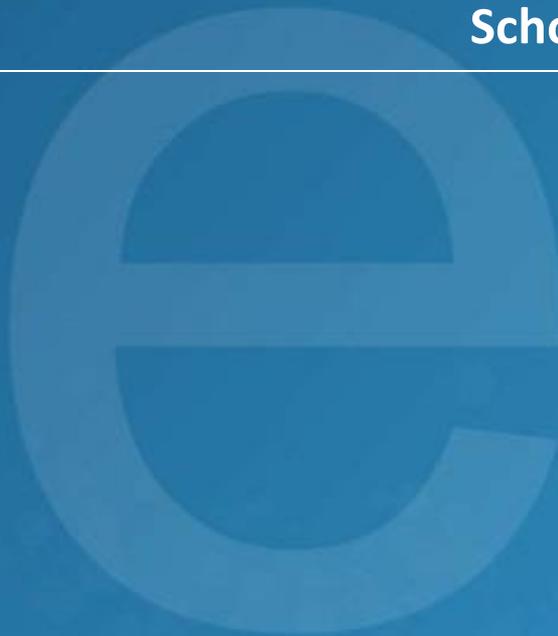# Case Studies on
e-Governance
in India

Electronic Payment and Application System of Scholarships (ePASS)

Pradeep Tandon

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1.0 Abstract

Online scholarship disbursement system, namely Electronic Payment and Application System of Scholarships (ePASS), was envisaged by Andhra Pradesh government to ensure speedier disbursal of scholarships through minimally staffed social welfare department. ePASS was a multi-department, multi-stakeholder application which had impacted over 25 lakh students and several thousand educational institutions in the State of AP. Given the magnitude of financial commitment, which for the years 2009-10 and 2010-11 was about Rs. 4,000 crores for each financial year, and which was only expected to significantly increase over the years, the need of a complete end to end student / college centric G2C (Government-to-Citizen) ICT (Information and Communication Technology) solution of the nature of ePASS presented itself as a matter of urgency. By adhering to the tenets of "SMART" – simple, moral, accountable, responsive and transparent government – the ePASS initiative had helped bring many economically deprived students into the fold of mainstream education, thus contributing to overall development and making economic growth truly inclusive. ePASS project initiative had also delivered many by-products like streamlining universities and colleges' fee structure, validation of courses offered by the colleges, initiation of electronic treasury processes, linking bill submission with budget approvals and new PPP service - Meeseva.

2.0 Key Words

Government Process Re-engineering (GPR), Andhra Pradesh (AP), Open Source Java technology, district treasury, social welfare, electronic document, AADHAR database, biometric / figure prints, hall ticket number, Principal Secretary – Social Welfare (PS-SW) and Post Matric Scholarship (PMS), Public Private Partnership (PPP).

3.0   Notes to Practitioners and Instructors

3.1 NOTES TO PRACTITIONERS

This case fact displays significantly the challenges and its mitigations for the project owner – Principal Secretary – Social Welfare (PS-SW). A vital decision in the beginning was the insistence by PS-SW to include ten top ministers of AP Government, few of them were owners of large group of colleges in AP and others were holding important portfolios / positions in AP government, in the core team of ePASS. This facilitated quick decision making and smooth implementation of the new system after Government Process Reengineering (GPR) was initiated. In the beginning, the software development contract was awarded to a local vendor (M/s Ram Informatics Ltd, Hyderabad) but it was soon realized that without proper GPR it would not be a successful implementation. A

comprehensive GPR was undertaken under the leadership of PS-SW and software was developed by Centre for Good Governance (CGG) on Java based open source technology. Objectives for ePASS were drawn and based on which, in structured fashion, processes were analysed and redesigned. ePASS had passed through multiple iterations of GPR. Every time, new processes were redesigned for higher transparency of operation and optimum involvement of manpower. Implementation of first version of ePASS brought full transparency to the system, while second iteration (of GPR) in which field inspection was withdrawn and was replaced by AADHAR database authentication of the students, had significantly reduced the transaction costs.. Second GPR iteration had saved more than 9,000 man days of efforts per year with fool proof verification process and 100% student verification, which was not feasible by field inspection due to the following reasons:

- All students were not present on the field inspection day

- Allocated staff members (about 3000 from other AP government departments) were not trained adequately to conduct field verification and there were differences in actual information on the certificate and the data filled in the scholarship forms submitted by the students. Income shown in income certificate and figures filled by students in the forms submitted by student were major mismatches.

- Field inspection process was leading to corrupt practices: Depending on the strength of the college, inspection was carried out in a time span of 1 day to 3 days. It was observed that field inspectors were approving the scholarship without properly checking the caste, cash and educational qualifications. Also, the students not present during inspection were reported as approved beneficiaries by field inspectors.

- Regular work of the government was affected as about 3,000 staff was released for 2 – 3 days by state administration to take up filed inspection from various government departments.

3.2 NOTES TO INSTRUCTORS

The case study helps in explaining various steps and challenges involved in Government Process Reengineering (GPR). One may appreciate that cascading effect from stage / step one to the next step(s) / stage(s), and a cumulative impact of all the stages on the success of adoption have been reported in the literature. It is important to note that with the adoption of Information Technology (IT) solution, many steps were reduced, processes were simplified, transparency had increased, stakeholders had clear cut information for their decision-making and action and cost of transaction was reduced to optimum level. After GPR, the entire scholarship was handled by about 330 staff members of social welfare department, effectively.

Debate on the following points may help readers in analysing the importance of GPR while planning and rolling out of IT / e-Governance projects:

1) Why is it important for core group / committee to have decision makers and top stakeholders as members?

2) Why is it important to set clear objectives in an e-governance project? Should these be decided by chairman / chairperson only or should they be arrived at through discussions and deliberations?

3) What additional / different steps would you have taken if assigned as core group chairman / chairperson to this project?

4) How will you achieve new directions / ideas which you have?

5) What is your assessment of reengineering of ePASS and associated processes? Elaborate your each point.

6) What is your SWOT analysis for ePASS project?

7) What could have been the change management strategies adopted for the ePASS project?

8) Elaborate your roll out / GPR and implementation method for such a project.

9) If you are given responsibility to lead ePASS project, what are the factors you may like to consider in ePASS?

10) The system has been coded and hosted by CGG. Could there have been alternative models for approaching this project? Please discuss merits and demerits of your model.

4.0 Project Context

The "Government Process Reengineering" (GPR) or organisation transformation is undertaken for efficiency in administration and service delivery. The knowledge of GPR enables government personnel to improve government functioning through:

- Improved citizen focus and experience

- Minimized process complexity, cost and service delivery time

- Increased transparency levels

- Reduced administrative burden

- Adoption of best practices

At the same time, GPR is challenging for several reasons:

- Process for changing in government is extremely tedious as this has long history and deep routes.

- Bureaucracies are known for their low tolerance for risk and maintaining status quo. Reengineering means fundamental and radical changes in the existing system.

- Bringing radical changes in government requires very large degree of change management in the department and associated stakeholders which may not be part of the department attempting GPR.

- Motive force for transformation is difficult to come by.

Electronic Payment and Application System of Scholarships (ePASS) is characterised by good practices which span the entire e-Governance life cycle and which collectively have contributed to the success of the project. A well-conceived e-Governance initiative, active top leadership involvement, rigorous rounds of capacity building aimed at obtaining buy-ins from all stakeholders – have all been responsible for the positive impact of ePASS.

Government process reengineering [GPR] holds a special position in the e-Governance life cycle. Perhaps more than any other drivers, the extensive GPR that accompanied ePASS and which contributed to its transformational characteristics merit special mention.

Post Matric Scholarships (PMS) was an important welfare initiative of the Andhra Pradesh Government, aimed at providing financial assistance for pursuing post matric education to students of weaker sections in following categories:

- Scheduled castes (ST)

- Scheduled tribes (ST)

- Backward classes (BC)

- Economically backward class (EBC)

- Disadvantaged classes (DC)

By adhering to the tenets of "SMART" – Simple, moral, accountable, responsive and transparent government – the ePASS initiative had helped bring many an economically deprived student into the fold of mainstream education thus contributing to overall development and making economic growth truly inclusive.

5.0 Project Description

The various stages in a typical GPR initiative are shown in figure 1 below. ePASS has also passed through similar steps.

| Problem identification and definition | → | Define vision and objective of GPR | → | Process Study and Documentation | → | Process analysis | → | Process re-engineering & define to be processes | → | Process implementation / IT enablement & Validation |
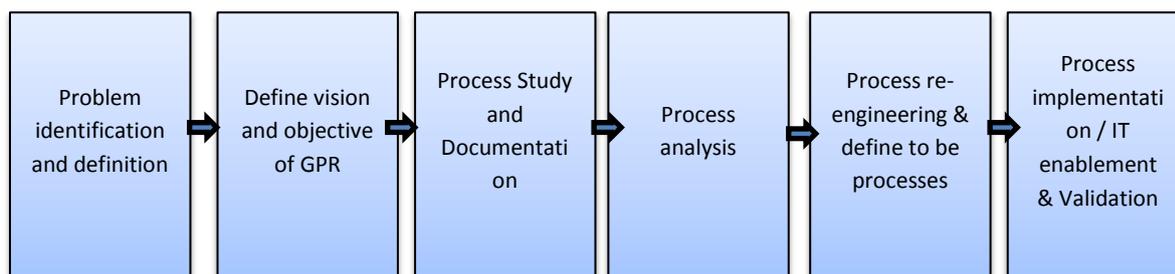
Figure – 1 Typical GPR Steps / Initiatives

5.1 PROJECT OBJECTIVES

PS-SW started the assignment around July 2009 and gave the name to this assignment as "Electronic Payment and Application System of Scholarships - ePASS". For smooth change of Government processes, PS-SW had requested for high powered team of 10 Group of Ministers and many of them had majority stakes in various post matric colleges in the state of Andhra Pradesh and some of them were effective ministers. This had made the transition / Government Process Re-engineering smooth and easier for adoption of new system - ePASS. ePASS core team has decided following 4 objectives:

1. **Ensuring accountability of institutes and colleges and focus on quality of education:** When the project started in 2009, it was observed that many institutes only existed on paper and not in reality. Many of these had not renewed their validity after 1999 and yet continued to draw government funds for disbursal of scholarships among students. During the verification process, it was discovered that out of 16,500 colleges, only about 10,500 existed.

2. **Making government responsible for timely release of funds to students:** It was quite a cumbersome and time consuming process because each and every applicant application was examined manually against set rules for the award of scholarship. After its approval, scholarship was computed at respective district social welfare offices. Total amount for each college was calculated manually and a typed copy of it was submitted to finance department for release of money. Based on the approvals and release of money by finance department, demand drafts for each college were prepared and dispatched by district social welfare office to colleges. It was decided in the core group that AP government should not only clear the arrears but also made timely payments to colleges and students. This has prompted the GPR core committee to undertake finance department and district treasury also as stake holder for processes based approval and online transfer.

3. **Reforming fee structures at Universities, Deemed Universities, autonomous colleges, added colleges and affiliated colleges:** For the same courses, different institutes were charging different fee from the students and universities were not having any control on it. It was estimated that there were more than 144,000 fee structures. It was decided that universities (about 34 in number) would fix up the fee structure for all types of categories with the approval of state government and institutes would follow the same without any deviations.

4. **Shift the student focus to studies:** AP Government had 2 to 3 years of tuition fee / maintenance fee (scholarship) backlog at any given point of time. Further, no information was available in public domain about the release of money by the government. Colleges were not permitting students to attend classes without colleting tuition fee. Therefore, students were forced to pay the tuition fee in advance to colleges. Students use to collect fee reimbursement from the college once it was paid to the colleges by AP government. It was observed that colleges were returning the money, with lot of follow ups only, to the students who were continuing in the colleges. Students who had completed their education, had bigger challenge in collecting the money from the colleges and many a times, losing the money as they were not in the college and could not follow up on regular basis.

5.2 KEY STAKEHOLDERS

During study of the manual system, it was observed that scholarship was handled at district level, which gave opportunities to students to claim scholarship from the institutes located in other districts in the state. After GPR, it was decided to treat students scholarship it at state level, evolving state wide unique ID for a student. The following stakeholders were involved in the ePASS system:

1. **Social welfare departments (district level) and 330 offices across AP State** – receipt of scholarship application, its verification, inspection and approval

2. **AP HSC and intermediate board** – provision of basic data for students and unique ID (HSC hall ticket number) and year of passing

3. **Universities / Colleges / institutes** – create fee structures, course duration schedules, course structures, student verification mechanisms, conduct courses and capture student attendance and regularize posting of this information on to the ePASS portal

4. **District Treasury offices** –release of funds for scholarship payments

5. **Centre for Good Governance (CGG)** –software owner for ePASS application and provider of data base server and access to stake holders and users

6. **MeeSeva centres** – provision of income, caste, category certificates and various associated services for users

7. **Students** – undertake selected course and focus on studies as scholarship was processed in transparent manner and status could be checked on web.

5.3 SCHOLARSHIP PROCESSES UNDER THE MANUAL SYSTEM BEFORE EPASS

Till FY 2009 – 10 schemes were handled manually and involved following steps:

1. **Notification:** Students were invited to apply for scholarship under specific categories with a starting and a cut-off date.

2. **Blank Application Forms:** Social welfare offices (SWO) were issued blank 5 page format of Application Form. These were duplicated at offices and issued to students and colleges. About 40 – 45 lakhs copies were made at Social Welfare office while there were about 28 lakhs applicants. After filling the form the student was supposed to submit it to the college in triplicate for onward submission.

3. **Filling of forms by Students:** Students are required to fill the form and submit it to colleges for checking.

4. **Forms Submission by Colleges:** Colleges are required to compile and segregate the forms, check its eligibility and to call associated SWO for inspection.

5. **Field inspection:** SWO use to visit the colleges for field inspection on a predefined day while students and their presence in the college were verified. It was observed that all the students were not present on the day of inspection and bogus verifications were reported. This had also led to corrupt practices.

6. **Consolidate and send it to social welfare office:** Colleges use to consolidate the verified forms and send these to associated welfare office.

7. **Acknowledgement by social welfare office:** Verified applications were received at the respective Social Welfare office from the colleges and acknowledgements were sent.

8. **Checking at social welfare office:** SWO use to check the eligibility of the application.

9. **Rejection / eligibility at Social Welfare office(SWO):** SWO use to perform this activity

10. **Segregate into Fresh / Renewal:** activity was undertaken at SWO

11. **Scholarship calculation:** Based on eligibility SWO calculated the scholarship for each applicant / student.

12. **Institution-wise calculation:** SWO tabulated the fund allocation for each college / institute.

13. **Prepare proceedings for scholarships:** Written approvals from DM on the amount calculated (up to step 12) were obtained.

14. **Prepare institution wise DDs:** Based on approvals, institute / college wise DD were prepared by SWO.

15. **Dispatch of DDs to institutes:** SWO use to dispatch DDs and obtain acknowledgement from colleges / institutes.

16. **Handle queries:** SWO used to receive and address queries and complaints.

17. **Cross verify:** Student account and institute account was checked by SWO to handle complaints.

18. **Reconcile:** SWO use to check their register and reconcile the payments.

19. **Inform disbursement progress:** As government was not releasing full money in one-go, SWO use to inform the progress of money disbursement to colleges / institutes periodically,

20. **Maintenance money disbursement by Institutes:** SWO use to take copy of acquaintance register for record.

21. **Revalidate DDs:** Time barred DDs were revalidated by SWO

22. **Check duplicate disbursement**

23. **Recover money**

24. **Close**

Flow chart (figure -2) explains the manual process of PMS:
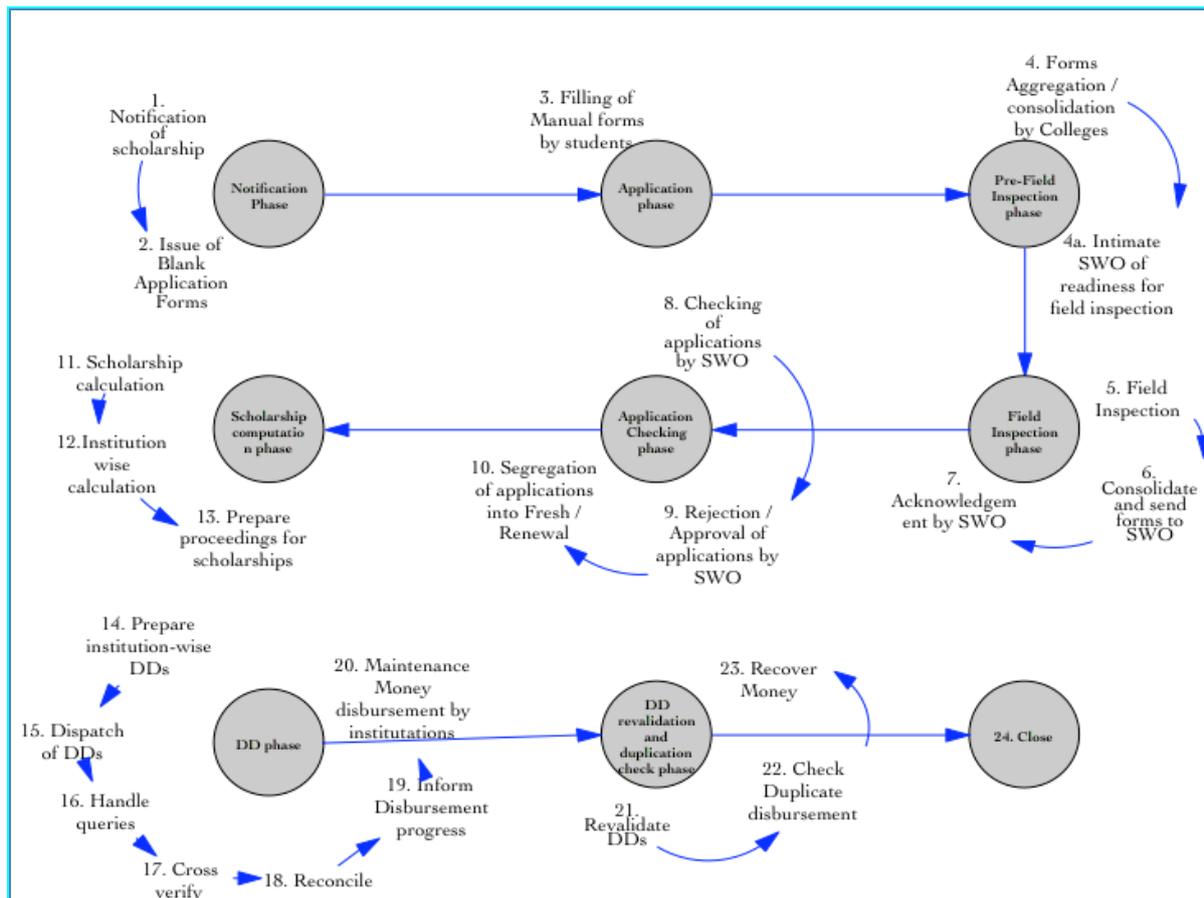
Figure-2

Pre-ePASS Manual processes

5.4 SCHOLARSHIP PROCESSES UNDER EPASS

Post 2009 – 10 to 2012 – 13 process followed with ePASS:

1. **Notification:** With cut-off date

2. **ON line entry by Student:** Students entered their data using SSC / Intermediate hall ticket number. Hall ticket number being unique, it helped in picking up basic data like name of student, family details, marks, category etc. from SSC / intermediate server. Student uploaded scanned copy of educational certificates, salary certificate, bank pass first page and category certificate.

3. **SWO checking:** SWO checked the applicants name with pass book, SSC data and category against the record of previous scholarships and approved it. After approval by SWO, approved data started appearing on college portal.

4. **Checking by colleges:** Colleges verified the data of student with original certificates, salary certificate, category certificate etc. and kept the application and copy of certificates for field inspection.

5. **Field inspection:** Services of 330 SWO staff and 3,000 other district staff were made available on specific dates, to verify the students at colleges. Any absence of student on the date and any bogus verification were reported. In the next GPR iteration, this process was removed with AADHAR data base verification and MeeSeva – income and caste certificate on line verification.

6. **Sanction of scholarship by SWO**: Each student wise data was presented to SWO on their office computer. It was approved by SWO by clicking a specific button. SWO had option to reject the scholarship application after choosing appropriate option from pop up options.

7. **Budget allocation**: District office / SWO were informed electronically about the budget availability.

8. **Release by scholarship by SWO by submitting bills to treasury**: SWO were required to submit hard copy bills to treasury.

9. **Sanction of bills by treasury**: Submitted bills to treasury were keyed at treasury and amount was transferred to bank for onward transmission to beneficiary account.

10. Transfer of funds by treasury Banks

11. **Transfer of funds to students bank account** – maintenance money and supply of SBI cards were issued by SWO to institutes for onward delivery to students for withdrawal of maintenance money from SBI branch

12. Tuition fee amount transferred by bank to colleges account

13. Receipt of acquaintance register at SWO from colleges

This had reduced the steps dramatically from the manual system and at the same time system became transparent.

The process flow chart after first GPR is depicted in figure 3 below:
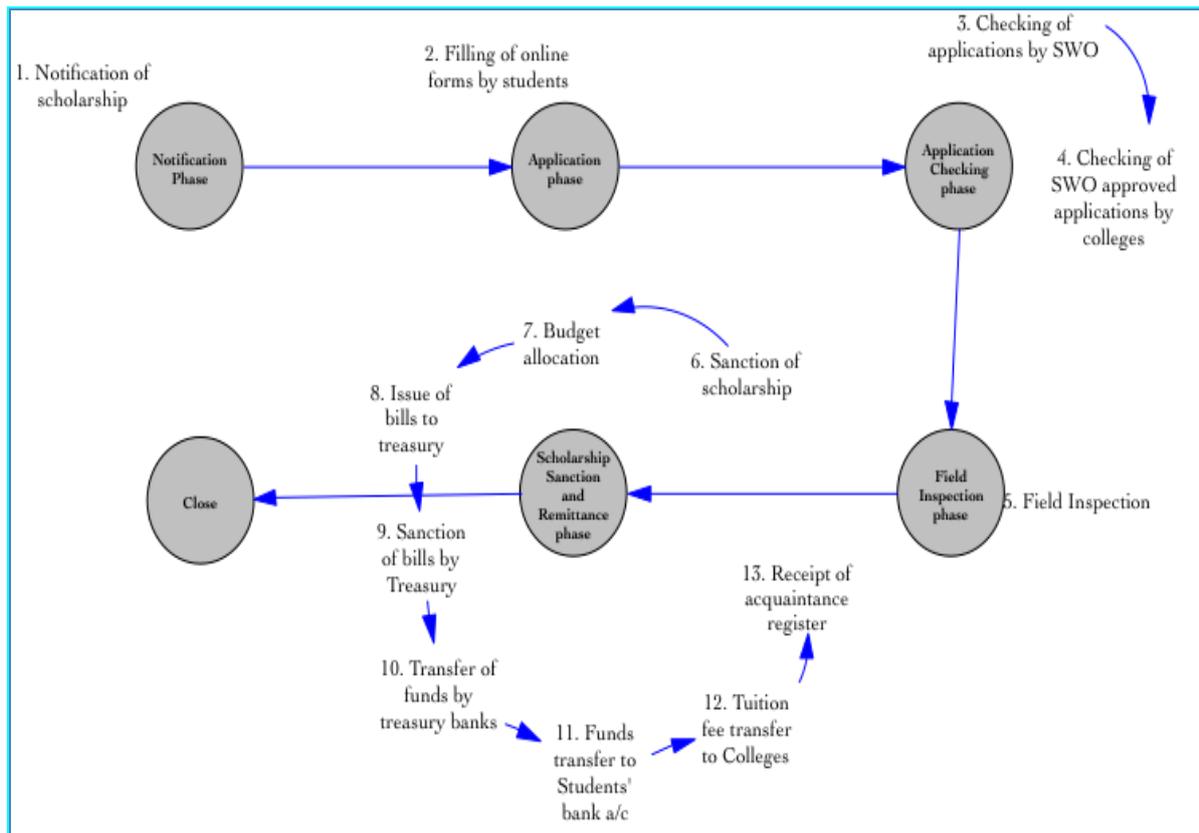
Figure - 3
ePASS – First round of GPR

PS – SW explained that after first GPR while payments were regular, field inspection was not working well and it was leading to corruption e.g. field inspectors were not verifying the students and associated data properly and were confirming the physical verification of the student while they were on vacation on the day of inspection. To address these issues, second round of GPR exercise was undertaken. The processes adopted after second GPR were shown below in figure 4. One may observe that encircled area processes were addressed to avoid field inspection issue.
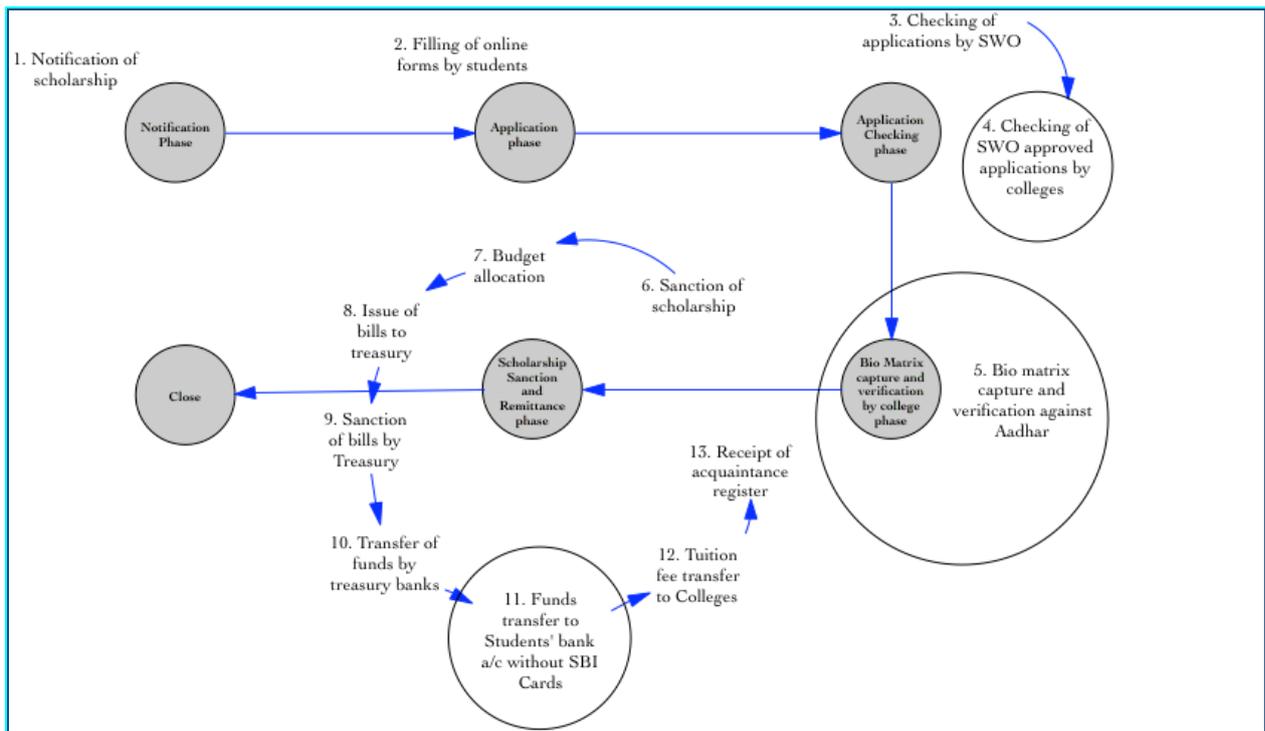
Figure - 4
ePASS – After 2nd round of GPR [circled areas]

5.5 NECESSITY AND CRITICAL STEPS INVOLVED IN GPR

The following figure 5 shows a fish-bone diagram of the problems which plagued the manual scholarship processes.

Figure 5 – Fish Bone- Diagram
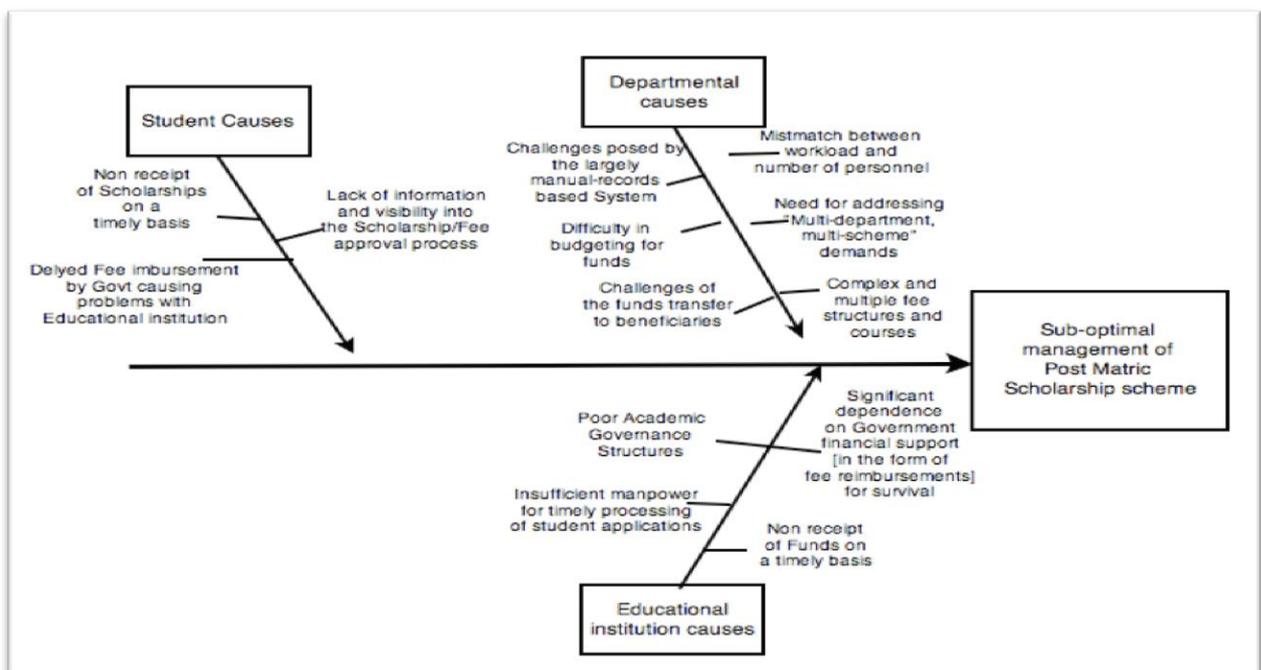
As shown in the above figure, there were several reasons for the sub-optimal performance of the post matric scholarship scheme. For the students, the problems included rejection of application with no adequate reason provided, no payment or few years' delay in release of scholarship and such like. The SW department was facing major issues of bogus and duplicate claims, and inability to verify caste, income certificates and academic records in time bound manner due to large volume of applications.   These problems led to wastage of government funds and inordinate delay in scholarship disbursement for even the genuine students. Therefore, scholarship processes needed to be revamped.

The first important initiative for the ePASS project was constitution of the high power core group/committee headed by the Chief Minister. The committee was empowered and given full liberty to change the government processes, wherever needed.

Technology selection for ePASS was the next step. IT industry was invited to give presentation on different technology solutions and cost of owning the new technology was discussed. Java based open source technology was chosen by the group due to free availability of Java based tools, adequate security provisions and ability to be implemented on general purpose computer servers and PCs.

The following 6 rules[1] are generally considered as guiding theory for any Government Process Reengineering (GPR) initiative:

1. **Elimination:** As part of elimination, those processes are removed which are not required due to reasons, such as:

   - Inefficient process

   - Painful to use

   - No more valid

   - Does not add any value

   A comparison of the manual processes and the processes under GPR iteration 1 shows that few processes were eliminated. These processes were not required after the first iteration of GPR:

   - Obtain hardcopy blank Application Forms (step 2)

   - Filling of forms by students in the college in triplicate (step 3)

   - Forms submission by colleges(step 4)

   New processes were introduced wherein students were required to fill-in HSC hall ticket number and year of passing the examination in the on-line application form. Based on this, actual data was picked from HSC database owned by HSC and

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[1] Source: Managing Transformation – Objectives and Outcomes by Mr. J Satyanarayana, IAS

intermediate board and read only access was proved to ePASS software. Further, students were required to upload the first page of bank pass book where the name and account number are clearly visible. This form was electronically presented to Welfare Officer (SWO) of the area for checking the name on the form and bank pass book. Upon acceptance, form was electronically presented to institute for its verification. During the verification process, institutes were required to upload certificates of the student which included educational, caste and income certificates.

In the first iteration, field inspection, was retained. During second iteration it was replaced with AADHAR database verification avoiding field inspection totally. Field inspection was proving cumbersome since the days when inspection was being carried out, many students were not present. Further, it was not possible for field inspectors to check and verify all records for each student, thereby creating scope for false entries and corruption. With AADHAR database-based verification, the corruption issue was arrested and 100% verification became possible without requirement of field visit. During institute level verification, student fingerprint was captured and verified with AADHAR database.

Under ePASS, a synergy had been created between various stakeholders involved and their resources had been leveraged and utilized in an optimal manner for ensuring transparency, preventing inordinate delays and minimizing wastage. One can appreciate the manner in which student academic records were procured from HSC / intermediate board database, caste and income certificates were taken from MeeSeva portal, bank pass books were used for ensuring correct name, bank account and AADHAR database verification ensures no duplicate/bogus claims. The AP Government was deploying about 3000 plus employees, engaged in other jobs, to undertake about 3 days field inspection.

Elimination of manual processes existing prior to ePASS:

Under ePASS now, use of IT application had eliminated manual processes like Consolidate and send application to the social welfare office (step 6), Acknowledgement by social welfare office (step 7), Checking at social welfare office (step 8), Segregate into Fresh/Renewal (step 10), Scholarship calculation (step 11), Institution wise calculation (step 12) and Prepare proceedings for scholarships (step 13). All these manual processes were handled through IT programs and reports were automatically generated by the system. Further, Rejection/eligibility at Social Welfare office (SWO) (step 9): One by one checking of each application was done in on-line mode as final check. Processes like Prepare institution wise DDs (step 14), Dispatch of DDs to institutes (step 15) were not required as treasury transferred the money electronically using on-line transfer.

Processes like - handle queries (step 16), cross verify (step 17), reconcile (step 18): Processes were retained with some modifications and became part of self service.

Inform disbursement progress (step 19) was not required and self-service was added where one could track the progress of their application.

Maintenance money disbursement by institutes (step 20) underwent a major change. Initially, SBI cards to students were issued after the first phase of GPR. Based on their eligibility, each card cash withdrawal limit was fixed. However, there were problems with issuance of cards by the institutes and, therefore, money was transferred to student account in second phase of GPR and students could withdraw money using usual bank facilities.

Processes like Revalidate DDs (step 21), Check duplicate disbursement (step 22), and Recover money (step 23) became obsolete as money was transferred to account to institute and students with instant credit in the respective accounts.

2. **Optimization :** After elimination, the left out processes are examined and redesigned so that:

- Forms are simplified for ease of use

- Wherever possible, redesigned forms are converted from sequential to parallel ones

- Transportation time and costs are reduced

- Multi-level processing of applications is reduced, leading to faster decision making

- Front line is empowered for quick and faster decision making

- Components and processes taking more time are replaced with more efficient ones

After the first phase of GPR in ePASS, basic student data like student name, father's name, marks etc. were picked from HSC / Intermediate database using the student HSC hall ticket number. Similarly, caste and income certificate data was populated in ePASS portal automatically from the MeeSeva portal. This way data entry errors and duplication were avoided and processes were optimized.

3. **Standardization:** Under this rule, one tries to examine common processes which are part of the system and are affecting the solution. These processes are reviewed and standardized across:

- Various services

- Processes

- Forms

- Decision making and empowering the front desk

In ePASS GPR, a common form was created so that universities/ institutes could enter information like:

- Courses offered with their structures

- Course duration

- Fee details

- List of affiliated colleges

- Hostel facility and associated charges

The above data was checked by social welfare department once and rules were created for its full or partial re-imbursements, as government was not able to release full scholarship money in one go. This has avoided cross-checking data every time with each individual student.

4. **Integration:** Under this rule, one tries to redesign the processes visualizing complete organization/solution as:

- Set of processes and functions

- Integrated and fragmented processes and functions

- Unified training and empowerment

- Single window for customer interface

Examples in ePASS were:

- Redesign HSC / Intermediate board database such that read-only access to ePASS portal was available

- Read-only access to AADHAR database and verification of student credentials using finger print.

- University database: Students could select courses from university portal through single window with full clarity on course duration, its structure etc.

- Access to Meeseva portal for caste, cash and income certificate data

5. **Automation:** Under this step of GPR, one identifies and designs processes in such a way that:

- Form / data is validated logically and automatically

- Standard logic is used all across and data is processed on set rules and logic

- Automation logic is developed for report processing

- Process controls are designed and automated

- Reiterative processes are addressed

- Focus is on work flows

- There is automatic communication to different / interwoven processes

As a result, under ePASS, scholarship calculation of student and institute wise amount, reports on proceedings for administrative approval, preparation of treasury bills based on availability of budgets, and other reports were generated automatically for all stakeholders.

6. **Self – service:** Customer oriented automatic services are designed under this rule. Example of self-service under ePASS are balance enquiry from the bank account, transaction alerts from bank, gas cylinder booking and its tracking for delivery, payment due dates with amount, time table alerts for classes in the course and such like.

In ePASS system, student was able to track the status of scholarship application, maintenance amount transferred to student's scholarship account and alerts on credit and withdrawal. Institutes were able to track tuition fee approval, rejected student list, amount approved by social welfare office and payment status etc.

The suitability of the various process changes carried out as part of ePASS were borne out not only as suggested by the fishbone analysis shown earlier, a comparison of the Critical to Process vs. Critical to quality/cost/stakeholder characteristics also shows that ePASS effectively targeted processes that were most critical to satisfying the stakeholder needs. The table – 1 below show a CTx vs. CTP analysis from the departmental perspective.

Table -1 CTx vs. CPT

Social Welfare Department Drivers	Critical to Quality / Cost / Stakeholder characteristics [CTx]	Critical to Process parameters [CTP]
- Ensuring PMS program contributes to the State's and Department's social welfare goals - Ensuring eligibility criteria are not breached by weak oversight and governance - Being a catalyst for Fee reform in educational institutions - Being a catalyst for Governance reforms in educational institutions	- Speedy processing of applications - Balancing employee workload - Budget management - Effective oversight and audit - Responsive and transparent processes - Accountability	- Application information- quality and content - Time to complete application - Resources to validate evidence of income and other eligibility criteria - Resources for field verification - Resources to approve application - Resources for Field Verification - Time to budget for funds - Time to disbursement of funds - Control over funds leakages

Table – 2 Mapping of Drivers [Goals] to CTx and CTP

CTx vs. CTP analysis

	Critical to Quality/Cost/Stakeholder [Social Welfare Department]					
	Speedy process-ing of applica-tions	Balancing employee workload	Budget manage-ment	Effective oversight and audit	Responsive and transpa-rent processes	Accountability
Critical To Process Application information-quality and content	Δ			□		
Time to complete Application	Δ					
Resources to validate evidence of Income and other eligibility criteria	Δ	O			□	
Resources to verify application information	Δ	O			□	

	Critical to Quality/Cost/Stakeholder [Social Welfare Department]					
	Speedy processing of applications	Balancing employee workload	Budget manage-ment	Effective oversight and audit	Responsive and transparent processes	Accountability
Resources to approve application	Δ	O		□	□	Δ
Resources for Field Verification		O		□	□	
Time to Budget for funds		O	Δ	□		
Time to disbursement of funds		O	Δ		□	
Control over funds leakages			Δ		□	Δ

Δ - Significant	O – Major	□ - Minor

5.6 PROJECT OUTCOMES

First year data

ePASS system was developed to address each of the stakeholder process in mind. During first year of implementation (2009 – 10) the final data looked as shown in table 3:

Table 3 – Final data after first GPR

S No	Item / Description	Value / No
1.	Students	26 lakhs
2.	Colleges	12,000
3.	Courses	64,000
4.	Fee Structures	1,44,000
5.	Field Officers	350
6.	District Welfare Officers	100
7.	Treasury Offices	40
8.	Banks	All
9.	College Attached Hostels	2,000
10.	Department Attached Hostels	790
11.	Universities/Boards	60
12.	Disbursement Amount	Rs. 4000 Crores

Category wise, year wise beneficiary data for subsequent years:

Table 4 - FY 2011 – 12 data

Category	Students (Lakhs)	Amount Tuition fee (Rs Lakhs)	Amount Maintenance (Rs. Lakhs)	Total Amount (Rs Lakhs)
SC	5.81	58274.48	22479.09	80753.58
ST	1.95	16908.18	7780.56	24688.74
BC	14.44	142795.33	49362.28	192157.61
Disabled	0.06	234.06	57.83	291.89
EBC	3.04	69942.24	0.00	69942.24
Total	**25.3**	**288154.28**	**79679.76**	**367834.06**

Table 5 - FY 2012 – 13 Data

Category	Students (Lakhs)	Amount Tuition fee (Rs Lakhs)	Amount Maintenance (Rs. Lakhs)	Total Amount (Rs Lakhs)
SC	5.98	63117.83	23075.08	86192.92
ST	2.07	18934.60	8765.57	27700.17
BC	15.16	152460.39	51810.11	204270.50
Disabled	0.05	174.65	48.91	223.56
EBC	3.37	79183.67	0.00	79183.67
Minorities	1.85	25370.39	4941.87	30312.26
Total	**28.479998**	**339241.5**	**88641.53**	**427883.06**

Table 6 - FY 2013 – 14 data

Category	Students (Lakhs)	Amount Tuition fee (Rs Lakhs)	Amount Maintenance (Rs. Lakhs)	Total Amount (Rs Lakhs)
SC	5.52	26658.53	9657.72	36316.26
ST	1.92	4483.31	3579.39	8062.70
BC	14.59	68587.95	18857.77	87445.72
Disabled	0.02	18.24	8.44	26.67
EBC	3.58	42444.39	0.00	42444.39
Minorities	2.13	5508.81	1341.70	6850.51
Total	**27.760002**	**147701.25**	**33445.02**	**181146.27**

6.0 Issues and Challenges

Six colleges were sent feedback form, details of which are provided in annexure 4, to obtain user experience on ePASS. Later, author had visited one of the colleges to discuss feedback with college management and students. Following issues and challenges were identified:

1. **Internet access to ePASS:**

   a) System is very slow during 9 AM to 5 PM. College staff handling scholarship entries and verification is forced to work before 9 AM and after 5 PM to complete the registration process for the students.

   b) During day it takes about 8 – 12 minutes per student to verify AADHAR database. At times, one loose web access. However, it takes about a minute at early mornings or late evenings. CGG may look increasing bandwidth for faster access or access to colleges may be schedules so that traffic on server and internet is lowered.

2. **Administrative Issues at colleges:** Students generally were not taking the scholarship online entry seriously and colleges were forcing them to complete the activity. It was proposed by colleges that basic information data entry may be completed by students

before they report to colleges for admission. It was possible to do this data entry by students before counselling.

3. **AADHAR data base related issues**

   a. ePASS displays same error during AADHAR verification - Duplicate AADHAR entry / student already exists or data did not match. Proper error handling message might be displayed for different situations.

   b. When AADHAR database verification failed at college level, colleges were asking students to go to AADHAR centre for correction of data / finger print etc. AADHAR centres were not working in time bound manner (keeping in view last date of scholarship application) to help students. Follow up with AADHAR centre did not help students. It was reported that about 3 – 4 % students, who looked genuine as per college records, lost scholarship / seat as proper assistance from AADHAR centre was not available till last date.

   c. There were no clear fixed specifications for biometric equipment. It was observed that optical type devices were cheaper but were less accurate while capacitive type devices were accurate but expensive. Colleges using optical devices often had reported data sets / figure pint not matching.

4. **Administrative process issue:** With Supreme Court decision on AADHAR card usage for government scheme use, one would require clarity for the year 2014 – 15 scholarship processing. Agency providing AADHAR card is not processing AADHAR card currently.

5. **Government related:** AP State treasury did not work on softcopy communication and expected hard copy of the approved bills. Some time it led to errors and many times delays, as data entry was required at treasury level. A proper system might be evolved so that treasury could have received softcopy / electronic communication along with hard copy communication, to avoid delays and errors. This might have allowed checking the budget approvals electronically. This process would have also helped to push of electronic bills to the tune of approved budgets. A proper formula can be decided in such a way that if lesser budget is available, payments can be processed on pro-rata bases.

7.0 Key Lessons

1. **Creation of empowered core committee**: ePASS core team, which was reporting to AP State CM, was empowered to take decisions fairly autonomously and introduce processes and services where ever necessary. The team not only streamlined ePASS but also helped associated stakeholders to adapt to IT-enabled processes newly introduced. Examples:

a. HSC / Intermediate board data base for on line

b. University / colleges courses and hostel fee structures

c. MeeSeva had emerged as a new business proposition under PPP model and more government services were expected to be added in due course. Students, based on their category, were required to submit caste / income / cash certificate. A new web based service is on PPP model was introduced as a by-product of the GPR. A new business model had emerged in the state of AP. Gradually, it was planned to shift most of AP Government related services to this portal where citizens can avail service from the centre without visiting the departments. To start with, caste certificates, income / cash certificate to the student parents were offered at Rs 10 per certificate. Also, this database, on read-only mode was shared electronically to ePASS application for proper authentication. Applicants were needed to download the application form and apply on line at Mandal Revenue Office (MRO). After few specified days, one was permitted to down load the certificate from Meeseva portal and ePASS solution was also populated the data from this portal. On receipt of the application, the verification process with the corresponding government departments was the responsibility of Meeseva centre, without bothering the applicant.

d. AADHAR data base read only access for various schemes

2. **Setting clear objectives:** During first few meeting ePASS project objectives were deliberated and drawn to provide focus to ePASS project. This activity has set the vision and tone to entire ePASS project.

3. **Multiple Stages GPR:** It is always preferred to implement change management in multiple phases which works on the principle of start small and build on success. First phase GPR captured the entire critical data and processes and provided transparent operation in scholarship disbursement. It cleared entire financial backlog and also, at the same time removed bogus students and institutes and ensured uniform fee structure for each approved courses. In second phase of GPR, field inspection process was replaced with AADHAR database verification. This reduced the transaction costs and manpower requirement at social welfare depart. Entire operation could be managed with 330 head count.

4. **Internet Bandwidth:** Adequate internet band width must be provided to keep peak load and last minute rush.

5. **Proper Specification of the equipment:** There may be requirement of special equipment for effective use of technology. The equipment specifications must be properly informed to the users. Bio-matric devise is example in ePASS.

6. **Error Handling:** Errors displayed by the application should be user friendly and must guide the users to take proper action. Same error message should not be flashed / displayed if action desired are different. ePASS application displayed same error message for figure print mismatch and student already exists in ePASS. Finger print mismatch would have led to correction of finger print in AADHAR data base while student data already existed would have led to action against student who is trying to misuse the facility.

8.0 Methodology adopted for Case Writing

The case study is prepared primarily on the basis of:

1. Discussions with various stake holders e.g. Principal Secretory – Social welfare, Joint Director - social welfare, Deputy Director – social welfare

2. Understanding processes in ePASS with Project manager (ePASS) CGG, Hyderabad

3. Structured user feedback and discussions with 6 colleges and few students

4. User of ePASS application from 2011 to 2013

5. Study of from various web sites

9.0 Case fact Sheet

Project name	ePASS
Project duration	Phase I – From September 2009 to April 2010 Phase II - After May 2010 onwards – maintenance and next level GPR extensions
Demographic information	Covers Post Matric scholarship beneficiaries of entire Andhra Pradesh
Stakeholders and beneficiaries	Across AP students, colleges, universities, autonomous colleges and institutes, social welfare offices, district treasuries and state finance department, HSC / board of intermediate
Major events Calendar	• Task force formation and setting of

	objective
	• Student ID decision
	• First phase of GPR and software development
	• Training and work shop for rollout
	• User feedback, second iteration of GPR, software change management and rollout through training and workshop
Time/cost overrun	Nil
I T Consultants	CGG for application development, maintenance and data hosting
Business Model	Managed by Social Welfare department MeeSeva centre
Concessionaire/Implementing Agency	CGG
Current Stage	Post Implementation Enhancements / extensions to the project are undertaken after GPR iteration

10.0 References

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4. http://epassscholarships.blogspot.in/2012/04/i-have-applied-online-for-both-tuition.html

5. http://www.indianjobtalks.com/forum/showthread.php?t=44213

6. www.csinihilent-egovernanceawards.org

7. Document submitted by AP Social Welfare department for CGS award in 2011

About Author

Name: Pradeep Kumar Tandon

IIT Graduate and result-driven leader with about 36 years of total experience, inclusive of nearly 24 years' experience in Profit Centre Operations, BPO / KPO, Software and IT Projects Execution, Business Development & professional services.

⇨ **Educational qualifications:** IITR BE - 76 and IITR ME - 78

⇨ **Career progression:**

From	To	Organization
Jan 14	Till date	Independent consultant
Sept 11	Dec 13	Director with Aurora Engineering College, Hyderabad
Dec 04	Aug 11	Managing Director with CGS Inc. - Hyderabad Branch
May 01	Nov 04	CEO with KusumSoft, New Delhi
Apr 99	Apr 01	Sr. GM with BirlaSoft, New Delhi
Oct 93	Mar 99	VP with Mastek Ltd, New Delhi
July 89	Sept 93	AVP with computer Point, New Delhi
Feb 80	Jun 89	Incharge – corporate services with Uptron India Ltd, Lucknow
Sept 78	Jan 80	Lecturer with IIT Roorkee

Annexure – 1 - Eligible Courses

A1. Eligible Courses for ePASS

AP State based Students can available scholarship facility for the post matric courses, which were having one year duration or more and were approved by the University / Board. Various courses were grouped as under:

Group – I

Professional Courses (Degree and PG Courses in Medicine, Engineering, Technology, Management, Agriculture, Veterinary and Allied Sciences, Business Finance, Business administration and Computer Applications/ Science, Commercial pilot License course).

Group - II

Other professional and technical graduate and PG including (M.Phil, PhD and post-Doctoral research) level courses not covered in Group-I. C.A./I.C.W.A./C.S./ etc., courses, all post graduate, graduate level diploma courses, all certificate level courses.

Annexure – 2 - Time lines for Scholarship

A2. Time Lines for Scholarship Application

1. **Student:** Submission of application online within one month from the date of admission.

2. **College:** The Principal should issue bonafide certificate on the same day of submission of application form (hard copy) in the college.

3. **ASWO/Field Officer:** Physical Verification: Twice in a year

   o Within one month of re-opening of college

   o Within one month from the last date of closing of Admissions

Online recommendation within one week after verification

- Accounts Officer: Bills submission- 16th to 18th of every month.

- D.T.O.: Passing of Bills & sending of cheques to Nodal Banks directly by 25th of every month.

- Nodal Bank: Credit to Accounts- 1st of every month.

The Total Process should be completed within one month of submission of application.

Annexure – 3 - Scholarship Heads

A3. Scholarships heads

AP government offered scholarship under following heads:

- RTF: Reimbursement of Tuition Fee in full for students pursuing post matric courses approved by the University/Board.

- RTF is sanctioned twice in a year i.e. September and March of the Academic Year.

- MTF: Maintenance charges or Mess charges are sanctioned every month as per the rates mentioned decided by the Social Welfare department

Annexure – 4 - User Experience Feedback Form

Following questions were sent to 6 colleges to obtain user experience:

1. Full Name of your college:

2. Contact Person Name:

3. Contact person Phone / mobile:

4. Are (all) the processes and functionalities which were existing with manual processes are captured in computerized system? Please elaborate if any of the functionality is missing.

5. Are you happy with auto generated alerts and reports ePASS? Please add elaborate the facility you feel should be added in ePASS for more affectivity.

6. Can you inform the redundant data entered by students / college and which can be avoided as it does not role in ePASS processes?

7. Please inform the auto data generation fields/ data which can be added in ePASS to make it more efficient.

8. Is ePASS application is intuitive enough and does not require training or minimum training to college staff and students?

9. Please elaborate pain points in using the application by your staff and students.

10. Is ePASS internet response is good enough at all the times or it has good response only at specific timings?

11. Do you feel that any of the process used in ePASS can be dropped or may be redesigned better?

12. Is student card for the withdrawal of money from the bank is working well?

13. Please elaborate that the security provided in ePASS good enough or it need enhancements in certain areas (please elaborate areas)

14. Have you created any process / forms to serve students / college? If yes, please elaborate:

15. How do you handle student queries? Please illustrate your college process.

16. Processes which were good old system now are missing with current ePASS.

17. How many students have applied for fresh and renewal of scholarship?

18. What is total students strength studying on the college?

19. How much (average) time it takes to verify the student with AADHAR portal?

20. How many days it took complete the verification?

21. Was verification done during college timings or staffs have come to complete activity late evening or early morning?

22. How many students though eligible, could not be verified and they have lost the scholarship?

23. Any other points you would like to share.