managed the computer center, as well as serving as a technical resource person. He also worked twice during the holiday as part of the report production process.

The art of facilitation is not in what you say, but rather how well you listen. The supportive attention of facilitators indirectly allowed three teams composed of people from diverse backgrounds to work to common purposes and common methods. Their listening and

observation are what makes the smooth operation of the workshop possible, the adapting of the schedule and the tasks to suit participant needs. That gift we can give to any team we are a part of. We are grateful for their serving as beautiful models of the spirit of teamwork and cooperation. May they motivate each of us to do the same in our own teams!

From outside the Ministry, two talented Jordanians with previous experience in Coverdale workshops, Maram Naser, Ministry of Post and Communications, and Mohammed Asfour, Jordan Investment Board, contributed wherever necessary to ensure the smooth flow of the workshop. Their participation represents continuity and connection to earlier teams, as well as commitment to development Jordan's human resource potential.

Three critical members of the facilitation team deserve special mention.

HE Dr. Khaled Toukan Minister	MOE
Ghazi Al Khreishah Secretary General	MOE
Dr. Bassam Kahhaleh Associate Professor of computer Engineering	Princess Sumayya University

In the true spirit of facilitation, each of them chose to support the teams rather than draw attention to themselves.

What enables and empowers outstanding performance is in fact an environment where people are willing to take risks together. Instilling that confidence is in the nature of leadership, providing the balance between keeping an eye on the long-term objectives, while rolling up sleeves to deal with immediate demands.



### **Report Preparation**

The tedious job of report preparation was a team effort, to which the transcribers' and translators' work was essential. Maram Naser, primarily for the Arabic version, and Mohammed, primarily for the English version, worked during the Eid al-Adha to prepare a more polished draft. Ayman Nimer provided computer support, especially regarding the photos.

From the Ministry of education, the three facilitators, Hala, Kifah and Suheil reviewed the draft report. They paid special attention to spelling of names, as well as taking time to make very specific, helpful comments.

Maram then prepared the final version in both languages including inserting pictures. Never previously has this report production process been so efficient and pleasant. My profound gratitude to all who made it possible with their efforts. Hundreds of half sheets of paper thus lead to a vision. Those colorful bits of paper, when put together attractively, create an enduring memory to motive each reader.

What is the purpose of a report like this? Is it the result of the workshop? No, hopefully the real result of the workshop is enhanced performance of the ICT Education Team. Like the photographs, however, the report is a reminder to us of what we accomplished together and an inspiration for future cooperation.

May the spirit of teamwork experienced during the workshop and its participatory, facilitated process serve as a model for the entire team to share with others as you pursue your shared objectives.

The real results of workshops like these depend on the commitment of every member of the team. If each person sustains the enthusiasm and cooperation demonstrated in the workshop, a very bright future is assured, not only for the participants and for the education sector, but also for Jordanians, and even the region, for generations to come.



## Overview: Workshop Preparation and Approach

### Clarifying the Vision of the Workshop

One of the critical steps in preparation for the workshop was to meet with top Ministry management to understand their vision of the workshop and agree on purposes.

- Develop a shared vision of the organization of the Ministry within Jordan's future information and communication technology environment
- Initiate a process of private-public sector dialogue to realize that vision
- Create a spirit of teamwork between key stakeholders.



Further purposes and results clarified the vision of the workshop:

- Exchange information between partners and help them to get to know each other better
- Produce a mini-action plan of steps to strengthen cooperation between stakeholders and begin to realize the vision
- Practice participatory methods in the workshop that team members can later apply at work.

Anticipated results included:

- A spirit of teamwork
- Consensus among partners/stakeholders on the importance of cooperation
- Greater understanding of the resources each stakeholder represents
- Mini-action plans
- Commitment of participants to work together to carry out this plan.

These purposes and results, in turn, were reviewed and refined in discussions with each participant prior to the workshop itself, as well as criteria for determining workshop success. When we look at our individual aims or objectives (purposes, results and criteria), we soon discover our common aims. Despite diversity of opinion, a resource to any team, the initial vision provided the unity of purpose that drove the development of the workshop itself.

During interviews, participants also learned about the techniques and methods to be used in the workshop, so they would become more comfortable with them (alternation between general and team sessions, brainstorming, roles in a team, review).

### **Agreeing on a Common Language**

To ensure active participation the workshop was conducted in Arabic. Two reports, one in Arabic and one in English, reflect the different audiences. Arabic, the national language of Jordan, ensures the workshop will be shared with others within the ministry headquarters with the field and with the educational community. English, on the other hand is the international language of ICT, as well as the language of international donors. This report, in both languages, documents for diverse audiences the enthusiasm and commitment of participants.

For Jordanians, operating skillfully in the two languages is becoming an international necessity to stay abreast of changing technology and ensure their own development. As more bilingual documentation like this report becomes available, as more people use both languages in the workplace, bilingualism can be one of the renewable national resources Jordan becomes famous for, a major attraction to international investors.

### **Developing the Facilitation Team**

When a workshop uses techniques people may not be used to, facilitators can help to manage the process of change. Although participants were asked to facilitate their own team tasks, external facilitators make the smooth operation of the workshop possible by adapting the schedule and the tasks to suit participant comments and needs. In addition, after the workshop is over, these facilitators can be very useful to the Ministry and to the ICT Education Team in managing a process of teamwork and cooperation to deal with change.

To develop this team, the workshop director and members of the AMIR program trained selected MOE staff in participatory methods and facilitation techniques over a two-week period. In the final analysis, bilingualism became a key selection criteria and three facilitators were selected on that basis. Other roles arose, external chart manager, external time keeper and technical resources. All who participated in the training acquired skills that can be useful to their professional careers, and to the ICT Education Team.

The training consisted of allowing trainees to experience the same methods and techniques participants would use in the workshop itself. In addition to the content side of the workshop, trainees were exposed to the logistics of organizing an interactive workshop: working with the AMIR project, they saw the importance of attention to many, many details to make participants work easier: hotel arrangements, food, room layout, folders to hold information about the workshop, supplies to allow active discussions while still capturing ideas. Flip charts, markers, half sheets of paper and tape, were purchased in quantity to facilitate the process.

Trainees also brought their knowledge of the subject area of education, ICT, of participants themselves, of the Jordanian context, as well as their experience with previous workshops or conferences. Not all who participated in the training worked in facilitation, but their input was useful to the process. Many people are needed on and off stage to conduct a successful workshop, especially one with active participation. The training emphasized that for a facilitation team to be successful, everyone must fully feel they serve as a model for the whole team.

The output of this facilitation training included brainstorms on purposes of the workshop, as well as an inventory of the facilitation trainees and the skills they brought to the team. Based on years of experience in this field, the Coverdale Organization drafted a workshop schedule using inputs from interviews with key stakeholders, as well as the facilitation training output. Top Ministry management then reviewed a selection of tasks to produce a flexible agenda for the workshop, revised daily with their input.

**Input from Key Stakeholders**

In workshop without a strong teambuilding purpose, organizers can set an agenda of their own choice and essentially force participants to comply with it. In the light of the Ministry’s purposes of building a team, and its highly skilled participants, this approach, known as traffic cop facilitation, would have been inappropriate. To ensure willing participation and cooperation, participants had direct input to the agenda during pre-workshop interviews as well as during the workshop itself, where their comments shaped the agenda as well as the tasks.



**Flow of the Workshop**

Theme	Time	Tasks
Team building, sharing information	Thursday, morning and afternoon	Personal Aims Characteristics of an Effective Team Task 1: Preparing to work together Task 2: 2001 Task 3: 2005
Developing a shared vision of the future	Friday morning	Task 4: Why use ICT in Education? Task 5: How use ICT in Education? Business plan questions and answers
Action planning	Friday afternoon and Saturday, morning and afternoon	Task 6: How? Ministry Functions Task 7: Critical Resources Task 8: Communication Strategy

**Preparing to Work Together**

After a welcome by his Excellency the Minister, participants introduced each other using a carefully timed format designed to apply the principles of time management from the very beginning. After reviewing overall workshop purposes, and participants identified their personal aims for the workshop:

## **Personal Aims**

- Acquiring information, enrichment of experiences, and exchanging of opinion (brain storming) to make use of Information Technology in developing educational work.
- Disseminating Information Technology among the largest portion of the staffs of organizations in order to form a common language and understanding.
- Developing awareness of the importance of using technology in everyday life in general and in education in particular.
- Changing our attitudes towards Information Technology.
- Increasing the motivation of all towards the topic of our assembly.
  
- Increasing the degree of awareness among educational decision makers of the importance of Information Technology
- Instilling the spirit of Information Technology in MOE educational leaders.
- Change for the better.
- Development.
- Improving the performance of the staff.
  
- Increasing productivity through the best use of information transfer
- Full awareness of all participants of the importance of the subject and working seriously to implement the outcomes.
- Easy communication and follow-up among managers and employees through this retreat.
- Using Information Technology more effectively in the General Directorate of examinations.
- Designing a time table for technology vision for the coming 5 years.
  
- Finding funding for the implementation of the plan.
- Setting the outline of a plan for funding the Information Technology project in general education.
- Defining the funding sources for the project under discussion
- Defining the roles I could play to implement the plan, as well as participate in setting it up .
- Clear plan for preparing human resources who will supervise the project implementation.
  
- Clear planning and implementation.
- Using Information Technology in making educational decisions rational.
- Applying Information Technology effectively in everyday work.
- Full participation in clarifying the vision.
- Defining the general objective of the strategy.
  
- Formulating a vision in order to create a strategy to provide human resources for the plan.
- Strategic planning for the development of information technology use in Jordan.
- A plan for the private and public sectors to integrate information technology in education.
- Developing a plan for training educational leaders to use information technology in management.

- Reaching an implementation plan to define the tasks of all parties concerned in implementing the National Strategy for integrating ICT in education.
- Collective enthusiasm to ensure success of the project
- Providing participants with necessary information to create a new spirit of Information technology among participants
- Developing creative thinking
- Developing spirit of team work among participants
  
- Ability to apply IT in all areas of work
- Providing commitment incentives with flexible approaches rather than sticking to literal sense of words
- Establishing right links and communication for better benefit for the education leadership
- Ability to apply information in problem solving
- Best use of time using information
  
- Using time to the optimal level
- I expect to acquire skills of time management in administrative work utilizing IT
- Applying technology ingredients
- Promoting the private sector's role
- Getting the new generation to use IT effectively
  
- Getting the new generation to interact with the information era
- Setting a common vision for cooperation and coordination among the Ministry's sections by using technology
- Developing cooperation spirit to achieve objectives of the project.
- Cooperation
- Increasing horizontal cooperation at the General Directors level at the Ministry
  
- Disseminating the spirit of cooperation and solidarity among the educational leaderships at the Ministry to face the IT challenges
- Stressing on the importance of partnership between the private and the public sectors to promote IT in the Jordanian community
- Raising awareness of educational leaderships with regard to the importance of introducing IT to our schools and into our lives accordingly

Members of the ICT team then practiced written brainstorming, a key workshop tool, where they identified the characteristics of an effective team. In the first application, they used half-sheets of paper to capture a wide variety of ideas quickly.

## Characteristics of an Effective Team

- Effective participation
- Each member contributes by giving opinions and discussing matters
- Documenting the outputs of the work team before the session ends
- Each member must invest the acquired knowledge from this meeting in daily work
- Respecting opinions
  
- Accepting others' opinions
- Close opinions and points of view among the team members
- Objectivity, do not impose opinions and respect others' views
- Understanding and cooperation
- Cooperation (cited more than once)
  
- Existence of the will to work
- Spirit of cooperation
- Each member must enjoy the team spirit
- An effective team is cooperative
- Constructive interaction within the framework of objectives set
  
- Assign a team facilitator selected in a democratic manner
- Ability to generate innovative ideas
- A team member should listen to all ideas and discuss them
- Knowledgeable members
- Members know the objective and what they want to do
  
- Coordinating roles
- Team members shoulder their responsibilities honestly
- Experience
- Democracy
- Application and Implementation
  
- Role assignment
- Team members love their work
- Good evaluation of accomplishment
- Impartiality
- Planning
  
- Relevant background
- Availability of motivation for work
- Common objective
- Assigning tasks to specialized team members helps prompt accomplishment
  
- Respect views of other members
- Respect views



- Good listening to other's views
- Listening to others when they speak
- Objectivity
  
- Introducing realistic ideas
- Cooperative team
- Constructive cooperation with a team spirit
- Understanding
- Cooperative, understanding and integrated
  
- Active communication
- Full cooperation among team members
- Cooperation and respect of others' opinions
- Communicate
- Has an outstanding leader
  
- Role assignment to do work effectively and achieve goals
- Has a reporter
- Flexibility
- Team willing to develop
- Well-educated
  
- Initiative and non-selfish
- Initiative
- Work with a spirit of love and tolerance
- Dedication
- Respect
  
- Sound thinking
- Serious and sincere participation
- Listening
- Comprehending others' opinions
- Effective contribution
  
- Seriousness
- Have knowledge of time management
- Persistence at work not getting distracted by other issues
- Good time management
- Time investment
  
- Each member observes time management
- Accomplishing the objectives



Following this application, participants moved to their teams. To ensure all participants the opportunity to work with

- Minister Dr. Khaled Toukan
- Secretary General Ghazi Al- Khreisha
- Dr. Bassam Kahhaleh (the key Jordanian author of the Business Plan),

they rotated among the teams during the sessions. Teams prepared to work together using methods introduced to facilitate teamwork in the breakout sessions, including roles in a team and review.

In any team people can take responsibility for helping each other move forward by assuming certain roles that facilitate the process of working together. During Coverdale workshops we frequently ask participants to prepare to work together by identifying the roles they will play and the methods they will use to reach agreement. Based on its experience conducting participatory workshops, the Coverdale Organization has seen that every team appears to function better (at brainstorming and other tasks) when the following general roles are filled:

- Internal facilitator to facilitate discussion
- Chart manager to handle putting up the half sheets and collecting them for transcription
- Reporter to make the 3 minute report in general session
- Time keeper to help the team manage time
- Transcriber to transcribe the half sheets
- Participant(s) to plan the action, carry out the task and review it afterwards
- Observer(s) to help the team improve

Of course, everyone is a participant and anyone can observe. Acknowledging these roles recognizes that we all play multiple roles within any team. Knowing in advance what is expected of you allows you to contribute more fully. Leadership can emerge within this framework at any level, according to skills, according to knowledge, according to authority and according to circumstances.

In addition, the program provided the following roles to each team:

- External facilitator, to present tasks, clarify method and facilitate the process
- External chart manager, to ensure the team's output is put into transcription for the report and support the teams
- Technical resource people, to provide input to the planning process as requested.

Each group elaborated its own methods of working together and reviewed their own actions to learn from their successes and develop appropriate solutions to any difficulties.

Teams conducted reviews using a specific review method and compared results in general session, strengthening their skills at observation and listening in order to learn from each other. At the end of each task, participants noted lessons learned and areas for improvement.

### **Nature of this Report**

A report of this kind primarily documents the outputs of the working groups along with the presentations made in general session. We hope it also captures the participatory approach, the enthusiastic exchange of information, and the spirit of listening and mutual respect generated in the workshop itself.

Transcripts of the sessions follow, in the words of participants, respecting their input and supporting their efforts.



## **Task 2**

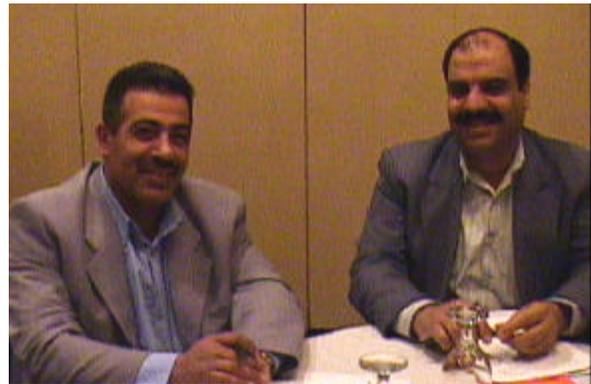
### **2001: Resources, Opportunities and Constraints**

#### **Blue Team**

##### **Resources**

- Budget of the Central Government
- Trainers and Trainees
- Technology concept (the subject literature) through training
- Foreign loans
- Curricula and equipment

- Participation of all concerned parties
- Foreign grants
- Learning from other countries' experience
- Conducting pre-studies
- Training specialized cadres
  
- Establishing institutes and universities
- Programs/computerizing curricula
- Training (training cadres), providing equipment
- Brain-storming ideas
- Equipment and machines



- Workers
- Curricula
- Trained cadres
- Curricula
- Equipment and sets
- Participation of all institutions in work

##### **Opportunities**

- Budget allocations
- Developing education while reducing time and effort
- Improving education quality and structure
- Holding seminars on IT concept
- Creating a new creative generation capable of facing challenges
  
- Grants, aid, and loans
- Governmental directives
- Enhancing and accepting teacher-student participation in the teaching/learning process
- Supporting IT companies to develop their products in education for the region
- Creating a new generation of youth capable of dealing with the world

- Giving the new generation a chance to join the international community
- Qualified cadres
- Producing a considerate and well trained generation to work within IT perspectives
- Computerizing teaching
- Creating new job opportunities and new positions to combat unemployment
  
- Computerizing educational administration
- Introducing a qualitative jump in education

### **Constraints**

- Lack of qualified human resources
- Financial support
- Lack of financing
- Lack of training
- Lack of equipment
  
- Changes of technology concept and its applications
- Some people were reluctant to understand concepts of IT
- Lack of previous chances for training
- Training of teachers
- Public awareness
  
- The Ministry works on providing IT facilities to its cadres
- Lack of specialized IT cadres
- Limited time
- Resisting change
- Limited resources
  
- Mid and long term plans
- Giving the opportunity to the new generation to adapt to the world
- Improving education quality by having students and teachers share work and increase interaction
  
- Improving communication methods
- Lack of finances and limited resources
- Lack of training, qualified cadres and equipment
- Public awareness
- The existing educational system and combating deficiencies

## **Task 2**

### **2001 Resources, Opportunities and Constraints**

#### **Green Team**

##### **Work Done by the Ministry**

The Ministry implements the whole education system in compliance with the Law of Education No. (3) for 1994, especially with regard to

- Building an integrated personality for students
- Establishing positive values including tolerance, cooperation and brotherhood within the society
- All elements of education including communication skills, thinking, and skills of reason
- Developing technological skills of students
- Contributing to the build-up of a modern Jordan by introducing ICT in Education
  
- Spreading education of all types to be accessible to all citizens and areas of the country, preparing the new generations for life and the future, while coping with the tools of the era
- The Ministry manages the educational process
- Developing human resources in general teaching
- Providing buildings, educational and technological facilities at schools
- Providing opportunities for students to enroll in different fields of education apart from their own capabilities and willingness
  
- Producing textbooks and curricula according to the students' capabilities and orientation to fulfill the community needs
- To produce a comprehensive national plan to move education from its traditional form to a technological one through the use of computers
- To prepare a well educated and aware generation with refined conduct, educational capabilities and vocational performance

##### **Resources**

- Human
  - Graduates from Universities and scientific institutes
  - National expertise
  - International expertise
  - Qualified Jordanian human resources
  - Educational curricula
  - Providing human resources by mobilizing those who can use the computers
  - Accumulative educational experience
  
- Financial
  - Budget of the Central Government
  - Loans and financial assistance
  - Internal and External grants
  - The State's Treasury
  - Foreign Grants
  - Loans

- Internal
- External
- Infra-structure
  - Providing computer sets as a first phase to cover about 1500 schools through international bids and donations from institutions
- Other parties
- Openness to and benefit from others' experience

### **Opportunities**

- To provide opportunity for all to join education
- A qualified new generation who will cope with the requirements of the new era
- Openness to the World
- Providing new job opportunities with more income and exporting school expertise
- Depends on general directives and strategic plans
  
- Depends on national, regional and international needs
- International loans, Budget of the Central Government, Miscellany.
- Recruit the human resources through coordinating with the Civil Service Bureau
- Further human resources can be invested, in addition to, financial capabilities and innovative ideas. Outputs must be qualitatively and quantitatively improved. We must learn from the experience of others
- Creating qualified and well-trained human resources
  
- Exporting human capabilities and expertise
- Economic and social development in Jordan



### **Constraints**

- Relevant training and orientation (technical)
- Curricula
- Limited resources to improve knowledge and to fulfill requirements
- Lack of financial incentives to attract capable human resources
- Sometimes, administrative cadres are incapable of adapting to change
  
- Lack of financial resources (cited more than once)
- Political conditions in the area
- Inability to cope with knowledge and information boom
- Dominance of traditional practices
- Resisting innovation and change
  
- Gap between theory and application
- Lack of appropriately-trained cadres
- Infra-structure
- Awareness of the importance of the subject-matter
- Lack of financing

- Sometimes financial resources are insufficient
- Lack of qualified Information Technology capabilities on the labor market
- At the mean time, certain schools do not have the infra-structure required by the plan.
- Stability of all kinds
- Competitiveness
  
- Employment security
- Social conditions
- Bureaucracy at work
- Delegation of authority
- Believing in the importance of time



## **Task 2**

### **2001 Resources, Opportunities and Constraints**

#### **Red Team**

##### **Work Sector: Government**

##### **Resources**

- Financial
  - Budget
  - Grants and loans
- Material
  - Equipment, furniture, transportation means, buildings, stationary

##### **Opportunities**

- Support of higher administration
- Cooperation of staff
- Administrative organization at the Ministry
- Keeping in line with rapid development in technology and information
- Using information technology
  
- Financial allocations
- Availability of human cadres

##### **Constraints**

- Media interference in a manner that does not serve the work
- Some unqualified elements
- Legislations
- Shortage of financial resources
- Shortage of human power
  
- Lack of facilities
- Obstacles to importing



## **Task 3**

### **2005 Resources, Opportunities and Constraints**

#### **Blue Team: Infrastructure**

##### **Work done by the Ministry**

- Reviewing the Ministry's plan of ICT (learning through computers)
- Web based education
- Video conferencing
- Each school must have its own intranet
- Sufficient power supply to cover the largest number of classrooms
  
- A network connecting schools with the Headquarters
- Depending on subject teaching rather than the scholastic year in some schools
- Suitability and adaptability in designing the infra-structure to accomplish set plans and programs

##### **Planned work for 2005**

- Completing learning resources centers (LRC) supplies at 30 directorates
- Evaluate infra-structure in 2005
- Completing infra-structure for labs
- Completing School net
- A LAN in each school (covering 3000 schools)
- School net connectivity

##### **Resources**

- Monitor allowances required to furnish computer labs for new schools
- Training newly recruited teachers to use computers
- Connecting schools with the headquarters
- There are new schools (the German loan)
- Completing all centers of learning resources at the 30 directorates of the Ministry
  
- Companies in the private sector furnish schools with computers
- International grants
- Increasing fees paid by students to use computers
- The school with technology and the productive school

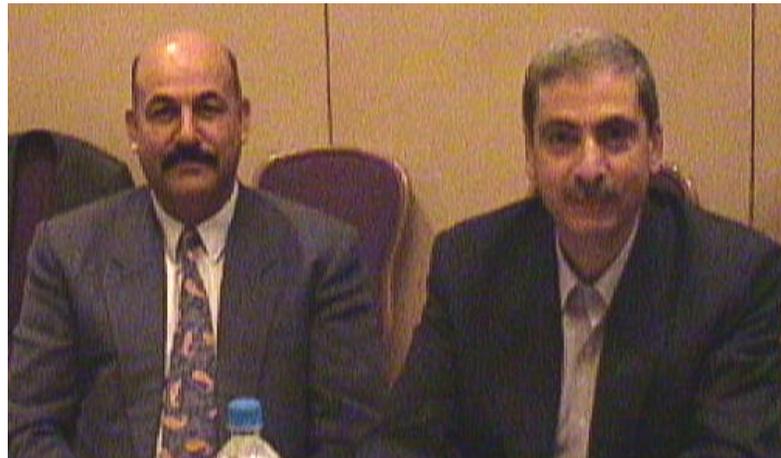
##### **Opportunities**

- Increasing investments of the private sector in education
- Contributions of universities and companies to training and qualifying teachers and personnel members
- Providing distant learning for the largest number of population.
- Helping the private sector to produce software
- Opening new horizons to develop technological industries in Jordan
  
- Real partnership between the private and public sectors
- Developing software

- Providing opportunities to the private sector to develop administration and information software
- Providing opportunities for distant learning

**Constraints**

- Difficulties of coordinating between different governmental bodies in terms of technology
- Trained human resources
- Lack of finances
- Continuous development of education technology
- School buildings
  
- Coping with continuous development of technology
- Coping with accelerating developments in education technology
- Increasing population
- Maintenance personnel
- Networks administration
  
- State's contribution to support the private and public sectors in terms of technology



## **Task 3**

### **2005 Resources, Opportunities and Constraints**

#### **Green Team: Human Resources**

##### **Work Done by the Ministry**

- Qualified teachers to deal with ICT
- Going on with the strategic plan to incorporate computer in education.
- Providing the labor market, universities and community colleges with distinguished human resources with high performance capabilities to deal with new technologies.
- Exporting teachers, specialists and experts who are capable of dealing with the latest technologies and information
- Difference from the traditional practices and change to cope with new trends
  
- Using all information in education
- Applying information systems in educational administration
- Developing computer skills of human resources and computerizing all the administrative jobs

##### **The work we do in 2005**

- Enabling teachers, administrative personnel, and students to acquire computer skills.
- Administrative personnel members are qualified and use Information Technology proficiently
- Students are proficient with regard to Information Technology
- Supervising policy making to manage qualified and sufficient human resources
- Technical supervision on the communication and information technology is available and practiced at the Headquarters and in the field
  
- The Ministry has become an expertise house and a reference to solve any problems
- Disseminate computer use in teaching/learning and in administration to achieve high performance
- Applying new legislation according to the Information Technology requirements

##### **Resources**

- Infrastructure for Information Technology
- Human resources trained in Information Technology
- Budget and foreign allocations
- Education Experts
  - Teachers
  - Students
  - Technicians
- Private Sector
  
- Other local, regional and international parties
- National expertise
- International expertise
- Self-teaching
- Jordanian universities

- Human resources qualified to use computer applications
- Qualified cadres
- University graduates
- Foreign expertise

### **Opportunities**

- Computer literate teachers to use computers and their applications
- Diversified software
- Extensive communication networks
- A young generation representing a large portion of population
- Economic growth in the region
  
- Increasing the financial allocations
- Increasing the qualified human resources
- Young age groups representing a large rate of population
- The supreme political leadership support by providing the financial allowances to improve the social status of the teaching staff
- Those working in several jobs
  
- Specialized training centers
- Diversified training and education areas
- Qualifying the trained human resources
- Educational institutions
- Labor and production sectors
  
- Other sectors (governmental and private)
- Class-rooms
- Computer supplies
- Open computer labs
- Developed curricula



### **Constraints**

- Job security.
- Lack of financial resources
- Unforeseen changes
- Continuous changes in technology
- Increased work requirements for the infra-structure
  
- Financial (providing resources)
- Providing equipment and infra-structure
- Brain drain
- Resisting change
- Incapability of coping with accelerated developments in Information Technology

## **Task 3**

### **2005 Resources, Opportunities and Constraints**

#### **Red Team: Financial Resources**

##### **Work done by the Ministry**

- Budget allocations to purchase computer sets already exist
- Budget is distributed according to the plan
- Controlling daily and monthly expenditure (financial position)

##### **Future Plan**

- Holding further courses and workshops
- Enhancing success elements
- Clarifying concepts and establishing their significance in order to reach joint perspectives

##### **Resources**

- Budget
- Grants and Donations
- Applying IT to reduce time and save extra expenditure
- Establishing an intranet at the Ministry and directorates level
- Internal and External loans

##### **Opportunities**

- Expected governmental support
- Optimal use of technology
- Well qualified and trained human resources

##### **Constraints**

- Shifting from manual work to computerized and documented processing
- Insufficient training for workers
- Lack of budget allowances
- Brain drain
- Increasing prices
  
- Existing hardware is obsolete and needs to be changed
- Some diversified views
- Lack of budget allocations (assigned to the Ministry)
- No cooperation between the private and the public sectors
- High prices
  
- Certain projects and activities overlap
- Insufficient training for the human resources
- Lack of required equipment and supplies
- Employees do not fulfill their duties required

## **Task 4**

### **Why use ICT in Education?**

#### **In order to**

- To improve education quality
- To cope with the continuous technological development in the world
- To exchange opinions and information among teaching staffs and among students to solve problems and improve performance.
- To cope with technological and cognitive development while reducing time and effort
- Communications are a method of self-learning
  
- To develop performance of teachers, students, and administrative personnel and help them be distinguished at work
- To cope with scientific development and countries with developed technology.
- To cope with cultural development for more interaction and benefit
- To enable students to cope with technological development and adapt to new trends in life
- To prepare the new generation for a better life
  
- To solve existing educational problems to achieve better results
- To cope with developments in education technology to improve the outcomes of the educational process
- To get information in the shortest time possible
- To diversify teaching / learning methodologies within a smooth and simple framework
- To help students benefit from Information Technology notwithstanding their achievement and educational orientation
  
- To achieve more effective education in shorter time and larger quantity
- To facilitate and accelerate the teaching process and have a better quality of education
- To cope with technology changes to enhance the competitive ability
- To improve the speed, level and quality of education
- To be aware of Information Technology concepts and acquire relevant skills while producing, improving and employing Information Technology products to serve the community as a whole
  
- To improve the teaching/learning process and cope with technological changes in information and communication systems
- To have educated people develop their intellectual and creative thinking
- To optimize investment of available resources in the best possible means
- To reduce cost of education
- To accelerate information exchange among students and teachers while saving time and effort necessary to achieve objectives
  
- To cope with the accelerating development of technology
- To use IT in student education being a methodology of the teaching/learning process
- To improve the competitive edge in the era of globalization
- To transfer know-how and information promptly and in an interesting manner to cope with the accelerating development of information and communications

- To facilitate the learning and information acquiring process
- To have access to information for the least possible cost through the use of technology
- To have education in Jordan cope with international educational trends
- To save time and effort
- To make the teaching process more interesting

**Because**

- Because information travels in the fastest possible way and spreads in an infinitive time
- Because technology helps educated people to interact better
- Because financial resources are limited
- Because the student is the output of education; he/she must be of the highest level of efficiency
- Because the new era requires a shift from conventional tools and jobs



## **Task 5**

### **How use ICT in Education?**

Jesse Rodriguez presented an overview of the Business Plan to connect 28 Ministry Directorates in an ICT network. He subsequently responded to questions from the audience, including the following.

- How can we guarantee the integration of the various systems?
- Have we prioritized the systems roll out?
- How would the ministry accomplish these ambitious plans while helping bridging the gap between the poor and the rich?
- It is imperative to tie MOE plans to connect schools with existing Information Technology infrastructure in Jordan. Has this factor been taken into consideration when working out the plan?



As part of the team effort, Professor Bassam Kahhaleh, principal Jordanian contributor to the Business Plan supported Jesse by translating his remarks.



## **Task 6**

### **How use ICT in Education?**

#### **Ministry Functions**

### **Outreach**

#### **Purposes**

- Computerize all the general directorates starting with those at the Headquarters
  - Administrative
  - Financial
  - Procurement
  - Project division/ Tenders
  - Other departments
  
- Computerize the headquarters and field administration including finance, buildings, supplies and human resources
- Computerize all administrative systems and processes at the Ministry while connecting them to other directorates
- Computerize administrative processes (text-books, exams)
- Invest time wisely
  
- Encourage information flow and easy access to it
- Computerize all systems at the directorates of the Ministry of Education
  - Computerize the financial system
  - Procurement system
  - Supplies system (books, equipment)
  - Buildings system
- Connect the administrative units through one communication network
- Develop management and documentation software
- Computerize management
  - At the headquarters
  - At the Education directorates
  - At schools
- Computerize the school administration system
  
- Computerize the enrolment system
- Computerize examination system
- Computerize the human resources system (teachers, administrative personnel)
- Computerize the supplies system at schools
- Computerize the class-room management system
  
- Computerize comprehensive education administration
  - Providing equipment
  - Analyzing jobs
  - Implementing training
  - Observing time of implementation
  - Rate of progress within the plan

- Sufficiency of proficient and successful personnel members
- Optimal use of available equipment
- Implementing the plan accurately and effectively
- Optimal investment of time in implementing the plan

### **Results**

- Sound, accurate and economic educational planning
- Decisions with the minimum mistakes
- Documentation of all information to serve the administrative decision
- A proficient educational administration capable of making decisions
- Satisfactory use of computer applications as follows
  - Sound planning (cited more than once)
  - Time reduction
  - Accuracy (cited more than once)
  
- Human resources capable of using technology
- Saving time and effort
- Mitigating the financial burden in the future
- Accuracy of performance
- A new generation capable of using technology in real life
  
- Smooth flow of information among the administrative units
- Prompt communication (cited more than once)
- Accurate information (cited more than once)
- Qualitative administrative decisions
- Effective and proficient management
  
- Time reduction
- Open channels of communication
- Accurate performance with controlled results
- Development dimensions
- New ideas
  
- Clear future visions
- Effective administrative application of decisions
- Quick achievement
- Information system
- Prompt making of accurate decisions
  
- Building up an integral information system to support decision making
- Reducing time required for administrative processes

### **Criteria**

- Reducing time and achieving quantitative and qualitative investment
- Preciseness and accuracy
- Prompt achievement

- Qualitative – the ability of directorates and the Ministry personnel to use technology effectively
- Quantitative Managing all task of the Ministry through computers
  
- Approving a data base for each directorate
- Connecting directorates with a computer network
- Connecting schools and the headquarters with a network
- Completing computerization of administrative systems within three years
- Sound administrative decisions
  
- Documenting accurate and true data
- Smooth access to information
- Accurate information
- Easy access to information
- Promoting linear communication
  
- Implementation according to scheduled time
- Proceedings with external parties go smoothly and regularly

What?	Who?		When?
	Internal*	External**	
Preparing the infrastructure	General Directorate of Supplies and Procurement, Directorate of Finance, Education Technology, Buildings and International Projects	Ministry of Planning Ministry of Finance Supplying companies	2001
Financial Allocations	General Directorate of Planning General Directorate of Finance Buildings and International Projects	Ministry of Finance Ministry of Planning Supporting agencies Private institutions	2001-2005
Orienting and Training the human resources	General Directorate of Personnel Affairs General Directorate of Training and Supervision General Directorate of Finance	Jordanian Universities Private institutions (in Jordan and abroad)	2001-2005
Launching a media campaign to raise awareness	Division of Information	Radio, Television, and Press	2001-2005

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 6**

### **How use ICT in Education?**

#### **Ministry Functions**

#### **Instruction**

##### **Purposes**

- Share the global cultural heritage (cited more than once)
- Assist researchers to acquire data
- Enable students and teachers to acquire data
- Gain access to data for the least costs possible
- Transmit data as promptly as possible
  
- Provide data to the youngest receptor
- Transmit data to every beneficiary
- Follow up on technological scientific developments
- Research data through communication systems
- Prompt access to information
  
- Change the teaching/learning process

##### **Results**

- Reduced educational costs
- Prompt communication among managerial levels
- Research and thinking skills for students
- New professional working skills
- Strengthen community culture
  
- Changed methods of thinking
- Self learning and distance learning
- Student proficiency increased

##### **Criteria**

- Evaluating referential criteria
- Comparing with a fixed reference at any time to locate mistakes
- Forming specialized review committees
- Number of sets and communication channels
- Interim evaluation of the plan
  
- Evaluating achievement according to the plan
- Following up on new achievements
- Feedback between the sender and the receptor

What?	Who?		When?
	Internal*	External**	
<ul style="list-style-type: none"> <li>▪ Setting a comprehensive training plan</li> <li>▪ Assigning specialized committees to implement the plan ingredients</li> <li>▪ Forming specialized committees to evaluate work during implementation</li> <li>▪ Forming a team to study the feed back of the evaluation team</li> </ul>	General Directorate of Training General Directorate of Planning	The World Bank Canadian Government (CIDA) USAID National Center for the Development of Human Resources  British Council D.F.I.D AMIR Program	2001-2002
Developing legislation to implement the plan	General Directorate of Legal Affairs	Bureau of Legislation The Parliament The Cabinet	2001-2002
Developing and up-dating the curricula	General Directorate of Curricula General Directorate of Education The Council of Education General Directorate of Training General Directorate of Information Technology	Faculties of Education at the Jordanian Universities UNESCO	2001-2003
Providing human and financial resources required for the implementation of the plan	General Directorate of Personnel Affairs General Directorate of Training General Directorate of buildings and International Projects General Directorate of Supplies and Procurement	UNESCO ALESCO ASISCO Investors in the private sector	2001-2003

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 6**

### **How use ICT in Education?**

#### **Ministry Functions**

#### **Administration**

##### **Purposes**

- Set a training plan
- Assign qualified human resources
- Provide a time-table and a detailed work plan
- Define mechanisms of work and the role of each directorate at the Ministry
- Define roles of the private sector and other parties
  
- Provide the physical infrastructure
- Provide appropriate financing
- Pass relevant legislation
- Improve human resources
- Develop the infrastructure
  
- Utilize human, physical and financial resources efficiently
- Establish the infrastructure required for plan implementation (sites, tenders, furniture...etc.)
- Implement a clear plan with special dates
- Improve education quality
- Accelerate the teaching process
  
- Conduct a societal media campaign under the slogan “Partners in education and human investment”
- Develop curricula
- Update legislation
- Design control and evaluation systems

##### **Results**

- Availability of all human and physical inputs to implement immediately
- Teaching some subjects using the computer
- An up-to-date teaching/learning system in harmony with the era requirements
- Equipment installed
- An effective system of educational administration
  
- Success of the plan and objectives fulfilled
- Capability to deal with change
- An integrated system for ICT in education available at the Ministry
- Good teaching process
  
- Good outputs
- Technological development
- Tasks implemented according to required standards and as scheduled

**Criteria**

- Each student and each teacher will benefit from the physical and human potentials made available to all.
- Receiving equipment according to the set quantity and quality according to the schedule.
- Easy flow of information among the different administrative units.
- Quantitative and qualitative performance indicators
- Disseminating computer applications at secondary schools for teaching/learning
  
- Acquiring information in a very short time
- Optimal use of technologies
- Complying with the time-table according to the plan
- Results of implementation conform with the plan contents.
- Monitoring the plan implementation
  
- Conducting progressive and final evaluation
- Providing feed-back
- Meeting milestones

What?	Who?		When?
	Internal *	External**	
Computerize all jobs at the Headquarters	General Directorate of Information Technology General Directorate of Supplies General Directorate of Curricula General Directorate of Personnel Affairs General Directorate of Planning General Directorate of Examinations General Directorate of Projects Other relevant directorates	Local and International consultants Private Sector National Information Center CIDA World Bank USAID	2001-2002
Computerize all the Education Directorates (30 directorates)	The above mentioned parties and the directorates of Education	The above parties	2001-2004
Computerize school jobs	The above parties in addition to schools	The above parties in addition to private schools	2001-2004
Connect the Ministry, directorates and schools in one network	General Directorate of Technology Directorate of Legal Affairs General Directorate of Projects General Directorate of Supplies	Private Sector (local and international)	2001-2004
Computerize jobs of Education directorates in the field	All directorates	The Ministry and consultants	2001-2004
Computerize school administration	Secondary Schools Elementary Schools	External sectors Consultants	2001-2004
Provide software for administration and information documentation	General Directorate of Information Technology	Private Sector in Jordan	2002

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 7**

### **How use ICT in education?**

#### **Critical Resources**

#### **Human Resources**

##### **Purposes**

- Ensure availability of
  - Trainers
  - Teachers
  - Maintenance technicians
  - Senior management to lead all activities
  - Local and foreign supporting parties
- Train and qualify the required technical cadre (cited more than once)
- Qualify cadres
- Develop technical expertise
- Attract expatriate expertise
- Tailor a comprehensive training plan
  
- Set a system for monitoring and evaluation
- Provide specialized human resources
- Train and qualify teachers and administrative personnel
- Teach students
- Provide specialists for the labor market
- Provide personnel members who are capable of implementing the plan

##### **Results**

- Capable teachers
- Students using technology and learn
- Administrative personnel members who employ their capabilities in implementing their duties
- Management information systems instructors and trainers
- Expatriate expertise and consultants
  
- Adequate numbers of trained staff
- Qualified people
- A better working environment
- Qualified personnel
- Teacher's role shifted
  
- The educational efficiency increased
- Providing trained technical human resources for the teaching sectors.
- Providing trained technical human resources for the administrative sectors.
- Increased efficiency
- A higher degree of accuracy
  
- Self-satisfaction (psychological factor)
- Jordanian human resources capable of dealing with Information Technology

- Availability of trained and qualified human resources
- Technology skills in students and teachers

**Criteria**

- Human resources that fit the spirit of the Information Technology era
- Distinguished performance level
- Improved achievement level
- The number of courses
- Questionnaires
  
- Computer applications at schools and administrative sections
- Information flow
- Development of the educational system
- Prompt implementation
- Qualitative results
  
- Applying the whole plan
- Support
- Establishing a system of promotion and incentives
- Successful implementation of the plan through achieving the required results.
- Information Technology becomes a natural and integral part of the educational system and of the community as a whole

What?	Who?		When?
	Internal*	External**	
Orient and Train the human cadres	General Directorate of Personnel Affairs General Directorate of Training General Directorate of Finance General Directorates of Education	Universities Internal and external institutions	2001-2005
Prepare maintenance cadres	General Directorate of educational technology General Directorate of Vocational Education	Universities Internal and External institutions	2001-2005
Provide the labor market with specialized human resources	Schools	Universities External Institutions	2001-2005
Train trainers	General Directorate of Training	Universities External Institutions	2001

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 7**

### **How use ICT in education?**

#### **Critical Resources**

### **Financial Resources**

#### **Purposes**

- Adequate Budget
  - Loans, grants and donations
  - Other Contributions
- Identify additional sources for the required financing
- Provide a permanent financial source to support the program
- Manage resources and without wasting money
- Obtain financial support for the Ministry, and local and international institutions
  
- Define priorities to be financed first
- Set a special budget for the program that would include updating equipment and maintenance
- Set the budget for the following three years
- Provide finances to cover the plan implementation requirements

#### **Results**

- Computerized accounting systems at directorates and at the Ministry
- Increase in maintenance costs due to high tech equipment
- Special budget system to cover the Ministry and the schools
- Infrastructure at schools
- Infrastructure at the directorates and the Ministry
  
- Non-disbursed finances forward to the following year
- Finance from the Ministry's budget
- Updated equipment
- Funding for the plan implementation
- Infrastructure necessary for the plan Purchased and prepared
  
- Infrastructure enhanced
- Communication networks
- Human resources trained
- Networks in use

#### **Criteria**

- Easy access to information
- System up and running at schools in the scholastic year 2001/2002
- The plan is implemented year after year
- Regular up-dating of equipment
- Communication networks are efficient and sufficient
  
- More funds in the budget

- Annual increase in the budget
- Availability of funding
  
- Availability of tools and equipment
- Good use
- Rate of expenditure on equipment in comparison with the budget of the Central government
- Deficit amount in the budget
- Availability of funds to purchase equipment and establish infrastructure
  
- Funds are available for training
- Implementation of plan as scheduled

What?	Who?		When?
	Internal*	External**	
Study the financial requirements of the Ministry in light of proposed projects	Directorate of Buildings and International Projects Directorate of Supplies and Procurement Directorate of Financial Affairs	National Center for the Development of Human Resources World Bank Canadian Government (CIDA) International Agencies (UNESCO, ALESCO, ISESCO) Private relevant institutions (banks, companies ,etc)	2001
Define of the percentage of budget allocations for project financing		Ministry of Planning National Center for the Development of Human Resources	2001-2005
Look for other external financing sources to provide loans and donations	General Directorate of Buildings and International Projects		2001-2002
Establish maintenance costs and obtain the required allowances	General Directorate of Information Technology General Directorate of Supplies and Procurement General Directorate of Buildings and International Projects		Along the whole plan 2001-2005

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 7**

### **How use ICT in education?**

#### **Critical Resources**

#### **Infrastructure**

##### **Purposes**

- Leave space for future expansion suitable for the requirements
- Establish a communication network according to the required standards that serve the purpose of the plan.
- Construct the communication network
- Implement the communication network
- Connect of all directorates and schools with the network
  
- Facilitate the communication process
- Validate the system inputs

##### **Results**

- Better future planning
- Coping with scientific developments
- Schools with communication devices
- Improved communication channels and better the level of education
  
- Improved communication
- Improved inputs/outputs of education
- IT service provided in the optimal manner
- An integrated communication system
- Prompt and effective implementation

##### **Criteria**

- Exploiting local capabilities to the largest extent possible
- Annual inspection (evaluation) of the computers during the years of the plan
- Evaluating the ability of the infrastructure to cope with the required task
- Assuring safety of the network
- Prompt review and receipt of information
  
- Assuring effective communication
- Environment friendly inputs and materials
- Following the international standards
- State of the art equipment
- Validating the communication efficiency in light of well-defined standards
  
- The ability to cope with developments
- Respecting others' views (cited more than once)
- Cooperation with a team spirit
- Seriousness and enthusiasm

- Commitment to time
- Cooperation spirit
- Democratic dialogue

What?	Who?		When?
	Internal *	External**	
Connect all directorates and schools effectively	General Directorate of Education and Information Technology and technical divisions operating under it General directorates as per the nature of their work	International consultants Contracting companies National Information Center	2001-2004
Build up a communication network in compliance with standards	General Directorate of Education and Information Technology General Directorate of Supplies General Directorate of Training General Directorate of Qualification General Directorate of Planning	Consultants Private Sector National Information Center	2001-2004

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## Task 8 Communication Strategy

### Blue Team: External Communication

What?	Who?		When?
	Internal*	External**	
Launch the project through <ul style="list-style-type: none"> <li>▪ A press conference for the concerned parties</li> <li>▪ Publications</li> <li>▪ Defining other media</li> <li>▪ Internet</li> <li>▪ Correspondence to donor parties</li> <li>▪ Public speeches</li> </ul>	The Minister  General Directorate of Education and Information Technology  Directorate of Information Technology  The Computer Center	The Media  Other private sector institutions	2001
Conduct tailored workshops	Directorate of Information Technology	Other private and public sector institutions	2001
Hold seminars for the community members	Directorate of Information Technology	Other private and public sector institutions	
Contact donor parties, loans and private sector financing institutions	Directorate of Buildings and International Projects	Ministry of Planning  National Center for Human Resources Development	2001
Hold an annual conference with the participation of all the concerned parties	The Minister	Universities Other private and public sector institutions	2001-2005

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## Task 8 Communication Strategy

### Green Team: Communication to Field

What?	Who?		When?
	Internal *	External**	
Generate shared enthusiasm	General Directorate of Information Technology General Directorate of Education Directorates of Education Directorates of Information	National Information Center Private Sector Radio Information	2001
	Superintendents Cultural activities	Radio Media	2001-2005
	Ministry Directorates Schools		2002-2004
	Teachers Societies, councils and clubs Students	Donor parties Vocational concerned societies National Center for Human Resources Development Jordan Telecom Ministry of Planning	2001
Define the information message	A technical communication committee at the Directorate Learning resources Supervision and training Direction and raising awareness Education	A central committee Experts from the private sector and concerned institutions	2002-2005
Inform the directorates of the Ministry's plans	Information Technology Sections at the directorates Supplies Section Personnel Sections Examinations School principals	Private institutions Local experts	2004
Orient teachers and hold regular meetings among the education directors and teachers Conduct follow up and evaluation Hold a training workshop	Research and Development Directorate Directorate of Extracurricular Activities Councils of Parents and Teachers Councils of Students School Counseling Teachers clubs School Broadcast (Radio)	The Press Jordanian Universities Internet cafes Societies specialized in Information Technology	2001

Communicate results among groups	General Directorate of IT Information Directorates Directorates of Education	National Information Center The private Sector	2001
Assure commitment to implementation through: <ul style="list-style-type: none"> <li>▪ follow up and monitoring</li> <li>▪ periodical reports</li> <li>▪ sustainable operation and maintenance</li> <li>▪ support by decision makers to the plan</li> <li>▪ incentive packages</li> <li>▪ powers' authorization and development of legislation</li> </ul>	General Directorate of IT General Directorate of Projects Directorates of Education General Directorate of Supplies General Directorate of Finance Teachers General Directorate of Legal Affairs General Directorate of Personnel Affairs	<ul style="list-style-type: none"> <li>▪ Donors</li> <li>▪ Contracted companies</li> <li>▪ Ministry of Finance</li> <li>▪ Ministry of Planning</li> <li>▪ Legislation Bureau</li> <li>▪ Parliament</li> </ul>	Periodically during the implementation 2001-2005
Ensure feedback from: <ul style="list-style-type: none"> <li>▪ interviews</li> <li>▪ questionnaires</li> <li>▪ studies</li> </ul>	Directorates of Education School principals Local community Local public opinion Parents (Parent Councils)		Periodically and during the plan implementation
Define means of communication Official memos <ul style="list-style-type: none"> <li>▪ meetings</li> <li>▪ workshops</li> <li>▪ local press</li> </ul>	Minister Secretary General Concerned general directorates Directorate of Technology Directorate of Supplies Directorate of projects Directorate of training Directorate of information		Periodically during the implementation 2001-2005
Defining the message to be relayed to the field	Ministry General Directorate of IT Directorate of Training Directorate of Planning Directorate of Curricula Directorate of Examinations		2001
Assure commitment to implementation	<ul style="list-style-type: none"> <li>▪ School principal</li> <li>▪ Teacher in charge</li> </ul>	<ul style="list-style-type: none"> <li>▪ Director of Education</li> <li>▪ Concerned directorates</li> <li>▪ Curricula</li> <li>▪ Projects</li> </ul>	2001-2005
	<ul style="list-style-type: none"> <li>▪ Division of Finance</li> <li>▪ Division of Supplies</li> <li>▪ Division of Training</li> <li>▪ Division and teacher clubs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ministry</li> <li>▪ Local experts</li> <li>▪ Foreign experts</li> </ul>	2002-2004
Train human resources	Ministry and other parties		2001-2021

Ensure availability of equipment and networks	<ul style="list-style-type: none"> <li>▪ Ministry</li> <li>▪ Relevant directorates</li> </ul>		2001-2003
Conduct communication and orientation phase	<ul style="list-style-type: none"> <li>▪ Ministry</li> <li>▪ Directorates</li> <li>▪ Schools</li> </ul>		2001-2002
Build commitment	All parties involved in the education process		2004-2005

\* *Directorates and divisions of the Ministry*

\*\* *Private sector, international parties, other governmental institutions and departments, others.*

## Task 8 Communication Strategy

### Red Team: Communication to Headquarters

What?	Who?		When?
	Internal*	External**	
Hold regular meetings (weekly, monthly...etc.)	<ul style="list-style-type: none"> <li>▪ General Directorate of Information Technology</li> <li>▪ The Minister</li> <li>▪ The Secretary General</li> <li>▪ General Directors</li> </ul>	Experts	Weekly/monthly
Submit and discuss working papers	General Directors	Experts	As necessary
Disseminate publications of achievements	<ul style="list-style-type: none"> <li>▪ General Directorate of Educational Research and Development</li> <li>▪ General Directorates</li> </ul>	Institutions	According to achievements
Evaluate achievements and identify ways to strengthen program	<ul style="list-style-type: none"> <li>▪ General Directors</li> <li>▪ General Directorate of Education and Information Technology</li> <li>▪ Directorate of Quality Assurance</li> </ul>	Institutions and experts	Quarterly and yearly

\* Directorates and divisions of the Ministry

\*\* Private sector, international parties, other governmental institutions and departments, others.

## **Task 9**

### **Lessons learned**

#### **Blue Team**

- More realistic approach towards the subject
- Cooperation in designing plans
- Making new friends (cited more than once)
- Joint performance
- Distribution of work
  
- Distribution of roles
- Agreement on objectives
- Group work
- Team spirit
- Organized performance
  
- Organized ideas
- Distribution of tasks and roles
- Participation
- Disseminating IT concepts among the educational leaderships
- Cooperation (cited more than once)
  
- Effective participation (horizontally and vertically)
- Patience
- Exchange of experience between the private and the public sectors
- Brain storming
- Frank dealing
  
- Free opinion
- Respecting others' views (cited more than once)
- Different points of view and the way to reach an agreement
- Democracy
- Democratic dialogue
  
- Time organization
- Time management
- Effective use of time
- Effective use of allocated time
- Making use of time
  
- Applying the learned lessons at work
- Application to work

## **Application**

- Hold such workshops in all the education domains
- Strengthen cooperation with non-governmental institutions
- Set time-tables to implement the plans
- Use precise and sound planning at work
- Allow participation of the larger community to incorporate education technology in curricula
  
- Select qualified human resources for implementation
- Focus on the job to be done and defining responsibility
- Have colleagues participate in decision making
- Introduce technology applications at my institution through training to develop work
- Participate in decision making
  
- Distribute roles
- Distribute work to personnel
- Instill spirit of cooperation among the directorate's personnel
- Ensure success of all the team members
- Define methods and techniques
  
- Use patience and tolerance in solving problems of employees and customers
- Computerize the General Directorate of Buildings and International Projects
- Cooperate with the private sector to complete the Ministry's plans
- Focus on time management at work



## **Task 9**

### **Lessons learned**

#### **Green Team**

- Organization of role assignments
- Time commitment importance of time
- Importance of consultation and dialogue
- Benefiting from others' experience
- All Directors General at the Ministry are informed of the computerization plan for the Ministry
  
- Strength comes from unity
- We must apply what we learned at work in order to increase productivity
- More motivation and enthusiasm for work
- Adapting attitudes to the main topic
- Team work and role play
  
- Clear vision of future work steps to implement the plan
- Importance of cooperation and participation in setting plans, programs, and strategies
- Considering the private sector as a strategic partner when drawing, implementing and evaluating plans by means of dialogue, cooperation and listening to others' views, no matter how difficult the tasks are
- The importance of clear vision before starting implementation
- Cooperation is a basic element of success
  
- Seeing the diverse views of the workshop participants and benefiting from them
- The need to have regular awareness campaigns
- Serious implementation of work as scheduled
- The need to hold further meetings and workshops to discuss the Ministry's plans
- Brainstorming is an important tool to reach rational decisions for education

#### **Application**

- Liberalize my convictions and share them with others with whom I'll be working in the future to implement the project steps
- Identify realistic work steps in light of knowledge related to all details of the project implementation.
- Ensure respectful dealing with partners from outside the Ministry while appreciating their roles no matter how small they should be
- Adopt work mechanisms as set in this workshop and apply them in future tasks
- Introduce constructive ideas
  
- Respect others' opinions
- Remember technological and communication applications are a basic element for a continuous education development
- Join dynamism and mobility
- Obtain training on work as a team and respecting others' views
- Obtain further knowledge and general and special ideas related to the main topic

- Develop useful contacts with others
- Respecting others' views
- Ensure cooperation
- Generate enthusiasm
- Obtain more knowledge
  
- Get to know the informal opinions of colleagues
- Give to others (and receive from them)
- Encourage quick thinking (wit)
- Strengthen cooperation ties between the Ministry of Education and those concerned with IT in the private sector by having them participate in planning for the project
- Form a steering committee in cooperation with the private sector
  
- Remove psychological barriers among participants during the workshop proceedings; this resulted in a positive impact on motivation and brainstorming
- Raise awareness of the public opinion in relation with the existing and future education projects
- Adapt codes of behavior and daily attitudes to work

## **Task 9**

### **Lessons learned**

#### **Red Team**

- How to strengthen ties among team members
- Respecting others' views (cited more than once)
- Realizing importance of time
- Acquiring new training skills
- Mastering role play
  
- Breaking down psychological barriers among educational leadership
- Team work and team spirit
- Benefiting from different experience
- Listening to others' views
- Getting to know the strategic plan to computerize education
  
- Acquiring listening skills
- Being aware of the importance of technology and communications
- A future vision of the Ministry's plans of computers
- Meeting with colleagues
- Acquiring skills of workshop management
  
- Joint work
- Objective work
- Exchange of opinions
- Giving all participants the chance to contribute to the preparation and implementation of the plan
- Communication and harmony
  
- Getting liberated from official work restrictions
- Democratic dialogue
- Communication among senior staff members
- Joint views
- Participating in the plan preparation

#### **Application**

- Apply lessons learned at work
- Hold similar workshops at the Education Directorate and for superintendents
  - meetings
  - interviews
  - evaluation
  
- Identify technological trends prevailing at the Directorate
- Enhance functional ties at work
- Listen to views of colleagues at the General Directorate
  
- Apply democratic management

- Encourage team work and spirit
- Respect several points of view
- Follow up on the computerization plan
- Follow up on plans set during the workshop
  
- Enhance communication channels among all staff members
- Hold regular meetings to reach common vision
- Adopt the group work method by holding workshops and meetings
- Find relevant methods by expressing views and opinions
- Define the difficulties and find solutions
  
- Ensure team work at the General Directorate
- Follow up on continuous communication
- Hold regular meetings and interviews