

# NAAC

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*For Quality and Excellence in Higher Education*

## PEER TEAM REPORT

on

## Institutional Accreditation

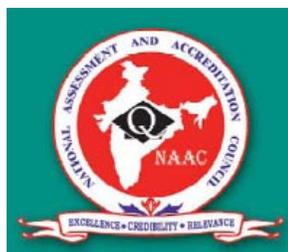
of

**Government Madhav Vigyan Mahavidyalaya**

**Ujjain – 456010**

**(Madhya Pradesh)**

**( 26<sup>th</sup> - 27<sup>th</sup> March, 2007 )**



**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**  
**P.O.Box 1075, Nagarbhavi, Bangalore - 560072**

*Peer Team Report on Institutional Accreditation*  
*of*  
**Government Madhav Vigyan Mahavidyalaya**

**Ujjain – 456010**  
**(Madhya Pradesh)**

**SECTION - I**

***Introduction***

Government Madhav Science College or as called “Madhav Vigyan Mahavidyalaya”, was set up in 1950 in Ujjain - a highly venerated pilgrimage centre enshrining Mahakaleshwar and a place notably rich in cultural heritage, tradition and civilization in Madhya Pradesh. It became a constituent college of Vikram University, Ujjain when the latter came into existence in 1957 and remained so till 1969. Then it became an affiliated college of the university from 1969 to 1995. From 1995 to 2005 it again acquired the status of a constituent college of the university. From 2005 onwards it is an affiliated college of the university. In 1960 post-graduate classes of the university in science subjects were started in it. After making a humble beginning with a small enrolment, faculty and infrastructure, as an institution run by the state government, it became a premier co-educational Science College of Madhya Pradesh having a sprawling campus to which it had shifted in 1969.

The college offers B.Sc (General) in Biological and Physical Sciences and M.Sc degree in Botany, Zoology and Chemistry. It has eleven departments i.e., Botany, Zoology, Chemistry, Physics, Geology, Economics, Geography, Statistics, Mathematics, Hindi and English. The courses are also offered in Computer Science, Computer Applications, Microbiology and recently in Biotechnology. The college has an enrolment of five hundred and eighty two students comprising four hundred and fifteen boys and one hundred and sixty girls besides sixty five students in M.Sc. and twelve candidates who

are registered for their Ph.D. under approved research guides of the college. The college has forty four permanent and seven temporary teachers. Infrastructure consists of Principal's office, classrooms, library, computer centre, science laboratories, office and play grounds spread over 15 acres with a built up area of about 34304 sq mtrs.

Since 2005 it is an affiliated college of Vikram University, Ujjain and it follows its norms and guidelines for all its admissions, teaching and examinations of its students conducted by it. The college is included in the list of colleges maintained by the UGC under sections 2 (f) and 12 (B) of its Act of 1956 since July, 1969 and has been regularly receiving UGC developmental assistance as per its entitlement in terms of its enrolment and merit of its proposals for under-graduate and post-graduate programs.

The college prepared its Self-Study Report (SSR) and submitted it to the National Assessment and Accreditation Council (NAAC) in 2006 and volunteered to be assessed and accredited. NAAC constituted a Peer Team comprising Prof K.C. Upadhyaya (former Vice-Chancellor, M.S.University of Baroda), School of Life Sciences, Jawaharlal Nehru University, New Delhi, as Chairman, Prof H.P. Mittal, Principal, Meerut College, Meerut as Member and Prof K.K.Bajaj former Dean of Colleges-cum-Director, College Development Council and Controller of Examinations, Himachal Pradesh University, Shimla (HP) as Member Coordinator, to visit the college and validate the Self-Study Report. Dr K. N. Madhusudanan Pillai, Academic Advisor, NAAC coordinated prior to the visit.

Before visiting the college the team held an in-house meeting at the place of stay of the members at 10 PM on 25th March, 2007 at Ujjain to discuss and exchange notes on the SSR of the college vis-à-vis evaluation framework and evolve team perception thereon and plan the procedure and modalities to be followed for its validation during the visit to the college.

The Team analysed the Self-Study Report and visited the college on 26<sup>th</sup> and 27<sup>th</sup> March, 2007 for an on-site validation. During the institutional visit, the team perused the relevant

documents and visited all the departments, science laboratories, library and other support facilities. The Peer team interacted with the principal, faculty members non-teaching staff, students, parents and alumni.

Based on the above exercise, inputs provided during the visit and interaction with all the stake-holders, the team assessed the college keeping in mind the seven criteria specified by NAAC. The assessment under various criteria, the commendable features of the institution as well as the issues of concern are presented in the following report.

## **Section II**

### **Criterion-wise Analysis**

#### **Criterion – I : *Curricular Aspects***

As a more than five decade old reputed Science College of the state now affiliated to Vikram University, Ujjain, it offers B.Sc and M.Sc degrees. The subject combinations for B.Sc are (i) Botany, Zoology and Chemistry, (ii) Botany, Biotechnology and Chemistry (iii) Zoology, Microbiology and Chemistry, (iv) Physics, Chemistry and Mathematics, (v) Physics, Chemistry and Statistics (vi) Physics, Mathematics and Computer Science/Computer Applications, (vii) Mathematics, Statistics and Computer Science (viii) Physics, Chemistry and Geology, (ix) Mathematics, Statistics and Economics, (x) Geology, Chemistry and Geography. Hindi and English are taught as foundation language courses. M.Sc degree is offered in Chemistry, Botany and Zoology. Some of the members of the faculty in the departments of Mathematics and Zoology are recognized as Ph.D guides of Vikram University. The college is autonomous with respect to its post-graduate programs. It designs syllabi, conducts its own examinations and issues marks-sheets. However, Vikram University issues the degrees for them. Under the existing framework though there is little flexibility to pursue any different or diversified academic programs yet the syllabi in different subjects are reviewed periodically by the respective Boards of Studies comprising senior faculty of the university including some from the college. Besides this, the students admitted to the Part I B.Sc of the college have a choice

to shift from one course combination to another before 15<sup>th</sup> September. Microbiology, Computer Science, Computer Applications and the recently introduced course in Biotechnology are offered on self-financing basis.

## **Criterion – II : *Teaching – Learning and Evaluation***

Following the guidelines and procedures laid down by Vikram University and Government of Madhya Pradesh, the admission to all the courses is done on the basis of merit. However, due to declining number of students opting for B.Sc any 12<sup>th</sup> pass student is allowed admission except in self-financing subjects. Being an institution committed to offering higher education in science subjects to all the students of Madhya Pradesh no one is denied equality of opportunity in this process. At the same time it follows the policy of the state government in the matter of reservations for the students belonging to SCs/STs/OBCs. Teaching is largely done through the traditional classroom lecture method though charts and models also support the teaching process wherever so required. There is some use of OHPs in classrooms for courses such as Botany, Zoology and Chemistry. The needy and brilliant students are given inputs and incentives in the shape of scholarships and fee concessions on behalf of the state government. However, there are neither tutorial classes nor bridge or remedial courses to meet the diverse needs of weak students. Teachers' evaluation by students in a formal manner is also not a practice.

Teaching modules or lessons are not unitized but these are planned in the beginning of the session by the teachers who frame the time table for the same in such a way as to ensure that the syllabi are covered by the time the examinations are conducted. The teachers also maintain their teaching record. Laboratory sessions, assignment work, practicals etc are given due weightage as per university requirements and stipulations. The college has one hundred and eighty teaching days out of its two hundred and ninety four working days. The teachers take classes with each period of forty five minutes duration. There are forty four teachers at present in the college as against fifty four sanctioned posts. The college has also recruited seven part-time teachers called guest teachers on the basis of hourly payment of honorarium.

Thirty three i.e., 73 % of its regular teachers have Ph.D as their highest qualification. The teacher student ratio is 1:17. The college has a support staff of thirty nine persons as against sixty five posts that includes both administrative as well as technical personnel. Teaching and non-teaching staff ratio is almost 1:1

Almost all the teachers have attended the Refresher and Orientation courses as required under UGC guidelines and state government rules for entitlement to higher grades and career progression. Teachers are encouraged to attend seminars and academic conferences in Vikram University, Ujjain and at other places to enrich their knowledge in their respective subjects and areas of interest.

The recruitment of the teachers is done through Madhya Pradesh Public Service Commission as per qualifications prescribed by the UGC and the university keeping in view the requirements. The faculty members are government employees and are freely and frequently transferred to other colleges. Since the college was a constituent college of Vikram University and consequently those appointed earlier by the university are not transferable. Each teacher carries the teaching responsibility of 24 periods a week as stipulated in the rules prescribed by the state government and the university.

The college does not follow a formalized institutional practice of annual self-appraisal of teachers and instead they are assessed by the Principal on the basis of their university results, college results, students' feedback in general, interaction with parents and other norms of conduct to evaluate their performance. There is no institutionalized practice of academic audit in the college. The performance of the students is monitored through random tests and discussions in the class. The attendance of students is 50 to 60% though the mandatory requirement of the university to appear in the examination is much higher. However, no one is normally detained on this ground from appearing in the examination. The results of B.Sc I Year examination are less than 40%, however, for II and III Year is over 80%. The poor result in the I Year is attributed to the poor quality of the students admitted. Several students obtain I division and are placed in the merit list of the university.

### **Criterion – III : *Research – Consultancy and Extension***

Despite the major focus of the college being on effective teaching there is a distinct institutional priority assigned to research as such. With 73% of its teachers being Ph.D holders research aptitude is well established more so in the light of postgraduate teaching in some subjects to which they are exposed and also for the reason that the university postgraduate classes in science subjects used to be run in this college earlier. A few teachers are actively engaged in research activities and have substantial scholarly output to their credit. A number of papers have been published by the faculty members in Mathematics, Zoology, Chemistry and Statistics during the last five years. Four teachers of the college are approved supervisors for Ph.D. At present twelve students are registered under them for their Ph.D.

Several faculty members have participated in different academic conferences and seminars both at the national and international levels. Department of Chemistry organized a national seminar. Though major research projects with the funding of national agencies seem to have escaped their attention and focus for better academic visibility and contribution to mainstream national research in their specific areas of interest yet they have only one minor research project from UGC to their credit. One major Research Project of the UGC has recently been completed.

Despite the fact that teaching related constraints of a conventional college stand in their way yet some consultancy has been attempted by the faculty such as in the field of sericulture, pollution related problems, water conservation in Vikram Tirth Sarovar etc. As a service to the society the college has also undertaken the project on the conservation of green waste (flowers of Mahakaleshwar temple).

The college has an impressive record in cultural and co-curricular activities with many achievements to its credit particularly in the two units of NCC and the two units of NSS volunteers who have participated in social awareness services like blood donation, adult education, AIDs awareness campaign, tree plantation etc.,. Two of the NCC students have participated in the National Republic Day Parade at Delhi while three of them have been

selected for regular commission in Indian Army. A couple of students have participated in inter-university sports events and also represented Vikram University at the national level and one of the students won second position in Gymnastics. The college successfully organized the recently held youth festival. Another activity worth mentioning is the creation of a water pond called Vikram Tirth Sarovar as a part of water conservation project and tree plantation on the Vikram University campus that has been undertaken by the students of the college

Gundeecha Brothers - the well known and acknowledged accomplished *Dhrupad vocalists* occupy a special niche in the extension and co-curricular programs of the college which inspire the student to envy them with diligence and sole commitment to be an artist.

#### **Criterion – IV : *Infrastructure and Learning Resources***

The college has an impressive campus which has been developed in phases. This covers an area of eighteen acres with impressive buildings which accommodate an office of the Principal, Staff room, the college office besides class rooms, science laboratories, computer laboratories, multi-purpose hall which can accommodate about three hundred persons, an open air stage, library, spacious ground, and a common room for the girls. It has a total built up area of about 34304 sq mt. The college has the hostel facility which at present is with the state government and is likely to be restored to the college next year. The college does offer some residential accommodation to its teachers and non-teaching staff.

The college library which remains open from 10 AM to 5 PM on working days and has over 32500 books on different subjects and subscribes to six magazines. There are four separate departmental libraries which house the books issued by the central library. The library follows a closed system where the students are not allowed access to the bookshelves. Some of the books were procured by the library during the last two years . However, most of the books are old. The library needs considerable up-gradation with

respect to acquiring new books, computerization and its basic policy of accessibility of books to the students. It has a total carpet area of about 2400 sq. ft.

The college has several lecture halls. It has spacious laboratories in Chemistry, Physics, Botany and Zoology though they need considerable up-gradation with respect to new equipment. The newly introduced courses in Microbiology, Computer Science, Computer Application and Biotechnology have no permanent teachers. The teaching is dependent on guest faculty. Computer Science department has two computer laboratories housing 386, Pentium III and Pentium IV computers. A couple of computers have BSNL broadband Internet connectivity. Some of the departments also have a few computers with Internet connectivity. However, no computers are available to general students. The Biotechnology laboratories require to be furnished with equipment and instruments. There is no health centre in the college nor it has a canteen for its students and staff.

Besides the college has a playground, indoor sports facilities, rooms for NCC, NSS, girls' common room, Principal's office and the college office. The campus is well maintained. The Botany department has a small botanical garden. The Zoology department has a sericulture laboratory. It also maintains a Vermicomposting facility.

### **Criterion – V : *Student Support and Progression***

The college publishes its prospectus for the students seeking admission to the college. Dropout rate as well as failure rate of the students in the first year is high due to availability of professional courses and poor quality of students' intake. The college offers a few vocation-oriented courses and for that a career guidance and placement cell has been in existence for the last three years. Scholarships are available to SC/ST/OBC and the needy students by the state government.

The college has many prominent persons as its alumni. They include a Vice-Chancellor, scientists, eminent doctors, professionals, talented artists etc. The college has two units of NCC. Many cadets have passed the 'C' certificate examination. Vikram University

recently entrusted the responsibility of organizing the Regional Youth Festival on behalf of AIU which was well organized and acclaimed.

## **Criterion – VI : *Organisation and Management***

The college is fully controlled and financed by the state government. While the financial code of the government applies in all expenditure and audit matters, academic courses and calendar of the affiliating Vikram University are followed in letter and spirit. The fee structure is as prescribed by the state government. No serious audit objections are pending.

The college has good internal coordination and works through a number of committees set up in the process of democratic and decentralized management which gives the faculty a sense of participation, responsibility sharing and involvement in the affairs of the college. This is reflected in the social outreach and co-curricular activities of the college. The elected students' union is also actively a part of this exercise which besides maintaining discipline in the college also helps the Principal in organizing extension activities. There is a Grievance Redressal Cell yet all the issues relating to students and others are resolved through the discussion with the Principal and the teaching staff of the college.

Last year the state government provided Grant-in-aid to the extent of Rs 1,83,37,685/- with the realization of fees to the extent of Rs 13,86,151/- and a donation of Rupees Ten lac and an income of Rs 12,93,500/- from self-financing courses. This is indicative of substantial financial support available to the college yet about 75 % of the grant has been spent on disbursement of salaries of the staff as such leaving very little for innovative improvement of courses and supporting infrastructure and laboratories for new state-of-the-art courses which could be introduced in the college. Enrolment being low, unit cost is as high as Rs 45,288/- per student /year, taking into account salary component.

Government rules on study leave, conveyance and house loans besides admissibility of advance out of the Provident Fund and other benefits that go with public service are in place for the teachers and non-teaching staff of the college.

## **Criterion – VII : *Healthy Practices***

To bridge the gaps in the prescribed curriculum and requirements of the students and to enable them to compete confidently the college organizes guest lectures, group discussions in different subjects besides common social out reach activities through NSS and NCC. To ensure its teaching learning effectiveness and prepare them for final university examinations it conducts mock examinations prior to the final examinations.

Teacher-student relations are cordial on account of easy accessibility of teachers to the students in all subjects. The students evince keen interest in the co-curricular, sports and social outreach activities. The contribution of NSS and NCC units which teach values of leadership and service in their social outreach programs is commendable. This has also contributed to greater cordiality, cooperation and amity among the students and the teaching fraternity.

It maintains its bonds and interaction with its past students. This gets the college a feedback on their contribution and also the much needed support as a positive measure to update its social esteem and evaluation.

Self-financing courses are a step to augment the financial resources of the college and offer new courses of socio-economic relevance to its students.

The various inter-departmental research activities and their contribution in Sericulture, Extension lectures, community orientation programs through the involvement of NSS and NCC are well appreciated to strengthen academic ambience of the college.

Geology museum, a large lecture hall, Vermiculture project, Plantation project (Sanjivini Vrind) and water conservation project (Vikram Tirth Sarovar) are some of the other initiatives which stand out as healthy initiatives and activities which the college has undertaken.

The college has recently launched its website and has invited its old students to register on line for formation of its Alumni Association.

The college has shown its potential and capacity in organizing big co-curricular functions.

The department of Zoology had undertaken the Sericulture project as an extension activity.

## **SECTION – III**

### **Overall Analysis and Suggestions**

#### ***Overall Analysis***

Established in 1950 as a small college by the state government it became an eminent co-educational postgraduate institution of science teaching. It has now an impressive campus covering an area of about eighteen acres. It has made good efforts to sustain quality of teaching, research and other co-curricular inputs for its students despite its different institutional formats such as of a constituent college of Vikram University whose postgraduate science classes were conducted in it to now that of an affiliated college. Its students have also done well. The college has the ambience of a seat of higher learning which promotes moral values through a student friendly environment along with academic pursuit with impressive results. The college can take pride in its alumni in various fields such as education, science, civil services, banking, performing arts, business etc.

The college enjoys financial stability and social confidence to sustain its new initiatives and is capable of meeting the aspirations of the students of the area. With its mature and highly qualified faculty in different science subjects it is fully poised to accept future challenges and may even opt for the grant of the status of an autonomous college if its enrolment improves to a sustainable level in due course of time.

### ***Suggestions***

During the visit to the college, while the Team validated the self-study report prepared and submitted to the NAAC by the college and has given its overall analysis and commendations as above it would like to make the following suggestions.

- The Principal and the senior faculty members of the college may discuss with the Vice-Chancellor of Vikram University the issue of rationalization of undergraduate and postgraduate courses in the university and the college in order to avoid an appearance of competing with each other. This is imperative in view of the declining inclination of the students to study basic sciences.
- The college may think of introducing more job-oriented courses or certificate courses in vocational subjects.
- The science graduates should be computer literate and in order to accomplish this the college may establish a computer centre with internet connectivity. A certificate course in computer applications may be introduced on self-financing basis.
- The college may introduce some off beat courses such as on interdisciplinary subjects, communication skills, disaster management, human rights, women rights, consumer rights, retail management, instrumentation, electronics, computer hardware repairs, aquarium maintenance, cultivation and marketing of marketing plants, tissue culture, floriculture etc.
- The laboratories need up-gradation in terms of equipment and other associated infrastructure.

- The classroom teaching may be made more effective by supplementing blackboard teaching with modern audiovisual aids.
- The library needs to be up-graded in terms of acquiring multiple copies of recent text books, accessibility of students to open book shelves, computerization etc.
- The college should address the critical shortage of students opting economics, geography and geology subjects.
- There is a need to strengthening career counseling and placement cell.
- Better networking of Alumni to tap resources will further strengthen the progress and development of the college.
- Efforts may be made to recruit regular teachers in self-financing and high demand subjects such as Microbiology, Biotechnology, Computer Science and Computer Applications.
- The staff members may be encouraged and motivated to take up research projects
- UGC should be approached for funding a Women's Hostel and for providing funds for College Science Improvement Program.
- The college may provide canteen facilities to its students and staff. It may also provide health cover to its students.
- Students' appraisal of the teachers at the end of the session and teacher's self-appraisal methods will improve quality of teaching inputs.
- Keeping in view the importance of communication skills special efforts may be made to improve communication skills of the students.

- Computer literacy should be encouraged among the teachers, administrative staff and even the students who are not the regular students of Computer Science department. This may be imparted as an integral part of the science courses. This will enhance their market employability and will take the culture of use of computers wherever they go, even to the villages.
- Social awareness and service programs should be further extended to nearby villages with the help of the University counterparts, Alumni, NGOs and other institutions.
- Academic monitoring of students, their attendance record, continuous evaluation, grievance redressal procedures and activities of various committees should be formalized and made on line through computer network.
- The college should have Photostat facility for the teachers and the students.
- Each department of the college may prepare a Vision Paper to formulate its roadmap for the coming five to ten years and plan generation and allocation of resources for the same accordingly.
- Internal Quality Assurance Cell may be set up to ensure monitoring of all measures to enhance quality in teaching-learning and research activities of the college.
- Frequent changes of Principals adversely impact the growth and development of the college. Minimum five year tenure of the incumbent may help.
- Inter-college transfer of teachers negatively affects the research initiatives of the teachers.
- Teachers may be encouraged by the Government to undertake independent minor or major research projects in their respective areas of interest and also seek more assistance from the national funding agencies. It may also consider grant of

special leave or monetary incentive to encourage teachers to explore linkages for collaborative research and consultancy with industry particularly in the departments of Physics, Computer Applications, Chemistry, Zoology and Botany for better placements of their students. They may organize more seminars and regional conferences in their respective areas of interest for greater exchange of academic ideas and for their overall enrichment and professional empowerment.

## ***Conclusion***

The team expresses its satisfaction over the quality of education being offered and the interest in research being shown in college by some of the members of the faculty. While the college is largely dependent on grant-in-aid from the government it is also trying to mobilize resources through the introduction of self-financing courses and is progressively adding courses which are student friendly. The college is making good use of its infrastructure with the help of its highly qualified faculty.

The members of the Peer Team express their appreciation for the hospitality and cooperation extended to them during their visit to the college and wishes the college success in all its future endeavours. The Team also places on record its appreciation of the coordination and expeditious planning done by Dr Madhusudanan Pillai, Academic Consultant, NAAC in getting this institutional assessment and accreditation done.

Names and signatures of the Members of the Peer Team

Prof. K.C. Upadhyaya  
Chairman

Dr H.P. Mittal  
Member

K.K. Bajaj  
Member Coordinator

I have gone through the Report and I agree with the observations and recommendations made by the Peer Team in it.

Dr Usha Shrivastava  
Principal

March 28, 2007



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद  
विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान  
**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**  
An Autonomous Institution of the University Grants Commission

## Quality Profile

Name of the Institution : Government Madhav Vigyan Mahavidyalaya

Place : Ujjain, Madhya Pradesh

Criterion	Weightage ( $W_i$ )	Criterion Score ( $C_i$ )
I. Curricular Aspects	100	82
II. Teaching-Learning and Evaluation	400	320
III. Research, Consultancy and Extension	50	45
IV. Infrastructure and Learning Resources	150	127
V. Student Support and Progression	100	76
VI. Organization and Management	100	80
VII. Healthy Practices	100	80
Total	$\Sigma W_i = 1000$	$\Sigma C_i = 810$

$$\text{Institutional Score} = \frac{\Sigma C_i}{\Sigma W_i} \times 100 = \frac{810}{1000} \times 100 = 81.00$$

Date : March 31, 2007

*M. V. V.*  
Director