

REPORT
OF
INTERNATIONAL
SEMINAR

ON

Washington Accord
India's Preparedness

Jointly Organised By

NITTTR, BHOPAL & DTE (MP)

6-7 January 2011



National Institute of Technical Teachers Training & Research

Shamla Hills, Bhopal (MP) 462 002

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Shamla Hills, Bhopal 462002

REPORT ON WASHINGTON ACCORD: INDIA'S PREPAREDNESS 6-7 January, 2011

1. Background

National Institute of Technical Teachers' Training and Research (NITTTR Bhopal) was established as TTTI Bhopal in 1966 with the major role of preparing professionally competent teachers for the polytechnics of Western Regional states. In 2003, the mandate of the institute was enhanced to cover entire gamut of technical education including polytechnics, engineering colleges, vocational and management education at regional as well as at national level.

Quality remains an utmost concern for all engineering educators. A way to assure quality in engineering education system is by adhering to accreditation by a certified body. Quality and accreditation have become buzzwords all over the world. In 1989, the Washington Accord was signed by six countries which recognizes substantial equivalence in the accreditation of qualifications in engineering education normally of four years duration. India became a provisional member of Washington Accord in 2007. As per the provisions of the Washington Accord, a country becomes eligible for full-fledged membership after two years of provisional membership, if all other members unanimously agree to

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include the country as a full-fledged member. In 2008, India approached the Washington Accord for sending mentors for review of the accreditation system before being considered for full-fledged membership. India's bid to become a full-fledged member of Washington Accord was not acceded to in 2009. However, as a special case, India's provisional membership was extended for another two years.

In view of its enhanced mandate covering the engineering education and quality of engineering education being the bedrock of NITTTR's existence; Board of Governors of NITTTR Bhopal in its 116th meeting held on 15th February 2010 decided to hold a conference /seminar to discuss challenges related to technical education and prepare technical educators in accordance with the challenges arising from the Washington Accord.

In fulfillment of resolution of Board of Governors, the institute organized a two day international seminar on 6-7 January 2011. It involved experts, National Board of Accreditation, AICTE, Professional Bodies such as Institution of Engineers, Directors of Technical Education, Senior Administrators and Faculty of Engineering institutions. A report of two day deliberations in the seminar is given below:

2. About the Washington Accord

The purpose of the Washington Accord is recognition of the equivalence of Accredited engineering Education Programs leading to the engineering Degree and is applicable only to Engineers. It is essentially a quality assurance process and is based on world best practice. The Washington Accord has the following basic terms of agreement in which the Signatories:

- Accept that Accreditation procedures are comparable.
- Accept one another's accredited degrees from the date of admission as a Full Member.
- Agree to identify and encourage implementation of best practice.
- Accept mutual monitoring.
- Accept that it applies to Accreditations in home jurisdictions only.
- Accept the need to encourage licensing and registration authorities to apply the Agreement.

3. The Need and Importance of Washington Accord

Washington Accord ensures that Indian undergraduate engineering degrees would be accorded an equal status in all member countries and they are recognized as engineering degrees of high international standards. It may be noted here that only degrees from the famed IITs and the Birla Institute of Technology and Sciences (BITS) Pilani were till now been considered something worthy of a high honour. With the new

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development, India will see itself doing at it can to improve the quality of its second and third rung engineering colleges.

4. Current Signatories

- i. **Australia** - Represented by Engineers Australia (1989)
- ii. **Canada** - Represented by Engineers Canada (1989)
- iii. **Chinese Taipei** - Represented by Institute of Engineering Education Taiwan (2007)
- iv. **Hong Kong China** - Represented by The Hong Kong Institution of Engineers (1995)
- v. **Ireland** - Represented by Engineers Ireland (1989)
- vi. **Japan** - Represented by Japan Accreditation Board for Engineering Education (2005)
- vii. **Korea** - Represented by Accreditation Board for Engineering Education of Korea (2007)
- viii. **Malaysia** - Represented by Board of Engineers Malaysia (2009)
- ix. **New Zealand** - Represented by Institution of Professional Engineers NZ (1989)
- x. **Singapore** - Represented by Institution of Engineers Singapore (2006)
- xi. **South Africa** - Represented by Engineering Council of South Africa (1999)
- xii. **United Kingdom** - Represented by Engineering Council UK (1989)
- xiii. **United States** - Represented by Accreditation Board for Engineering and Technology (1989)

5. Provisional Members

- **Germany** - Represented by German Accreditation Agency for Study Programs in Engineering and Informatics
- **India** - Represented by National Board of Accreditation of All India Council for Technical Education

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- **Pakistan** - Represented by Pakistan Engineering Council
- **Russia** - Represented by Russian Association for Engineering Education
- **Sri Lanka** - Represented by Institution of Engineers Sri Lanka
- **Turkey** - Represented by MUDEK

6. Washington Accord Conference at NITTTR Bhopal

In this backdrop NITTTR Bhopal and Directorate of Technical Education jointly organized the International seminar on Washington Accord from 6-7 January, 2011.

About 100 delegates from the Engineering Colleges and Professional Bodies attended the seminar in which papers from following invited experts were presented and deliberated at length.

- Prof. Amitabha Ghosh, Chairman, BOG, NITTTR Bhopal
- Prof. Vijay K. Arora, Eminent Professor, Wilkes University, USA
- Prof. B.C. Majumdar, Chairman, NBA
- Mr. I.B. Pirzada, IAS, Commissioner, Department of Technical Education, Gujarat
- Prof. Abdul Halim Yatim, Universiti Teknologia, Malaysia
- Prof. D.V.Singh, Eminent Professor
- Prof. (Dr.) N.R.Bandhyopadhyay, Institution of Engineers, India
- Prof. Rafiqul Islam, University of Dhaka, Bangladesh

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- Prof. B.K.Sthapak, Principal Director, Ex-Vice-Chancellor, Chhattisgarh Swami Vivekananda Technological University of Chhattisgarh
- Prof. Piyush Trivedi, VC, RGPV, Bhopal
- Shri Shridhar.P.Joshi, Sr. GM, Tata Motors

7. Recommendation of the Seminar on Washington Accord held at NITTTR Bhopal

Based on the presentations from the experts , deliberations, the following recommendations emerged out.

7.1 NBA RELATED RECOMMENDATIONS

- NBA should be robust both as an autonomous organization and its implementation of accreditation programme.
- NBA should have adequate and competent manpower in the secretariat.
- NBA may have four regional centres to support NBA to carry out accreditation activities for the four regions of the country
- NITTTRs may be used as resource institutions to carry out activities of NBA
- NBA may take appropriate measure to avoid backlog.
- Orientation of evaluators be done to help them understand accreditation systems, and assessment process.

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- Compliance reports and mandatory disclosure, which AICTE approved institutions are posting on their website, to be linked up with accreditation process

7.2 POLICY RELATED RECOMMENDATIONS

Encourage institutions to opt for accreditation by providing the following incentives which are restricted to accredited programmes only (AICTE may be requested accordingly):

- Suitable Development Grants
- Starting new courses
- Deemed University status
- Increase in intake
- Granting sponsored projects
- Approving post graduate programmes

7.3 TEACHING-LEARNING RELATED RECOMMENDATIONS

- Assign credits for training of new teachers in technology areas especially basic engineering and science subjects through intensive QIPs and other courses offered by reputed institutions like IISc, IITs etc. and participating pedagogical exercises through NITTTRs.
- Curriculum should have adequate courses of fundamental engineering and science subjects. State Technical and other Affiliating Universities should be advised accordingly.

- Outcome-based curriculum design must be adopted early, subject outcomes and programmes outcomes must be in alignment
- Programme delivery using different modes to be adapted and assessment system must be accordingly designed to ensure realization of stated outcomes
- Metric of measurement leading to documentation of evidence is necessary hence their design for various programmes be initiated

7.4 INSTITUTION RELATED RECOMMENDATIONS

- Institutes applying for accreditation must have duly approved statutes in place.

8. Concluding Remarks

Following needs to be done so that India becomes signatory to this prestigious accord.

- (i) NBA: - Strengthen National Board of Accreditation and make it independent. Invest in information systems, more staff, and the evaluators/peer reviews. Accrediting over 10,000 engineering, computer science, and technology programs is going to be a gigantic task and requires huge resources.

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- (ii) Shortage of qualified faculty: There is a great shortage of faculty with Ph. D. In Engineering. A large number of PhDs need to be produced and incentivized to join teaching profession.
- (iii) Incentivize accreditation. Accreditation should gradually be made mandatory for public funding – as it is in many countries --and perhaps mandatory for students to be eligible for financial aid, as in the US.
- (iv) Modern curricula that will be in tune with IEA Graduate Attribute and professional Competencies. Therefore, it is necessary for institutions to modernize curricula and teaching-learning methods, upgrade equipment, and invest in research.
- (v) Autonomy and accountability: Institutions need to become more autonomous and accountable to compete at the global level.
- (vi) Invest in institutions to give them a fair chance to reach the new global standards. As many as half the Indian institutions, if not more, will not meet the Washington Accord standards. Immediately imposing the new standards without funding and availability of qualified faculty will produce a difficult situation.

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Appendix I

Washington Accord Seminar - 6th - 7th January 2011

Programme Schedule

6th January 2011	
10.00 AM to 11.00 AM	Tea and registration at conference venue
11.00 am to 12.30 am	
i) Lighting of Lamp	By Dignitaries on Dais
ii) Floral Welcome	
iii) Welcome address and about the seminar	By Prof. Vijay K. Agrawal, Director, NITTTR Bhopal.
iv) Technical Education Scenario in Madhya Pradesh	Prof. Ashish Dongre, Director, Technical Education, Madhya Pradesh
v) Inaugural Address	Prof. Amitabha Ghosh, Chairman, BOG, NITTTR Bhopal
vi) Address by Guests of Honour	Shri Sanjay Singh, Secretary, Department of Tech.Edn. & Skill Development, Govt. of MP
vii) Address by Chief Guest	Hon. Minister Shri Laxmikant Sharma, Department of Technical Education and Skill Development, Government of Madhya Pradesh
viii) Presentation of Memento	
ix) Vote of Thanks	Dr. S.K.Saxena, Organising Secretary
x) Rashtra Gaan	
12.30 to 12.45	Tea Break
12.45 to 1.45 p.m.	Session I <ul style="list-style-type: none"> • Prof. Vijay K. Arora
1.45 p.m. to 2.30 p.m.	Lunch Break
2.30 p.m. to 03.45 p.m.	Session II <ul style="list-style-type: none"> • Prof. B.C. Majumdar, Chairman, NBA • Prof. I.B. Pirzada, Commissioner, Department of Technical Education, Gujarat • Prof. Abdul Halim Yatim, Universiti Teknologia, Malaysia
03.45 p.m. to 4.00 p.m.	Tea break
4.00 p.m. to 5.15 p.m.	Session III <ul style="list-style-type: none"> • Prof. D.V.Singh

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	<ul style="list-style-type: none"> Prof. (Dr.) N.R.Bandhyopadhyay, Institution of Engineers, India 	
7.00 p.m.	Cultural Evening	Rajiv Gandhi Auditorium NITTTR Bhopal
8.30 p.m.	Banquet	NITTTR Open Auditorium

7 th January 2011	Programmes	
10.00 a.m. to 11.30 a.m.	Session IV <ul style="list-style-type: none"> Prof. Amitabha Ghosh, Chairman, BOG, NITTTR Bhopal Prof. Rafiqul Islam, University of Dhaka, Bangladesh 	
11.30 a.m. to 11.45 a.m.	Tea Break	
11.45 a.m. to 1.30 p.m.	Session V <ul style="list-style-type: none"> Prof. B.K.Sthapak, Principal Director, O.P.Jindal Institute of Technology, Raigarh (CG) Prof. Piyush Trivedi, VC, RGPV, Bhopal Shri Shridhar.P.Joshi, Sr. GM, Tata Motors 	
1.30 p.m. to 2.30 p.m.	Lunch Break	
2.30 p.m. to 4.00 p.m.	Panel Discussion	
4.00 p.m. to 5.00 p.m.	Valedictory Function - Welcome	Welcome to Chief Guest and Chairman of the Session Prof. Amitabha Ghosh and Prof. D.V.Singh, Guest of Honour – by Prof. V.K.Agrawal, Director, NITTTR, Bhopal
	Address by Chairman of the Session	<ul style="list-style-type: none"> Prof. Amitabha Ghosh
	Address by Chief Guest	<ul style="list-style-type: none"> Shri Mahendra Hardia, Hon. Minister of State for Technical Education and Skill Development
	Vote of Thanks	<ul style="list-style-type: none"> Dr. Mohan Sen, Organising Secretary

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Appendix II

LIST OF PARTICIPANTS

List of Delegates from Engineering Colleges

1. Dr. L.V.M. Reddy
2. Dr. Arvind Kumar Gupta
3. Dr. R.K.Sarin
4. Dr. Brij Bhushan Gupta
5. Shri Amit Singh Chouhan
6. Dr. Neeraj Bhargava
7. Dr. Ritu Bhargava
8. Prof. Ajay Singh Gaur
9. Dr. Alpana Verma
10. Dr. J.S.Chouhan
11. Dr. Anurag Seetha
12. Dr. M.D.Agrawal
13. Prof. Vevek Bansod
14. Shri Sandeep Gangane
15. Director,SGSITS, Indore
16. Mr. S.K.Bhatt/Mr.A.K.Jain
17. Aditya College of Sc. Tech. Satna
18. Mrs. Sunita Singh
19. Mr. Amar Sharma
20. Mr. Rajesh Jain
21. Dr. Kapil Arora
22. Prof. C. P. S. Chauhan
23. Shri K. Ramamohan Rao
24. Dr. I. K. Khanna
25. Dr. Sunil Sugandhi
26. Dr. R. C. Jain
27. Prof. I. M. Jain
28. Dr. R. K. Ranjan
29. Shri Neeraj Shukla
30. Dr. P. K. Tinge
31. Mr. S. K. Mishra
32. Mr. K. G. Garg
33. Prof. R. Vijayvergiya
34. Prof. Anil Khandekar
35. Ms. Nayan Bhale
36. Mr. K. Somani
37. Mr. S. R. Nigam
38. Mr. Vivek Sharma
39. Dr. Sunil Jain

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40. Prof. S. C. Kapoor
41. Dr. O. P. Roy
42. Mr. Shishir Nigam
43. Prof. L. Shiv Subramaniam
44. Dr. Sudhir Agrawal
45. Acropolic College, Bhopal
46. Dr. S. Jain
47. Dr. K. Korosia
48. Mr. Sanjeev Jain
49. Dr. V. P. Singh
50. Mr. M. Parashar
51. Dr. N. Kulkarni
52. Prof. A. Bhaglowala
53. Mr. Virendra Verma
54. Mr. Ashish Moyade
55. Surbhi College of Technology
56. Dr. N. K. Mittal
57. Dr. S. Monga
58. Prof. Sanjay Verma
59. Prof. Umashankar Pandey
60. Dr. R. K. Pandey
61. Dr. Manoj Sharma

List of Delegates from NITTTR Bhopal

1. Dr. D.s.Karaulia
2. Prof. R.G.Chouksey
3. Dr. V.H.Radhakrishnan
4. Dr. S.K.Saxena
5. Dr. Joshua Earnest
6. Dr. K.K.Jain
7. Dr. R.K.Dixit
8. Dr. B.L.Gupta
9. Dr. S.K.Gupta
10. Dr. Anil Kumar
11. Dr. (Smt.) Kiran Saksena
12. Dr. R.B.shivagunde
13. Dr. J.P.Tegar
14. Dr. Peeyush Verma
15. Dr. A.K.Jain
16. Dr. Sanjay Agrawal

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- 17.Prof. (Smt.) Susan S.Mathew
- 18.Prof. (Smt.) A.A.Khajanchee
- 19.Dr. C.K.Chugh
- 20.Prof. S.R.Ganorkar
- 21.Prof. M.C.Paliwal
- 22.Prof. (Smt.) C.Mehra
- 23.Dr. P.K.Purohit
- 24.Prof. Sharad Pradhan
- 25.Prof. (Smt.) Vandana Somkuwar
- 26.Prof. A.S.Walkey
- 27.Dr. Ajay Kumar Sarathe
- 28.Prof. M.A.Rizvi
- 29.Prof. R.K.Kapoor

List of Delegates from DTE, M.P.

1. Dr. Y.K.Agrawal
2. Shri S.B.Choubey
3. Dr. B.L.Reddy
4. Dr. Akhil Siteke
5. Dr. A.K.Jain
6. Dr. K.C.Garg
7. Shri N.K.Sharma
8. Shri J.P.N.Pandey
9. Dr. M.R.Dhakad
- 10.Prof. R.S.Rajput
- 11.Shri Sanjay Vinayak
- 12.Shri I.K.Agrawal
- 13.Shri P.L.Shukla
- 14.Shri L.D.Lande
- 15.Shri Vijay Raj Singh Chouhan
- 16.Shri Rajesh Tiwari
- 17.Shri Ashok Kumar Jain
- 18.Dr. Mohan Sen
- 19.Prof. Subodh Pandey
- 20.Dr. C.R.Tiwari

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21. Shri Rakesh Kumar Khare
22. Shri Ramesh Chadar
23. Smt. Damayanti Mahant
24. Shri G.L.Sahu
25. Shri S.C.Rawal
26. Shri Vijay Singh Sisodia
27. Shri S.N.Prasad
28. Shri Prateek Manke
29. Shri J.S.Kilnakar
