Processing of forms, marks & preparation of result is computerized at many institutions to improve office efficiency. But benefit to students, teachers, schools, guardians, media, public or any outsider did not accrue. Then first time this Board decided to develop web base application Result Through Binocular to provide access to database, analytical tool, various services & information to everybody according to their need. This covered areas hither to untouched and provided many views.

This is an effort to put on web every information service, analysis one needs from the Board. And the most spectacular part of effort was the implementation strategy which overcame various forms of organizational resistance, resource crunch etc.

What is RTB.

RTB provides standalone and webbased information, provides analytical tool to everybody, instrument of transparency, online certification counseling etc.

Beneficiaries

The range of beneficiaries spread from student to media to government. Morethan 12 lakh students & their guardians, lacs of teachers & principals, thousands of schools & their management bodies, thousands of institutions, universities, job providing organizations, Govt. and its bodies, all sorts of media and various social organizations and Board itself.

It is said that information is power; in the context of the Board. RTB is a weapon through which public can feel empowered.

Features of RTB

E-access to result

RTB changed the paradigm of read & throw result data to permanent updated verifiable record. Daily updation was the most important feature of detailed result display. A Roll number search engine helped anybody to find out roll number & result in a limited knowledge of particulars. The remarkable aspect was that the latest information any day was always available first on web. Even Board people used this if anybody was to the know any latest position.

Although barrier of time & distance was also abolished by providing marks on Mobiles, IVRS systems, yet people using those methods also turned to web to take advantage of various added features, print outs, certificates.

Online Verification.

Because of regular update & cross check the reliability of gazette data is as good as manual papers. The problems of fake certificates and frauds can be tackled by verification on web as well as paper certificate. Once proper encrypted internet security system is in place then Board can do away with paper certificates. Many institutions, universities have opted for such verification for admissions instead of time consuming, lengthy, tedious manual paper verification procedures.

Provisional Certificates

These certificates with limited validity period can be printed from the web. This can also be verified online and it has photos, signatures and encrypted bar coded security in-built in it. As a measure of caution, persons knowing their roll number as well as date of birth can print it.

Macroview of the result.

Other then individual results, collective view provides many insights into the performance of child, school, teacher, educator, administrators, etc. at various levels. They can know their relative achievements.

RTI allows one month to get any data but RTB provides every information instanteaously. All type of toppers on various parameters are available to everybody including media and social organizations. Award and scholarship list is immediately available.

Fighting exaggerated performance claims of private schools.

This is an offshoot of information and transparency provided by RTB. Ranking of teacher and schools are provided and it includes detailed relative performance of various schools. Students and their guardians use the information while taking admission to avoid being trapped by misleading and tall performance claims.

E-psychologist

Fully automated web based interactive e-counseling is also offered by RTB to fast post result stress and provide necessary guidance. No human being is involved in the interaction which rules out human attrition, mistakes, lack of knowledge and cost. Counseling for parent as well student is provided. The option of choosing language-either English or vernacular is there. Some consoling data about one's performance can be given only by computer. Even human psychologist can take help of RTB for busting stress. Usually human beings have no inhibition in seeking advice

and exposing their weakness before a machine. Software also provides various motivational slogans to boost one's morale.

Dynamic database with millions of queries.

RTB can be accessed and analysed on any combination of parameters meeting any criteria. All sorts of comparisons on various possible parameters is possible. **These parameters includes sex, District, Block, caste, type of school, nature of students, locality, subject, marks criteria, pass criteria, result status, eligibility status etc.** A student can evaluate his/her admission options by knowing the degree of competition and his/her relative standing anywhere. Teacher's write their ACR's can be based on relative performance of their students vis-a-vis State/district & last year's performance. For every possible query detailed list with all information is generated. And a sample output is there to make it user friendly. RL reports helping in removing in accuracy in result preparation.

Statistical Groups

RTB provides frequency of marks analysis to give a pictorial view of performance on any combination of parameters. It also helps the Board in deciding grace, grading, etc. as well as in question paper analysis. Scoring patterns as also diagnosis and strength & weakness of students meeting any criteria on any parameters is possible with the help of RTB.

Chatting with Secretary

Chatting with Secretary is open to every body whenever the Secretary is online throughout the year but whenever result is declared he is compulsorily available at fixed declared hours. Not only counseling but various problem solving is also done. If some complex problem cannot be resolved immediately then email is sent within a week. It has certainly improved the satisfaction level of public but there were also instances of abusing and misusing this process.

Reaching Everybody Everywhere

CD versions are also distributed with uploading facility from net. Board is making connectivity as condition for recognition/affiliation of a new school. For existing ones, Govt. is giving financial assistance in phases to have e-connectivity. Even at the academic front, Computer Science is being equated to the level of languages.

Some Impacts

All reports are generated on web itself and even these are not sent to anybody. Asker is directed to consult website. Every information as well as analytical tool is available online and updated. It was so user friendly that no training is required. Research scholars, policy makers, school managements, educationists, teachers are using it extensively. It has empowered people through transparency. Board benefits by accuracy, time & cost saving, doing away the drudgery. Students at the tender age, interact with computer and see the ease, power and facilitation provided by software. This substantially increases interest of younger generation in computers.

Strategy for success of e-governance

Success of e-governance lies in identifying right areas/operation where computers can play a role. Whenever process working involves a large numbers of things amenable to some and an algorithm where speed of access, computation has a role to play, computerization could prove a large improvement over manual system. The Board always works with big numbers – lakhs of students, crores of answersheets. Its examinations cover almost every family in the State more so with Open School.

Hostile Environment & resource

Due to organistion inert ion and resistance to change coupled with lack of knowledge of power of IT, nobody in the organization was willing to even understand, let alone contribute resources to the project. There was no technical personnel nor any resources to engage manpower or purchase of hardware.

It is almost unbelievable that two persons (one in the Board and the other an outside programmer) separated by a distance of 150 kilometers, chatting and e-mailing over net, conceptualised, developed and implemented all features of the package without spending a single penny.

Outsourcing

The Board took help of outsider programmer from NIC to spend some extra time beyond office hours. As no financial or otherwise compensation was possible to extend, the work was ensured only through the personal report and hope of glory someday in future, using existing facilities within and outside.

Board used web facilities of NIC at Chandigarh headquarter for uploading & support. Regular updation was made possible from website so that Board did not approach Chandigarh for update every hour.

Step by Step Improvisation

With all sort of resource crunch, it was not possible to first make the software and then test it and then launch. Its features were added regulary and they were tested whenever any result was declared. A new version was launched after an average time period of 20 days. This sustained interest, ensured effortless joyful working from the beginning and increased confidence of various decision makers overtime.

Smoothing out Resistance

Software tested success after success throughout the year as features addition was faster than declaration of various results. Gradually all skeptical people who were making resisting in the beginning started appreciating it

Support started Housing in

After successful one year, even Board started talking about support of hardware and manpower to extend it properly to schools. Board granted US $ 1 million approximately to provide e connectivity to each school. Government is also pledging $10 million for providing computer labs to schools and for connecting them through the net.

Model Implementation plan for resource hit countries.

The austerity Model of implementation may prove an eye opener to various organizations in the Third World where every basic e-governance resources are luxury .

Overcoming low computer net penetration

Students, teachers public are less techno saves than other states but private internet cafe operators played a big role in reaching every nook and comer of the population. E-access and literacy got a big boot through this unique project.

1 ▣

2 ▣ Result through Binocular

Database,
Analytical tool,
Service & facility provider,
Electronic assistant

3 ▣ Serving

Student
their parent/guardian
Teacher, head teacher
School management
Government, policy maker

4 ▣ Serving

Various university,
institution
Job provider
Media & social organisation
Research scholar
Board

5 ▣ Initial Introduction

- *Board works with big numbers*

- *Moving away from use & throw results*

- *adding features regularly*

- *working within limited & existing resources*

6 ▣ eAccess to result -i

- *Online result (gazette) record*
- *result display*
- *find even with limited knowledge*
- *daily updation*
- *latest information is available first on RTB*

7 ▣ eAccess to result -ii

- put last year's record too on web
- user of other mode also going to computer
- instant round the clock facility on your computer

8 🖼

9 🖼 Online verification

- Doing away with paper certificates in future
- avoiding fake certificates, fraud
- tackling cases of not returning certificates
- doing away with tedious, lengthy and manual verification of record
- Online verification
- User of other mode also goes to computer for this

10 🖼 *Provisional Certificate*

- instant round the clock facility at home or nearby
- valid for limited period
- Bar coded security
- can be verified online
- useful for admission, applying till original received
- must know date of birth to get it

11 🖼

12 🖼

13 🖼 *collective view of the result*

- looking at result collectively
- percentile
- list of toppers on various parameters
- instant award list
- social organisation & media
- performance of teachers and subject wise ranking

14 🖼

- performance of schools
- transparency
- useful in fighting fraud,
- tall claims, misleading advertisement
- guardian, students use before taking admission in private intuitions

15 🖼 Snapshot of ranking

16 🖼 *E-Pshycologist*

- *ecounseling and busting stress*
- *fully automated 24/7*
- *no human attrition, mistake, lack of knowledge, cost*
- *for parent and student separately*
- *in both English and Hindi*
- *no inhibition in interacting with machine*
- *no wastage of time in asking for routine details*
- *motivational slogans in his own language*

17

- ***Any combination of caste, sex, district, school, nature of student etc urban rural goverment school/private school suject wise, marks criteria***
- ***All sort of comparisions between regions***
- ***Evaluation of admission options***

18

- ***teachers comparing and writing Acr***
- ***school, subject, district analysis***
- ***averages, compartments, pass percentage...***
- ***comparison from last year performance etc***

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29 [image]

30 [image]

31 [image]

32 [image]

33 [image]

34 [image]

35 [image] **Statistical graphs**
- frequency of marks analysis
- helps board in grace decision, grading, question paper analysis,
- scoring pattern,
- RL reports helps in removing inaccuracy in result preparation

36 [image]

37 [image] **Chatting with secretary**
- round the year when online
- and fixed time when exam result is declared.
- for counseling and problem solving of students and their parents
- better satisfaction level abuse and misuse too

38 [image] **Reaching every School**
- through CD version
- investing in computer labs
- making connectivity as a condition for fresh recognition
- equating computer science with languages

39 [image] **Impact 1**
- Doing away with all manual report to anybody
- everything is available online and updated
- a training of govt people
- reserach scholars, policy makers, school managements, educationist
- teachers using it extensively

40 [image] **Impact 2**
- Transparency, accuracy & time/cost saving
- Epowerment

4

- *Students getting attracted towards computers*
- *Now no paper list or information is send to anybody*

41 Thank you