

ROLE OF TECHNOLOGY IN ENHANCING GOVERNANCE: IMPACT OF ELECTRONIC PAYMENT & APPLICATION SYSTEM OF SCHOLARSHIPS (EPASS) IN ANDHRA PRADESH

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ABSTRACT

There are still millions in India who only dream of accessing technology. In fact, the rapid growth of technology offers government problem-solvers a new dimension, allowing them to move beyond the traditional tools of growing budgets and proliferating laws to find direct, action-oriented solutions. However, development in information and communication technology over the past three decades have given rise to the notion of electronic governance, most commonly used to refer to the delivery of public services over the technology. However, this paper argues for a shift from the narrow focus of “electronic government” on technology and transactions to the broader perspective of digital government between the public sector and beneficiaries --as a way to understand the changing nature of governing and governance in an information society.

This paper is an attempt to understand the role of technology in enhancing governance mechanism in implementation of the public policies in Andhra Pradesh with reference to electronic payment and application system of scholarships (e-PASS). It includes the detailed analysis of the scholarship scheme and its implementation process through e-pass both in terms of colleges as well as students. This paper also explores to interplay between recent technological developments and evolving information flows for efficiency, accountability, transparency, reducing Red Tapism, reducing corruption, poor governance, political mobilization, and democratic accountability. The paper consists of case studies from the beneficiaries of the innovative technology which enhances government’s effective implementation process in Andhra Pradesh.

Keywords: Governance, Technology, Scholarships, Electronic Payment and Application System.

INTRODUCTION

Online scholarship disbursement system, namely Electronic Payment and Application System of Scholarships (ePASS), was envisaged by Andhra Pradesh government to ensure speedier disbursement 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 were 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 effort to find 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 – Mee Seva.

The “Government Process Reengineering” (GPR) or organization 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 and 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 roots. 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. Electronic Payment and Application System of Scholarships (ePASS) is characterized 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 drives, 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 such as Scheduled castes (ST), Scheduled tribes (ST), Backward classes (BC) Economically backward class (EBC) Disadvantaged classes (DC). However, 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.

GENESIS, AIMS AND OBJECTIVES OF THE SCHEME

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 objectives such as Ensuring accountability of institutes and colleges and focus on quality of education which in fact deals 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 disbursement of scholarships among students. During the verification process, it was discovered that out of 16,500 colleges, only about 10,500 existed. Another objective is making government responsible for timely release of funds to students. It was quite 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 of 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 respective district social welfare offices 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.

Another objective is reforming fee structures at Universities, Deemed Universities, autonomous colleges, aided colleges and affiliated colleges. For the same courses, different institutes were charging different fees 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. In addition, the last objective is to Shift the student focus to studies. In fact, 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 collecting tuition fee. Therefore, students were forced to pay their tuition fees 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.

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 at state level, evolving state wide unique ID for a student. Social welfare departments (district level) and 330 offices across AP State –receipt of scholarship application, its verification, inspection and approval. AP HSC and intermediate board –provision of basic data for students and unique ID (HSC hall ticket number) and year of passing. 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. District Treasury offices –release of funds for scholarship payments. Centre for Good Governance (CGG) –software owner for ePASS application and provider of data base server and access to stake holders and users. Mee Seva (at your services) center’s–provision of income, caste, category certificates and various associated services for users. Students – undertake selected course and focus on studies as scholarship was processed in transparent manner and status could be checked on web itself.

STATUS BEFORE EPASS

Till 2009, more than ten schemes were handled manually and involved with traditional steps starting with notification students were invited to apply for scholarship under specific categories with a starting and a cut-off date. Second, blank application forms which deals with 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. Another

steps are filling up form by students who are required to fill the form and submit it to colleges for checking. Then colleges are required to compile and segregate the forms, check its eligibility and to call associated SWO for inspection. Social welfare officer 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 and then colleges use to consolidate the verified forms and send these to associated welfare office who check the eligibility of the application and then based on eligibility, social welfare officer calculated scholarships for each applicant and then tabulated the fund allocation for each college/institute. Based on approvals, institute/college wise DD were prepared by Social welfare officer who use to dispatch DDs and obtain acknowledgement from colleges/institutes. Then social welfare officer used to receive and address queries and complaints to recover their register and reconcile the payments. As government was not releasing full money in one-go, SWO use to inform the progress of money disbursement to colleges/institutes periodically. SWO use to take copy of acquaintance register for record. Then time barred DDs were revalidated by SWO and then they check duplicate disbursement to recover money, then they close it.

IMPACT OF EPASS

This electronic payment process was initially started in 2009 with online entry by students with 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. Second step starts with social welfare officer checking 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. Then the third step is colleges verifies the data of student with original certificates, salary certificate, category certificate etc. and kept the application and copy of certificates for field inspection. The Fourth step involves the 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 Mee Seva – income and caste certificate on line verifications. However, each student wise data presents to SWO on their office computers. It approves by SWO by clicking a specific button. SWO had option to reject the scholarship application after choosing appropriate option from pop up options. Then District office/SWO were informed electronically about the budget availability and they submit hard copy bills to treasury. After submitted the bills to treasury the amount was

transferred to bank for online transmission to beneficiary account. Maintenance money and supply of SBI cards were issued by SWO to institutes for online delivery to students for withdrawal of maintenance money from SBI branch. This had reduced the steps dramatically from the manual system and at the same time system became transparent.

However, 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 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 Social 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 data-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 Mee Seva 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 three days' field inspection.

ELIMINATION OF MANUAL PROCESSES

Under ePASS now, use of IT application had eliminated manual processes like Consolidate and send application to the social welfare office, acknowledgement by social welfare office checking at social welfare office, segregate into Fresh/Renewal Scholarship calculation, institution wise calculation and prepare proceedings for scholarships. 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) one by one checking of each application was done in on-line mode as final check. Processes like Prepare institution wise DDs, Dispatch of DDs to institutes were not required as treasury transferred the money electronically using on-line transfer Processes like-handle queries, cross verify, reconcile processes were retained with some modifications and became part of self service. Inform disbursement progress was not required and self-service was added where one could track the progress of their application. Maintenance money disbursement by institutes 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, check duplicate disbursement, and Recover money became obsolete as money was transferred to account to institute and students with instant credit in the respective accounts.

IMPACT OF ePASS

After elimination, the left out processes are examined and redesigned so that application 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 Mee Seva portal. This way data entry errors and duplication were avoided and processes were optimized. Under this rule, one tries to examine common processes which are part of the system and are affecting the solution. 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 and hostel facility and associated charges.

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. 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.

OUTCOMES

However, 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 below table.

First year data (2009) Category wise, year wise beneficiary data for subsequent years

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.	Dept. Attached Hostels	790
11.	Universities/Boards	60
12.	Disbursement Amount	Rs. 4000 Crores

Source: Dept. of Social Welfare, Govt. of Andhra Pradesh, Outcome Budget Reports from 2008 to 2013.

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

Source: Dept. of Social Welfare, Govt. of Andhra Pradesh, Outcome Budget Reports from 2008 to 2013.

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

Source: Dept. of Social Welfare, Govt. of Andhra Pradesh, Outcome Budget Reports from 2008 to 2013.

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

Source: Dept. of Social Welfare, Govt. of Andhra Pradesh, Outcome Budget Reports from 2008 to 2013.

CONCLUSION

Author had visited few colleges to discuss feedback with college management and students. Following the visit, the issues and challenges were identified such as computer system is very slow between 9.00 am to 5.00 pm. College staff handling scholarship entries and verification is forced to work before 09.00 AM and after 05.00 PM to complete the registration process for the students. During day it takes about 8 – 12 minutes per student to verify AADHAR database. At times, one loses 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. Students generally were not taking the scholarship online entry seriously and colleges were forcing them to complete their activities. 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 counseling. 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.

When AADHAR database verification failed at college level, colleges were asking students to go to AADHAR center for correction of data / finger print etc. AADHAR centers were not working

in time bound manner (keeping in view the last date of scholarship application) to help students. Follow up with AADHAR center 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 center was not available till last date. 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 print not matching. Andhra Pradesh State treasury did not work on soft copy communication and expected hard copy of the approved bills. Sometimes, 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 soft copy / 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 basis.

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