

Business Process Re-engineering (BPR)

Situation analysis (as is) on research Addis Ababa University (a revised version)

**Report by
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**Submitted to Professor Tsige Gebre Mariam
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Owner of BPR on Research**

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Addis Ababa University
Addis Ababa**

¹ Originally the committee was composed of eight persons. Later in due course three persons, namely, Dr. Dejene Ejigu, Dr. Tilahun Tesfaye and Dr. Worash Getaneh resigned with verbal reports to the Committee chairperson.

1. Introduction

The BPR Research Core Committee with members Dr. Mahlet Yigeremu, Dr. Muluwork Tefera, Dr. Getnet Alemu, Dr. Gebru Mersha and Dr. Brook Lemma was given the mandate to report on the situation analysis (as is) of research at Addis Ababa University. This was clearly stated to the team by Professor Tsige G. Mariam the process owner of research. Accordingly, the committee developed a strategy as to how it can come up with the said document. The details of the methodology are given in the appendix under the same title. To meet this goal the committee divided itself into sub-committees or teams to gather the necessary information. Again, the details of the sub-teams and the different faculties, colleges, schools or research institutes, hereafter collectively referred to as information centers or simply centers that each sub-team should visit and collect data from by way of interviews, are given (see the appendix).

2. Scope and limitations

With regard to **the scope** of the work the committee while developing the methodology of data collection underlined that all center (23 in all) be interviewed and no sampling should be employed, realizing the fact that all centers have the right to be interviewed and give their comments on how research is conducted at their respective center.

The limitations were (i) time, as BPR was started at AAU very late unlike other Ethiopian higher education institutes. (ii) All committee members are excessively loaded with their regular duties of teaching, research, supervision and administrative work in their respective centers. These activities are too difficult to stop or even downsize them at this point in time, as it is now the end of the academic year when all AAU activities come to their climax. (iii) The dropping out of three members of the committee, namely, Dr. Dejene Ejigu from the Faculty of Informatics, Dr. Tilahun Tesfaye and Dr. Worash Getaneh from the Faculty of Science has limited the speed at which the committee should operate to complete the work in the given time of three weeks.

3. General Objectives

- Realizing the fact that there is a large bulk of research conducted and there is also massive research data collection at AAU, the general public and the mushrooming industry in Ethiopia are not beneficiaries of these data in pushing forward the development of this country. This phenomenon needed to be investigated and find out the gaps where improvements could be made using the envisaged BPR tool.
- It was also understood that some general perspectives be made on the bulk of resources needed, be it in terms of finance, material or human, to conduct these research activities so that how cost effective in terms of finance and time could have been the research activities at AAU.

4. Specific objectives

- Attempts will be made to re-visit the specific strengths and weaknesses of all centers to reach the general objectives.
- The re-visit to be made center by center will be put together to develop the “as is” scenario of research undertakings at AAU by outlining the steps of research and the network of the whole research process as is.

5. Methodology

See the Appendix.

6. End-to-end process definition

The committee agreed on the following as **triggering factors (inputs)** for the initiation of the research process at AAU

- Societal problems (poverty, poor development of technology, e.g. farming as old as 3000 years, etc.)
- Poor quality of health services to humans, animals and plants
- Industrial problems (no data as to how resources are efficiently used in this country)
- Creation of knowledge (As a center of academic excellence AAU should always endeavor to develop its knowledge bank and be part of the leading institutions of higher learning nationally and internationally)
- Academic staff members have it as their professional duty to create knowledge and thereby be promoted by their research outputs.
- Students at the graduate level must develop the skill to develop a research protocol and conduct a research by it to demonstrate their ability of independent knowledge creation and acquire their qualifying degrees.
- Donors or research fund providers can also trigger the initiation of research exercises with their agenda which could be aligned with the national agenda for development, which is of course described in AAU missions and objectives of research undertakings.

Based on the above triggering factors research activities are believed to be initiated by developing research protocols or proposals. These are then first set to the test in the form of fund solicitation. If that succeeds then the whole lot of the research process is unleashed whereby the whole AAU system for research starts to operate. This will be re-visited in details in Section 10 under Mapping the Process. See below.

The **end of the process** is understood by the BPR Research Core Committee to be:

- Extending research results for societal use.

- Extending of research results for industry use.
- Extending of research results for improvement of health of humans, animals and plants.
- Expanding the knowledge bank of AAU
- Awarding masters and doctor of philosophy degrees to graduate students
- Promotion of academic staff members to the next academic rank.

7. Inputs of the process

The inputs of the process are described as triggering factors under Section 6, above.

8. Outputs of the process

The outputs of the process are described as end processes under Section 6, above.

9. Outcomes of the process

The outcomes of the research process are perceived by the committee as:

- The satisfaction society gets from the research results extended to it. These could be improved health services because research has facilitated better medication to humans and animals and protection to plants, etc.
- Improved agricultural outputs because research results have improved yield with quality and of course in shorter periods.
- Quality graduates are now on the market with masters and doctor of philosophy degrees.
- AAU is confidently forging forward as adequate accumulation of knowledge in its data bank and its high caliber and competent researchers grow in number.

10. Mapping the process

After a closer examination of the data collected from **twenty-one information centers out of twenty-three** (See the Appendix), the committee has earmarked the following steps in the research process and attempted to draw the timeline, etc. they required to conduct research at AAU.

(a) Steps in research process

1. Fund from donors (Ethiopian Government, Sida, etc.)
2. Call for papers, RPO
3. Faculties, Institutes, Schools, Colleges
4. Departments
5. Individual Researchers
6. Proposal compilation
7. Submission of proposals to departments
8. Department council meeting

9. Approval of Minutes
10. Minutes write up
11. Minutes approval
12. Reproduction of minutes
13. Compilation of minutes and research proposals
14. Cover letters write up
15. Dispatching to the Dean's office
16. Academic Commission meeting
17. Academic Commission minute approval
18. Reproduction of minutes
19. Compilation of minutes and research proposals
20. Cover letters write up by the dean
21. Dispatching to the Office of the VPGSR
22. VPGSR to RPO
23. Summarization of research topics with costs, required documents
24. In-house meeting to select and approve projects
25. Minutes' approval
26. Dispatching award letters to Deans
27. Dispatching of award letters to Departments
28. Dispatching of award letters to researchers
29. Researchers filling out and signing of grant agreement forms
30. Dispatching signed award letters to deans through department heads
31. Signing of grant agreement forms by deans
32. Dispatching of grant agreement forms to RPO
33. Signing of grant agreement forms by RPO
34. Dispatching of signed grant agreement forms to Deans
35. Dispatching of grant agreement forms to departments
36. Letter from RPO to Main Finance Office at Sidist Kilo as per the grant agreement form
37. Finance office dispatches fund to executing sub-finance offices at different campuses
38. PIs execute research
39. Purchase requisition filling out
40. Signing by deans
41. Purchasing processes: Collection of price quotations
42. Selection of lowest bidder by committee
43. Minutes approval of purchasing committee
44. Cover letter and minutes to center finance office
45. Approval by administrator
46. Preparation of checks
47. Purchasers to market
48. Collection of items
49. Items to store
50. informing PI on purchased items
51. Filling out of issue slips by PI
52. Signing of issue slip by department head

53. Storekeeper signs and delivers item to PI
54. PI signs receiving report form
55. Property control gives item code number
56. Laboratory assistant takes over item and signs
57. Research undertaking by investigators
58. Periodic reports to RPO
59. Periodic grant releases from RPO
60. PI passes the procedures above to purchase materials
61. Final report and termination of project
62. Publication at a later date
63. Publication (data) to community, industry or shelf
64. If promotion to DC minutes
65. DC minutes approval of promotion
66. AC minutes approval of minutes
67. AC minutes approval of promotion
68. Deans writes cover letter and attaches documents and minutes and sends to the Associate Vice President for Academic Affairs.
69. Associate Vice President to Academic Vice President (AVP)
70. AVP to Senate
71. Senate to AVP
72. AVP to dean and researcher
73. Administration endorses promotion
74. Finance adjusts salary

The above steps are put into a **process analysis chart** in relation to **operations** (actual action spots), **transport** (where job has to move from office to office, campus to campus, campus to material suppliers, etc.), **delays** (where job stagnates due to meetings, minute write ups, absence of officials, busy officials with urgent matters, etc.), **approvals** (require the gathering of personnel to re-visit their previous discussions and decisions) and **storage** (accumulation of documents or purchased research materials in stores).

Note should be made that:

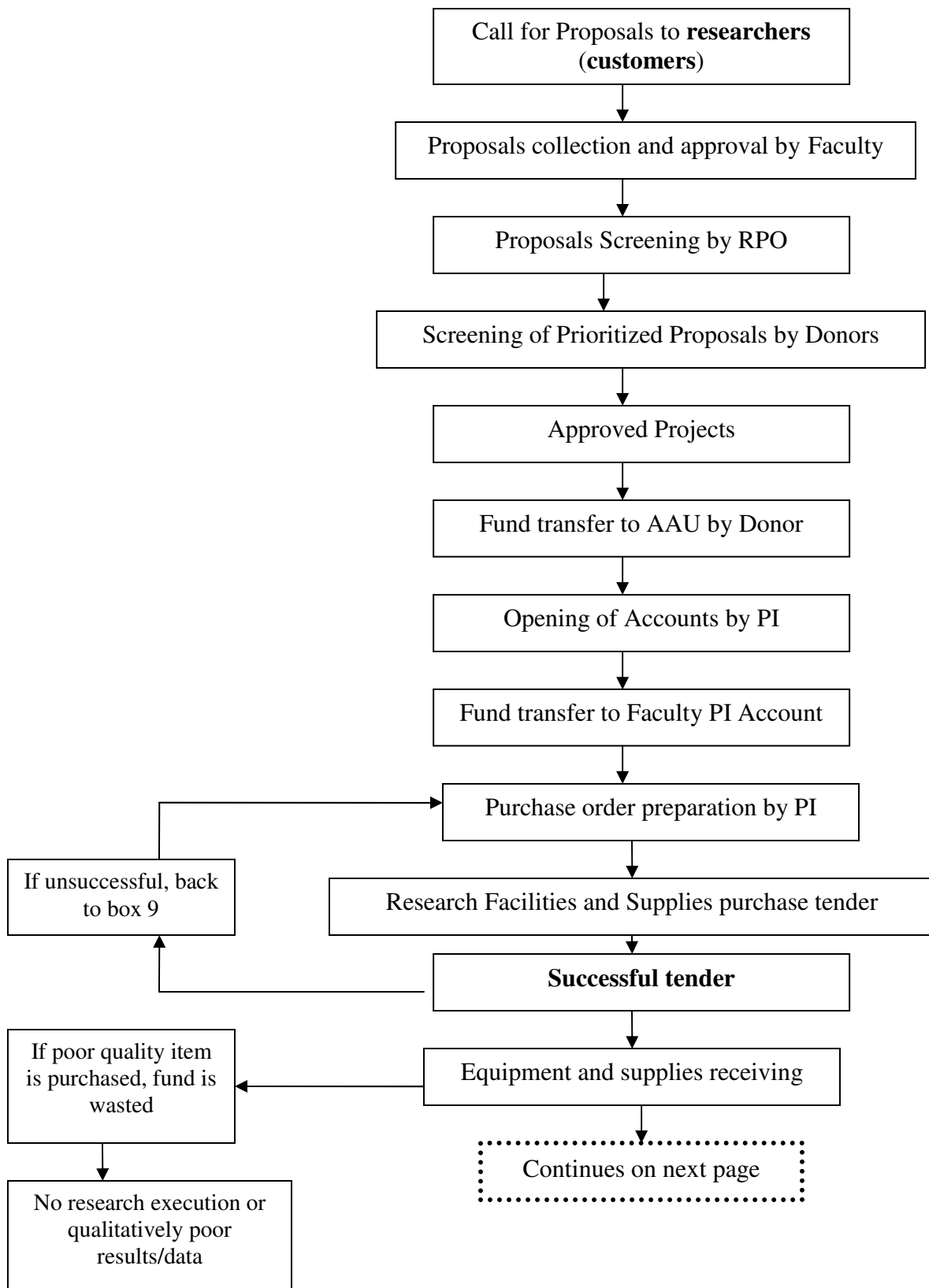
- (i) No one knows about the business process network of projects that are conducted with collaborator institutes that are found within or outside the country. Analyzing the process of these projects can be done but it takes a little more time with the associated travels and costs (See the Appendix).
- (ii) Research by students that lead to degrees, particularly to masters and doctor of philosophy) are included in all the steps and charts.

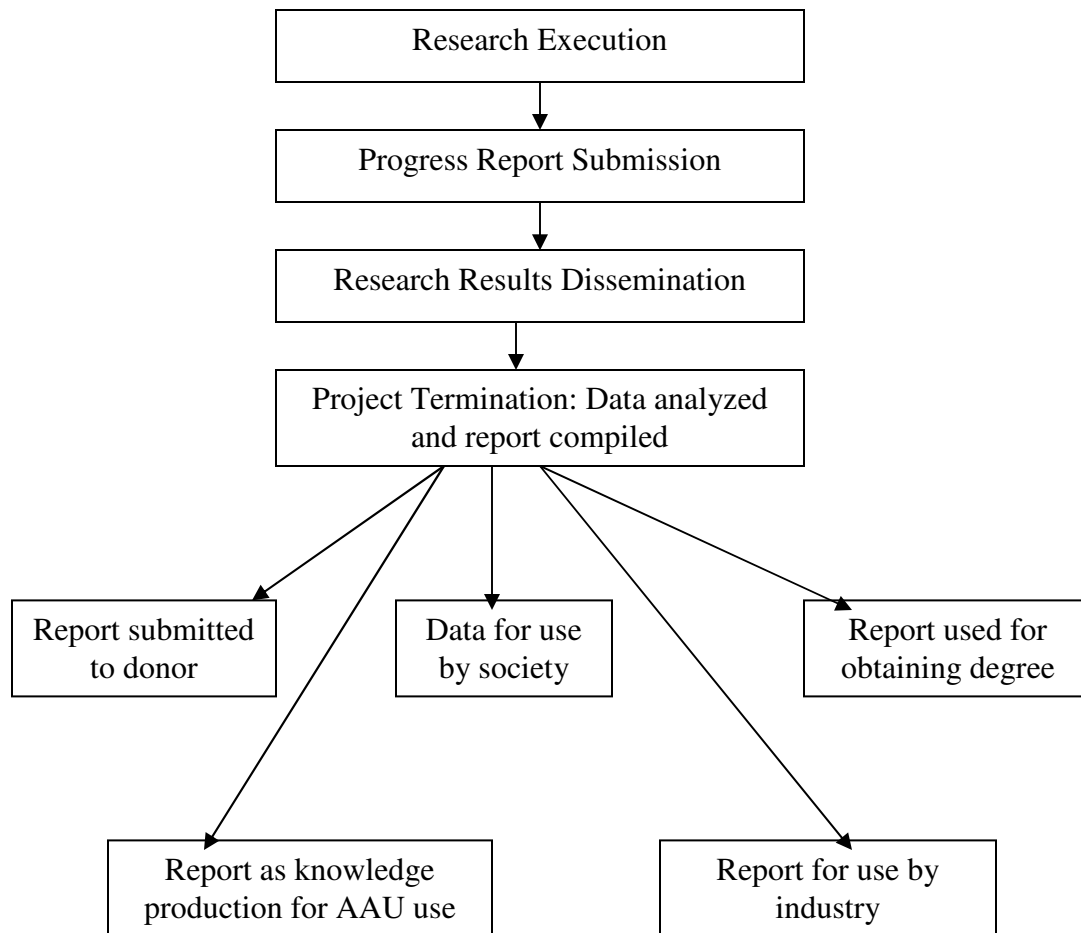
For readers who use the soft copy of this report the [PROCESS CHART OF "AS IS" STEPS ON RESEARCH AT AAU](#) can be accessed at the hyperlinked Excel file.

RPO writes award letter
Letter to faculty, department, researcher
Researcher fills out contract agreement form
Researcher sends contract form to department, faculty, RPO
Copies of contract agreement forms to faculty, department, researcher
RPO to finance
Finance releases fund to researcher
Purchases
Field trips, laboratory work
Researcher settles accounts at finance
Researcher writes reports, department, faculty, RPO
C, W, Pr, P, D (conferences, workshops, proceedings, publications, disseminations by outreach activities)
Financial settlements at finance office
Publications for promotion to departments (DC1 and DC2), faculty, academic commission (AC1 and AC2),
AVP (academic vice president)
AVP to Senate
Senate to AVP
AVP to faculty and researcher

A more simplified version of the above complex network is given below just to give an overview of the complexity of the scenario in research business process.

Below is a simpler version of the flow chart as observed on AAU campus.





11. Customers of the process

Customers of the process are described as follows with explanations. They are:

- **Researchers:** Researchers trigger investigations by analyzing social, industrial, environmental, scientific, etc. problems and set out to solve these problems. It must also be realized that by virtue of the researchers being AAU employees, they are required to do research and they must also remain competent in the field of their specialization so that they can be promoted in their academic ranks. These

- factors add to their initiative to trigger research activities. The term researcher here refers to academic staff members of AAU.
- **The government:** Based on the responsibility of the Ethiopian Government to foster social change in the direction of poverty reduction, industrial development, etc. has its hands full of problems. For that, it requires scientific solutions that can be implemented in the shortest possible time and in very cost effective ways, be it in terms of financial, material or human resources.
 - **Society:** The Ethiopian society is the tax payer that directly provides some percent of the research fund. Indirectly, it collects research fund in the form of loan from international financial organizations (e.g. the World Bank), which at some point in time it will have to pay back. A third indirect way is obtaining some donations through its government. These donations seemingly free come with some level of commitments or strings attached to them.
 - **Graduate students:** In their endeavor to collect degrees that qualify them as better professionals in the job market trigger the research process by developing research protocols that are meant to solve some societal problems.
 - **Donors:** Mostly these are international organizations and governments of developed countries (individually or collectively as in the case of the European Union). These organizations like Sida/SAREC, The British Council, or the European Union have agendas that address problems of South countries. Without addressing problems of the South that suffer from poverty, drought, malnutrition, degradation of the environment, poor human rights records, civil wars, etc., the developed nations cannot be considered as safe or immune of international problems in this globalized world. It has therefore become their duty to solve problems of the South by triggering research activities in the South.
 - **Industry:** Much of the effort of developing Ethiopia rests on rapid changes in the industry sector which of course encompasses developing the agriculture sector. Much of what is seen today in Ethiopia is calling for foreign investors that come with their own technology which has very little relevance to the Ethiopian context. The industry therefore triggers research in search of contextual industrial development.
 - **AAU:** To achieve its goals of becoming a preeminent research university AAU must always endeavor to build on its knowledge bank and continue to foster the research capacity of its academic staff members. This goal can only be achieved by bringing as many of its staff members into research. This has always remained as a triggering factor for research activities.

12. stakeholders

Apparently every one in this country is a stakeholder in research activities and the outcomes that follow. The following are however selected to be major stakeholders. These are:

- **The general public** (society that counts on new findings that will solve major national problems such as poverty).
- **The Ethiopian government**
- **Academic staff members** of AAU

- **Graduate students of AAU**
- **Investors or the industry sector**

13. Collaborators

AAU collaborates with many such as

- National and international universities,
- National and international research organizations and institutes (e.g. the Ethiopian Science and Technology Agency, the Ethiopian Agricultural Research Organization, Sida/SAREC)
- Governments through their embassies and ministries
- National ministries (e.g. Ministries of Education, Agriculture, Public Health, Water Resources, Mines, etc.)
- The industry sector
- The community in facilitating research operations by investigators.

14. Customers' demands

The customers described above all require research results that:

- are easy to apply in daily life
- are cost effective
- have short and effective processes (small number of operations)
- can alleviate national problems with regard to poverty reduction, improving the health status of humans, animals and plants (crops)
- can bring about quick development of the country in this globalized world

15. Problems of customers and the process

Customers always look up on the scientific community to provide it with the knowledge to solve problems. The knowledge accumulated in the scientific community is “shelved” and it is not accessible. Even when accessed it is written in such scientific manner that it excludes the general public from consuming it. The national media as well does not play any role in popularizing the scientific community. See for similar gap analyses in the Appendix under Research Dissemination.

The unfortunate side of research in most cases is that it needs a lot of verification, testing, and re-testing before releasing reports. This takes time and hence frustrates customers that need solutions to their problems today.

16. Performance baseline

The baseline for research activities is that

- It should solve national problems (poverty, health, etc.)
- It should be cost effective.

- It should be simple and short in its use (with short and effective process).
- Quality research data should be generated.
- Data should be communicated to the general public in the language the general public understands.

Appendix

Methodology: Procedures of the study

The core committee for research was established with a letter written on 29 April 2008; Ref. No. PR/10.1/525/00/08 from the Office of the President. Following that the process owner, Professor Tsige G. Mariam summoned the committee members in his office and briefed members on their duties and responsibilities on May 08, 2008. This was then followed by a series of meetings of the committee that designed its strategy as to how it can come up with the first phase of the BPR activities.

Consequently two major formats of data collection were developed. These were:

I. Study framework

This is comprised of the following seven categories data collection and report formulation.

A. Policy

- a. Types and priority issues
 - i. As degree fulfillment activity
 - ii. As a stand alone project
 - iii. To address industrial/agriculture/social/medical problem
- b. Proposal review and approval process
- c. Ethical/copy right/patent issues
- d. Follow up mechanisms
- e. Weakness and strength

B. Funding

- a. Source
 - i. Government
 1. Procedure for fund allocation
 2. Procedure for obtaining fund
 - ii. External (SAREC, NUFU, UNFPA, WHO, IDRC, ICTP, etc.)
 1. Procedure for fund allocation
 2. Procedure for obtaining fund
- b. Management of fund
- c. Weakness and strength

D. Dissemination of research findings

- a. Journals (grant and support)
- b. Conference/symposia/workshop/proceedings
- c. Outreach
- d. Weakness and strength

E. Other research related activities

- a. Visiting scholars/research programs
- b. Collaboration with other institution
- c. Consultancy
- d. Weakness and strength

F. Available research facilities

- a. Maintenance
- b. Accessibility
- c. Sharing mechanism
- d. Weakness and strength

G. Quality assurance

Strengths and weaknesses

H. General reflections

Strengths and weaknesses

II. Guide questions

The second important component of the procedures followed was development of guide questions.

Guide questions were developed containing 39 questions to be forwarded to as many colleges, faculties, research institutes, schools and offices such as the Research and Publication Office. There was a general understanding that all questions may not be relevant to all colleges, faculties, schools, institutes and offices. Therefore, each delegate sent to any one of these centers of data collection (information centers)² must sieve out the relevant questions that meet the frame work outlined above.

The list of the guide questions are given below.

Guide questions for the Research and Publication Office (RPO) under the Vice President for Graduate Studies and research (VPGSR), colleges, faculties, schools and institutes.

1. What is the general purpose of research at AAU, in your faculty, etc.?
2. How is research initiated at AAU, in your faculty, etc.?
3. How much free are researchers to initiate research areas of their own interest?
4. Do you think research activities are directed towards solving social problems?
5. Where do grants for research come from?
6. Is AAU, your faculty, etc. influenced by donors in the selection of research titles or themes?
7. Do you think different faculties, etc. compete equally to secure research grants? Or, conversely, should all faculties and all academic staff be involved in research?
8. What are the various activities done by the research office, your faculty, etc. (e.g. conferences, teaching materials preparations, outreach programs, collaborations with other non-AAU institutions, etc.) to promote data generation and knowledge creation? Or in short what are the various activities of the research office, your faculty, etc.?
9. Do you think all these activities, such as,
10. Seeing the various activities done by the research office, such as being signatory of all research, approving some proposals, research leaves, etc., do you think all these should be done here or is there some room for decentralization?

² Data centers or information centers refers to colleges, faculties, institutes, schools, the RPO and the Science and Technology Agency.

11. Do you have a research policy that sets out prioritized? What types of research does the RPO, faculties, etc. encourage?
12. Does the RPO, your faculty, institute, etc. have grants to support regional and international conferences?
13. Each staff is supposed to do research (25% of the load in training institute and 75% of the load in a research institute). How do you evaluate this at the university level? In most faculties and research institutions staff members are engaged in overload teaching in the regular class and busy with extension class. Given this and the current training expansion policy how do you envisage research activities in AAU? What kinds of institutional arrangement and incentive structure do you think are effective to engage staff in research?
14. What does the research office, your faculty, etc. do with academic staff and departments that are not motivated to do research?
15. Are the requirements for academic promotion the same for all faculty/college staffs and research institutes? If no, how do they differ? If yes, do you think this gives equal opportunities to all to have access to do research? If differences exist, don't you think this is discouraging for faculty/college/institute staff?
16. How does the RPO/faculty/institute follow up the research progress and final output of the research? Is there any mechanism to assess the output and promote further usage of this research output?
17. How does the RPO/faculty/institute follow up quality of research progress and final output? In other words, how is quality of research assured?
18. How does the RPO/faculty/institute follow up efficiency of research activities in terms of cost effectiveness and usage of man-hours and materials?
19. How many research projects are currently active in your faculty/college/institute including consultancy based researches? List all active research projects (Please differentiate research projects and consultancy based researches) by donor including the amount of money, principal investigator, who initiate the research idea (donor or ... ?),
20. Do all these projects pay overhead costs to the RPO/faculties/institutes? What percent of each project budget goes for overhead costs? Why do you think these overhead costs are paid? If these are not paid, how do you think the respective offices manage service costs?
21. Do you have a check list of research proposals that are submitted to RPO/the faculty/institute for financial support along with names of the researcher/s and date of application?
22. Are all these approved? How does the selection proceed? Please add also reasons for rejected ones.
23. Do you think between the times a proposal is submitted and approved or rejected, the process is long and discouraging one? What should be done if it is too long?
24. Do you get acknowledgement letters from faculty/institute/RPO for receiving proposals?
25. Has the faculty/institute/RPO solicited research funds by its own? Have these come into the University research system for management?

26. Are you comfortable with the approval or rejection processes of proposals? Have there been complaints or applications for reconsiderations when proposals are rejected at all levels (PRO/faculty/institute)?-
27. Do you think researchers get the required support in running the research project from RPO/faculty/institute?
28. How comfortable are you in processing payments and purchases for the research?
29. Have you ever invited visiting professors from abroad? Who sponsors their costs? Have any one of your staff been invited as visiting professors to go abroad? If so, who covered their costs?
30. What benefits does your faculty/institute/RPO derived from hosting visiting researchers?
31. Are there cases of rejection at any level (faculty/institute/RPO) when visiting professors were ready to come with all costs covered?
32. Have you ever organized national/international conference/workshops? (RPO/faculty/institute)? How were these financed? Has there been any effort to organize an international workshop and failed because of failure at RPO/faculty/institute?
33. Is there any mechanism to support academic staff to travel abroad to present their findings at international forums by RPO/faculty/institute? Or should staff members always seek external fund to travel to such forums?
34. Each staff is supposed to do research, at least 25% of the load. It is also said "publish or perish. How do you follow this up that each staff does his/her share of research? Please answer this in view of the workload staff have. What happens to those staff members that do not do any research?
35. What do you do with the data generated (knowledge produced) after a research is said completed? Is there any mechanism to extend such data into the government, community or industry by PRO/faculty/institute?
37. Who owns innovations that can come out research undertakings?
36. Do you think there are adequate facilities for research? What are present and what are missing? What about catering for maintenance (at all levels faculty/institute/RPO)?
37. How are principal researchers and research team leaders or leaders selected (at all levels: faculty/institute/RPO)?
38. How do you assure quality of research (at all levels: RPO/faculty/institute)?
39. Please give us your general reflections on the strengths and weaknesses of research at AAU?

III. The other issue that had to be cleared out was how to approach each of the centers where data should be collected. After some discussions it was agreed up on that a letter be released from the process owner's office that indicates the intent of the mission and that the issue be given the utmost priority, as there is severe time shortage. The same letter has also helped to defreeze any drawbacks that could have been faced at the levels of the centers.

IV. The committee also decided that it be split into sub-teams or sub-committees comprising of two persons each. This came to four sub-teams. Namely:

- (a) Dr. Muluwork Tefera and Dr. Mahlet Yigeremu were assigned to do
 - Faculty of Veterinary Medicine
 - School of Pharmacy
 - Faculty of Medicine
 - Institute of Gender Studies
 - Science and Technology Commission
- (b) Dr. Getnet Alemu and Dr. Gebru Mersha were assigned to do
 - College of Social Science
 - Faculty of Law
 - Institute of Language Studies
 - Institute of Development Studies
 - Regional and Local Development Studies
 - School of Journalism
 - Ethiopian Language research Center
 - RPO
- (c) Dr. Tilahun Tesfaye and Dr. Worash Getaneh were assigned to do
 - Faculty of Informatics
 - Faculty of Technology
 - Faculty of Science
 - Aklilu Lemma institute of Pathology were assigned to do
- (d) Dr. Brook Lemma and Dr. Dejene Ejigu were assigned to do
 - College of Education
 - Institute of Ethiopian Studies
 - Institute of Ethiopian Studies
 - Institute of Educational Research
 - Faculty of Business and Economics
 - School of Social Work.

Despite these assignments that were agreed upon in the presence of all committee members, three members, namely, Dr. Dejene Ejigu, Dr. Tilahun Tesfaye and Dr. Worash Getaneh, resigned. Therefore Dr. Brook Lemma had to work alone and took over the faculties stated under Dr. Tilahun Tesfaye and Dr. Worash Getaneh.

Institute of Peace and Security and Institute of Federalism were not included in the list with the understanding that they are newly established and do not have much in store regarding research experience.

V. Final daft report is compiled by the Chairperson, Dr. Brook Lemma, and commented upon by all committee members.

VI. Steps in research process and process network model

VI. Results

In all out of 21, 19 colleges, faculties, institutes and schools have been visited. The remaining two are those belonging to Dr. Worash Getaneh and Dr. Tilahun Tesfaye for which Dr. Brook Lemma could not find the time to visit them. These are the Faculty of Informatics and the Aklilu Lemma Institute of Pathology. This apparently indicates that no sampling technique was used and all attempts were made to visit all faculties, the RPO and the Science and Technology Agency which had a closer tie with AAU in research exercises. The committee believes that with the given data there is enough information to compile a report on the status of research at AAU.

Report based on the seven study framework categories stated above in the methodology

A. Policy

- Apparently all interviewed centers of information do not have any research policy. All of them use what is stated in the University Senate Legislation of 2007 (page 225; Title VI, Article 123; 1-2) as their research guideline. The two points under this article require all academic staff to engage 25% of their time in research and device ways and means of their findings to disseminate results to society. Through the following pages some light will be thrown as to how much of this policy is implemented at each information center.
- Further the centers were asked if they have prioritized research areas that they have followed to conduct research over the years. Apparently all are of the opinion that they do not have as such any prioritized list to follow. This has a number of reasons.
 - A.1.** All of them do not have dependable resources for research, particularly; finance to conduct research according to plan and strategy.
 - A.2.** AAU as well does not provide them with research resources. Consequently it is up to each center to go on the look out to solicit grants and research facilities.
 - A.3.** Some centers such as College of Education, Science Faculty, and Faculty of Business and Economics have reported that they have a list of research areas that they want to dwell up on. All of them are not prioritized to match the needs of the country and in solving some social problems.

However it was clearly brought out in the discussions that all data collection centers have made efforts to research in the areas of their center mandates, which in one way or another are attempting so address some social issues. Examples can be sighted as in the case of the Institute of Gender Studies where attempts are made to conduct investigations in the areas of policy issues, traditions and practices, and behaviors of females. The Institute of Educational Research has addressed educational issues that extend from curriculum improvement, to quality of higher education, Faculty of Technology has worked on development of some

utilities such as solar energy harvesting models, the Faculty of Science dwelling on mushroom production, a tradition long neglected in a country of food shortage, donkey research at the Faculty of Veterinary, in a country where donkeys are taken for granted, abused, ill-treated and underutilized, etc.

- When one looks into these disconnected projects one sees that each is addressing some sort of social issue in a fragmented way. It is said fragmented because each of the projects in each center is initiated by individual academic staff within the framework of the mission of establishment of the respective center.
- The other aspect of research at the data collection centers is that the question of who initiates the launching of a project or a specific research. In all cases, research is initiated by the interest of individual researchers, and / or by research partners of the center, which could also be referred to as donors in some cases they always make efforts to contribute their share to societal services. Academic staff as part of their duty and ethical commitment to produce knowledge that has societal values is the basis that they do conduct research. Thus, that individual interest emanates from this commitment. As individual academic staff are also employed and given the opportunity for further training in line with the objectives and missions of the establishment of a data collection center, they cannot think of otherwise except researching within the general framework of the overall AAU policy and vision.
- Academic staff may divert a little but still remaining within the general framework of AAU policy when donors come with specific research agenda. This is the case generally known to be donor driven research. Looking at the efforts of researchers from this latter point of view then indicates that they are not completely free to do that particular research that would interest them most and in which they could have been most effectively useful to society.
- Currently it is clearly observed that there are gaps between (i) academic staff who are committed to carry out research undertakings despite the difficulties in soliciting grants, shortage of facilities, inefficient financial management systems and (ii) those that do not do any research as such but work on small consultancy services that have quick financial returns. Centers were asked if there is any mechanism to be all academic staff to get involved in research that have long term effects in changing societal problems; thereby achieving what is set in the Senate Legislation that all staff devote 25% of their official time to research. In all cases there is no such mechanism. The western notion of “publish or perish” does not seem to work here. In fact a discussion conducted at the Faculty of Business and Economics has revealed that AAU is better off with such non-researching academic staff and it is worth keeping them for AAU on the pay role since academic staff of such academic caliber cannot be forced to work at such low salaries and incentive mechanisms. Many stay on board at AAU just to maintain the status of being AAU staff

and continue doing consultancies on their private hours. In fact, in recent years AAU is turning into more of a teaching university with the high rate of enrolment, which is also believed to continue in the foreseeable future.

- Data centers were also asked if the process of research approval and rejection could be discouraging in their effort to conduct research. The responses were mixed in the sense that at the RPO of AAU level the process is long, and the fate of each proposal is not clearly stated. With regard to international donors, they have their own timeline to which all researchers have to comply to obtain grants. Researchers then would know from the outset what to expect and when. With the RPO one would only know his/her project is rejected when those few approved projects are already months past in their new project activities.

Weaknesses and strengths in the policy aspect

Weaknesses

- Data collection centers do not have specific research policies.
- A list of research areas that are in line with the missions of a center could be there. But, these areas are not put into prioritized format to meet the general national objectives of solving societal problems.
- Resources for research are not adequately available. It is up to the individual researcher to search for funds or grants. AAU is unable to provide the necessary resources (functional or not) to appropriately reward or blame researchers.
- Donors have considerable influence on what researchers or AAU should do.
- Research programs are individual efforts.
- Research approval schemes are too long.
- Research efforts are fragmented by individual efforts and even these efforts are not coordinated.
- AAU is progressively changing into a teaching university rather than a researching also.

Strengths

- Researchers attempt to solicit grants.
- Researchers collaborate with national and international donors to solicit grants.
- Researchers attempt to solve societal problems.
- Capacity to conduct research is available.
- AAU produces high number of graduates.

B. Funding

The sources of research grants as stated by the centers are limited to the following few. These are:

- Government fund which AAU receives from the Ethiopian Government. The total sum of this grant is very small by any standards. When this is shared between hundreds of AAU academic staff, it becomes a meaningless by small sum. Providing 5000 Birr to a scientist who wants to write a book is nowadays meaningless. Likewise granting up to 20000 Birr for a project that is designed to cost 60000 Birr is highly discouraging. It is then safe to say that AAU does not have its own jackpot for research funds.
- International donors like Sida from Sweden, NUFU from Norway, EDULINK from the European Union and a few others provide funds on competitive basis and with specific research areas. Academic staff members find the competitiveness quite repulsive and the research areas of the donors automatically exclude scientists from the area of their interest. It is stressed however that academic staff can negotiate and reconcile their interests with those of donors in many instances as discussed with the Faculty of Business and Economics, Faculty of Technology, Institute of Educational Research or the Institute of Ethiopian Studies.
- The involvement of the Office of the VPGSR and the Office of the RPO provide little assistance in the provision of funds except in the cases of Sida, Sweden, and Ethiopian Government funds.
- The management of funds is another area where data sources have strongly complained about. Those research projects that are recognized by the Office of the VPGSR and the RPO and placed their funds under the AAU finance system are facing serious problems. These are described in a number of ways.
 - a. Purchasing takes a long time unduly delaying the research timeline.
 - b. Items or research facilities of lowest price are purchased that do not match the quality requirements of a specific research. As a result, funds are in many cases wasted or the data collected using such unfit facilities or items become qualitatively poor. This later case is particularly true for investigations in science technology, the health sciences and informatics.
 - c. Re-settlement of advance payments are severely difficult, time taking and there are cases of rejecting receipts collected in the field. As a result there are many instances when researchers pay from their own pockets. In other rare cases researchers are wrongly advised to fill extended per diem forms to compensate the costs of such rejected receipts. This is illegal on both sides, namely, on the side of the researcher and the finance office and even the officials that authorize such overstretched per diem payments.
 - d. The AAU finance office instead of being service giver it attempts to control researchers who have made such hard work to solicit thousands and millions of Birr. Such acts have repelled academic staff from conducting research and even created that mentality of not being trusted for funds that they brought in the university. The incidence encountered at the Faculty of Business and Economics to avoid rejection of receipts coming from distant field payments is worth mentioning.
FBE once invited some personnel from the Main Sidist Kilo campus finance office to give them orientation on how they should conduct

payments at the field level and attempted to acquire all the necessary formats for payments on the field. It took a few days of exercises and special payments to the finance office workers were effected from the project. All was set and the field work was done. After the field work was completed and the receipts were presented to the finance office, a number of the receipts were rejected on grounds that the *Kebele* identification cards of the field workers were not presented along with the receipts. This then required extra field trip that resulted in a lot of fund and time wastage on the part of the researchers, the field workers, and general resources of the university including vehicles.

- e. Fund transfer from one campus to the other takes a number of months, a lot of telephone calls and visiting of personnel in the finance office. The discussion at the Science Faculty has revealed that things get better on personal relations, authority and even with extra payments to the same finance personnel for the duty that should have proceeded in no time so long as documents carry the necessary authorizations.
- f. The cumulative effect of the above phenomena has eventually resulted in keeping funds away from the AAU finance office. In many instances as in the Faculty of Technology, Science Faculty, Faculty of Business and Economics, Law School, Institute of Ethiopian Studies, etc. funds are kept in other collaborating institutes within the country or even abroad. This has serious consequences on the reputation of AAU, the ownership of data generated in a research or even when one looks into some technological innovations that may emerge out of a specific research undertaking.
- g. Quite on the contrary the experience of the Institute of Educational Research with the finance office is also worth mentioning. IER opted for engagement with the finance office of AAU and has put all its research grants in the same. IER admits that it faces all the problems mentioned above and more. This is done at the cost of repeated visits, calls, extra payments, delays and so on.. At the discussion it was revealed that this has a bearing on the quality of research conducted.
- h. Another experience is the case of the College of Education that has recently obtained autonomy and established its own finance office. The problem here is to get funds transferred from the main finance office into the college account. Once that is done, things go faster and more efficiently.

Weaknesses and strengths of the funding section

Weaknesses

- AAU provides apparently no tangible funds for research.
- The finance administration of AAU creates a great threat to the continuity of research.
- The absence of organized finance resettlement formats that are easy and flexible to use are not in place.
- Researchers are made to pay for research exercises.

- Lack of sub-finance offices at some data collection centers.
- Lack of special desks for specific projects.

Strengths

- Academic staff members make efforts to secure funds from external sources.
- Engagement strategy of some centers with the finance office until change comes and not following the desertion strategy of others (placing grants in other research collaborating organizations in or out of the country).
- Decentralization of finance office functions.

C. Dissemination of research results

All centers do not have defined strategies or mechanisms of research result dissemination. The usual routes of organizing conferences, attending workshops, publishing journal articles, proceedings, etc. are done based on the availability of funds. These do not have regularity. The case of IES is important that it conducts a renowned international conference on Ethiopian studies now going on its eighteenth year. However the following cases that hinder dissemination of results must be mentioned.

- A lot of research results have very little outlet to reach the general public or the society that need the information.
- In most cases government officials who need to hear presentations so that they could have some ideas for policy development do not come or come at opening sessions only and disappear when papers with some substance are presented.
- In most cases again these gatherings use the English medium which automatically excludes the general public.
- Apparently all publications that come out of such conferences, etc. remain in the university or abroad where they are published.
- There are no internal seminars in all centers that could help in knowledge exchange between academic staff and improve research activities.
- Offices of the VPGSR and RPO have no track records of organizing conferences or sponsoring travels of scientists in and out of the country to disseminate results.
- All centers are not open to the general public, even for a day in a year.
- All of the above seriously question the transparency of research activities at AAU.

Weaknesses and strengths of dissemination of research results section

Weaknesses

- Lack of organized outreach mechanisms at all data collection centers.
- Lack of open days for the general public.

- Exclusion of public from information by publishing in English and outside the country.
- Lack of internal knowledge exchange mechanism (within departments and faculties) to design outreach programs.
- Lack of resources to disseminate results.
- The Ethiopian media has no room or very little if at all to bring knowledge gained through research to the general public or investors. There is only this allegation that research results remain shelved in AAU.

Strengths

- Availability of knowledge that can be disseminated.

D. Other research related activities.

This section deals with issues related to visiting scholars/researchers, collaborations with other institutions, and consultancy services.

- All centers are of the opinion that they continue to maintain receiving visiting scholars from other institutions, mostly from abroad. Such undertakings come with some costs. Centers need to provide accommodations and local transport for such scholars if not air tickets and professional fees. Even then there are not adequate resources for these purposes. The Office of the VPGSR has limited resources for this purpose which it provides centers on competitive basis and to assist such departments that have serious shortages of senior scholars in their graduate programs, particularly again for PhD programs.
- On the other hand Ethiopian senior staff members do not have such opportunities of working in other institutions abroad. This is not due to lack of competent academic staff but lack of funds to travel and the problem of obtaining such opportunities at specific stages in the professional life of an academic staff that can go along AAU regulations. In other words, academic staff members can only travel after fulfilling a number of years of services. Traveling without checking this can cost academic staff members some delays in promotion, etc.
- Collaboration in research is done in most centers with varying degrees. Some centers like the Medical Faculty that does a lot of collaborative work with the World health Organization and the Ministry of Public Health is exemplary in its practices and social services.
- Consultancy services, small projects as described by the Faculty of technology, are dependant on the area of the specialization of the department involved. Such areas as technology, economics, medicine, veterinary science, etc. have a lot of attraction to organizations, investors, policy document developers and others. Most of these activities do not come to the respective centers through official channels. Individual researchers are approached by these organizations

privately. Although services and knowledge produced in AAU reach the society and academic staff members reap financial benefits by virtue of their being in the university and have access to knowledge, AAU does not benefit in obtaining revenues or sheer acknowledgement for being home of the scientific personnel or the knowledge bank.

Weaknesses and strengths of the other research related activities section

Weaknesses

- There is no systematic way of contacting visiting scholars and optimizing their services once they are in country at AAU. Probably sharing experiences of such scholars can be made between centers and other universities in the country.
- Ethiopian scholars have little access of traveling to other international universities to export their ideas and experiences.
- Data on consultancy are not available at AAU, as organizations that finance the consultancy or small projects keep them.
- It is unknown if researchers involved in such consultancy services have the intellectual right of using data gathered from these exercises.
- AAU does not benefit from consultancy services be it in the form of revenue or in the form of acknowledgement from society for hosting researchers of high caliber.

Strengths

- Researchers find outlets where they exercise what they have accumulated through research.
- Researchers obtain some financial benefits to supplement their meager incomes at AAU.
- The community in one way or another obtains the services of AAU scientists, such as the services given by AAU medical doctors at private hospitals and clinics. The same goes in other fields as well, such as technology, curriculum development, advising on policy issues, treatment of domesticated animals, etc.

E. Available research facilities

- The use of the word “available” is purposefully included since there are so many facilities lacking particularly in the areas of science, technology and informatics. There is not much to be done about them at this stage of reporting this BPR situation analysis. However, the committee realized at the outset that there are gaps even in those facilities that are currently available on AAU campuses.
- All faculties complain about the inefficiency and out datedness of the facilities available mainly in science, technology and informatics. These facilities purchased for fewer number of researchers and students are now on one side

overburdened and on the other side they are on becoming out of order (not functioning any more) or they are so much outdated that there are gaps in the data they collect as compared to what is proposed in the project documents. This has a bearing on the quality of data that can be generated.

- A major stumbling block is also the shortage of vehicles to conduct research outside of Addis Ababa. Apparently all vehicles are centrally controlled, although a vehicle might have been purchased by a specific project. This lack of ownership on the vehicles has created mishandling on the vehicles. In simple terms it is as if no one really worries about regular maintenance. Any project that wants to use these pooled vehicles must book them before months and pay mileage costs. This is extra burden for the projects beyond what is proposed and allowed in the project grants.
- There are also cases where four-wheel drive vehicles are possessed by center officials for home-office transport purposes while research undertakings are halted due to lack of transport facilities. There are numerous cases when researchers and PhD students have to travel with public buses. There are also such centers as the School of Social Work that has completely abandoned studies on street children, women's rights, migration, etc. of the regions and concentrate on similar problems in Addis Ababa only. Results collected in restricted areas become incomplete and insufficient for use by policy makers.
- Another problem observed at all data collection centers is that academic staff of the same department and faculty do not have any knowledge of what is available in each other's laboratories. As revealed at the discussion at the Science Faculty, there are researchers that request for financial support to get their samples analyzed off campus, while facilities are available right at the science Faculty itself. This indicates that there is not sharing mechanism between different research programs or between researchers themselves. Currently the Science Faculty is developing inventory list of all scientific facilities available on the campus together with their status (if in working order or not). The same applies to chemicals and other supplies. There are many redundancies in chemicals and other supplies purchases. Many instance of excess storage of a certain chemical is observed in one store while the other is out shopping for the same. If mechanism of information exchange could be developed and sharing of materials could be managed, financial resources could also be used more efficiently and effectively.
- The facility scenario exacerbated as many new universities emerge in this country. These new universities are apparently empty with regard to heavy research/laboratory facilities for research or even simple facilities for teaching. They all look up on AAU for practical work and sample analysis. All of them send their researchers and students to AAU to use the same meager facilities. On one side, collaboration of the universities is to be

encouraged however it is one sided. If the facilities at AAU all go down, then everybody stops from what every body wants to do.

Weaknesses and strengths of available research facilities

Weaknesses

- There are not adequate facilities that are sufficient to researchers at AAU.
- Field and laboratory facilities are out dated and measure data that are not compatible with contemporary data collection mechanisms.
- There is no tradition of sharing and collaboration between academic staff, departments and centers.
- There is no collaboration between universities.
- Financial resources are inappropriately used due to redundancies in purchases.
- There is no inventory of facilities.
- There is a danger of overutilizing facilities and research undertakings would gradually stop and teaching becomes based on theory only.
- Vehicles are not available to researchers as per the AAU approved project documents.
- Vehicles should have owners that care.

Strengths

- Despite the odds, researchers struggle to continue working.
- Some faculties continue researching within the limits of Addis Ababa to avoid the clash at the university motor pool.

I. Quality assurance of research

All centers of data collection have confirmed that there is no follow up mechanism that ensures researches are implemented as designed in the approved research protocols. As discussed above, there may be sporadic workshops, conferences, etc. where researchers present their findings and collect feedbacks. This is done if and only if a specific researcher wants to and obtains financial support to travel in and out of the country. If not, she or he will go for publishing the data without obtaining feedbacks from colleagues. Amazingly in all the centers visited there are no in-house seminars where researchers exchange knowledge and collect feedback to re-direct their research activities. It can then be safely concluded that research in AAU is the affair of a specific individual researcher or a group of researchers within the parameters of that research. It has gone unnoticed that all the research activities conducted at AAU should be the affair of AAU.

Weaknesses and strengths of the quality assurance of research section

Weaknesses

- There is no quality assurance mechanism in research at AAU.

- There is no culture of sharing experiences, such as in seminars, to collect feedbacks and re-tracking investigations. This may generally be considered as lack of research culture, as put by the Faculty of Veterinary Medicine.
- There is lack of interdisciplinary research that could address multifaceted societal problems.

Strengths

There is no strength in not assuring quality.

J. General reflections

Weaknesses of AAU

- There is generally poor culture in research.
- There are no adequate incentives for researchers as opposed to those who do not do any research. All pool the same salaries at the end of each month.
- There is not sufficient fund available at the RPO.
- Research coordination by RPO should have been much more efficient than currently observed.
- No one exactly knows how many research projects are underway at AAU. RPO is expected to develop this list together with their status. Most data collection centers do not have exact updated list of research projects together with their status. For instance, the Science Faculty which claims that it has about 80 researches is on the process of inventorying these researches and determining their status. Some may have been already completed but still withdrawing funds more that they have in their accounts. Similarly Faculty of Technology does not have a complete list, which it is now trying to compile. Only some centers like the Institute of Educational Research, the Institute of Developmental Research, RPO have some list of currently active projects.
- No one knows what exactly all the researches conducted at AAU cost.
- There is no inventory of major research facilities at AAU. As a result, AAU cannot provide technical support with or without payments to researching organizations and industry.
- The finance management system of the university is a disaster. It is highly centralized and is run by mentality of controlling rather than giving services.
- Weak collaboration practices between individuals and faculties.
- There is lack of defined policy on research.
- Keeping research grants out of the university should be avoided by drastic changes in the financial system and putting in place the appropriate incentive mechanisms for researchers.
- Lack of research resources, particularly funds, has interfered with the ability of AAU to follow its research priorities as outlined in its strategic plan.
- Lack of research dissemination mechanisms and reward mechanisms for those who reach out the community. Simple media coverage can also do the trick.

- Research at AAU lacks transparency to the general public. There is no periodic media coverage on research results and there is no annual open day when the general public visits AAU facilities, look at posters or attend to some seminars.
- The link between AAU and industry/investors is poor. If there is any communication it is done between individual researchers and industry/investors.
- AAU is not profiting from research results, which could have been extended to investors, policy makers, and the industry.
- Research publications are in most cases written in much more scientific manner and in English which exclude the general public from accessing AAU knowledge bank.

Strengths of AAU

- AAU has qualified high caliber academic staff.
- Location of AAU at the center of the country allows it to access all parts of the country.
- AAU has developed strategic plan if followed properly.
- Currently the Office of the VPGSR is developing a research policy document which is now available on AAU web site for comments.
- AAU has recently opened University-Industry Linkage Office at Director level under the Office of VPGSR.
- AAU has relatively better research facilities than any other higher education institute in the country.
- AAU has good access to international researchers and organizations.
- Relatively speaking AAU has large infrastructure, many campuses with specializations, and better e-communications.
- AAU has the potential to conduct interdisciplinary research undertakings that can be put to societal use and national development.