

Rejaul Karim Barbhuiya, Ph.D.

Assistant Professor (Computer Science)

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Summary

Joined NCERT on 13 August 2013 as Assistant Professor at the Department of Education in Science and Mathematics (DESM). Since February 2020, I have been working with the Central Institute of Educational Technology (CIET), NCERT. Prior to joining NCERT, I have worked as an Assistant Professor at the Miranda House College, University of Delhi.

Education

1. Ph.D. in Computer Science from Jamia Millia Islamia (A Central University), New Delhi in 2016. Title of the thesis “Adaptive Intelligent Tutoring System”.
2. Master’s Degree in Computer Science from Assam University, Silchar, India.
3. Bachelor’s Degree in Computer Science from Assam University, Silchar, India.

Area of Interest

My research interests include among others, Intelligent Tutoring Systems, Personalised and Adaptive Student Modeling, E-learning, Soft Computing including Data Mining and Machine Learning.

Highlights of Works

10 years in the development of curriculum in CS, IP, AI, and Integration of Information and Communication Technology (ICT) in School Education and Teacher Training.

#	Activity
1	PI for development of syllabi of Computer Science and Informatics Practices for grades 11 and 12 involving K-12 teachers, principals and university professors
2	PI for development of textbooks of Computer Science and Informatics Practices for grades 11 and 12 involving K-12 teachers, principals and university professors
3	Co-PI for DST sponsored project on “DST–Centre for Learning Science & Technology” under ‘Technology Enabling Centre’ scheme at Rajiv Gandhi University (Central University), Itanagar, Arunachal Pradesh
4	PI for DIKSHA platform, including cloud hosting, operations and enhancements

5	PI for Vidya Samiksha Kendra (VSK) at NCERT, including preparation of dashboards, hosting, operations and enhancements
6	PI for National level research study on use of ICT for online and digital learning during the pandemic.
7	NISHTHA - Development of teacher training modules on ICT and large scale capacity building of teachers on Integration of ICT in teaching-learning involving K-12 teachers, and teacher educators
8	Resource person at various seminars/webinars/workshop/Teacher training programs for topics such as 'Open Educational Resources', 'Licensing and Creative Commons', 'Free and Open Source Software', 'Cyber Safety and Security', and 'Use of ICT in Teaching and Assessment'.
9	PI for Epathshala (https://epathshala.nic.in/) portal and app of NCERT
10	PI for Design and development of a portal and app for the National Curriculum Framework (https://ncf.ncert.gov.in/) and citizen survey (https://ncfsurvey.ncert.gov.in/).
11	PI for setting up an Open edX based MOOC platform (http://ncertx.in) and design and development of a one year diploma course for in-service teachers.
12	Member of working group for development of Position Paper on ' <i>Educational Technology</i> ' in Education, and ' <i>Computational Thinking</i> ' at NCERT
13	Member of working committee for Smart India Hackathon, Toy Hackathon and Manodarpan Hackathon for development of Video Games at NCERT
14	Member, Adult Education Cell with special focus on Digital Literacy at NCERT
15	Member, Steering Committee for "Innovation Challenge for Development of Machine-aided Translation System (IC-MATS)" under the office of the Principal Scientific Advisor to the Government of India.
16	Member, organizing committee for the National Science Exhibition by DESM, NCERT (since 2013)
17	Member, organizing committee for the National ICT Award by CIET, NCERT (since 2020)
18	Reviewer, Indian Journal of Educational Technology (IJET) by CIET, NCERT (https://ciet.nic.in/IJET_July_2022/docs/IJET_July_2022a.pdf?reload=1658923124376)

Major Projects (Ongoing)

1. DIKSHA (<https://diksha.gov.in/>)
2. NCF Tech Platform (<https://ncf.ncert.gov.in/>)
3. NCF Citizen Survey (<https://ncfsurvey.ncert.gov.in/>)
4. Epathshala (<https://epathshala.nic.in/>)
5. Vidya Samiksha Kendra (<https://vsk.ndear.gov.in/>)
6. National Digital Education Architecture (<https://www.ndear.gov.in/>)
7. Setting up of 'Technology Enabling Centre' under the scheme "DST-Centre for Learning Science & Technology"

COURSES TAUGHT (Miranda House College, DU)

- Operating System
- Database Management System

SCHOLARSHIPS AND NATIONAL LEVEL ACHIEVEMENTS

- Qualified the National Eligibility Test (NET) for Teaching and Research Fellowship conducted by the University Grant Commission (UGC) of India, in June 2012 and December 2012.
- JRF and SRF under the UGC Basic Scientific Research fellowship for meritorious students.
- Qualified the Graduate Aptitude Test in Engineering (GATE) organized by Indian Institute of Technology, India.
- Visited Japan in 2018 as part of a delegation of Indian Researchers and Administrators under the Sakura Exchange Program in Science organized by the Japan Science and Technology Agency (JST).

PROFESSIONAL TRAININGS ATTENDED (in India and Abroad)

- International Online Course on "Computational Thinking in Education the New Normal Time", Mashav-METC, Israel in 2020
- Two weeks Refresher course on Computer Science and Information Technology organized by JNU in 2019
- Three weeks Refresher course on E-Learning and Digital Learning by DU in 2017.
- Three weeks workshop on Large Scale Assessment: Analysis and Reporting in collaboration with Australian Council for Educational Research in 2016.

- International Conference on 'Devising On-line In-service Teacher Education Programmes for Quality Enhancement in School Education in India – in collaboration with Curtin University, Australia in 2016
- Three weeks orientation cum Refresher course on Research Methodology by NCERT in 2013.

PUBLICATIONS (<https://scholar.google.com/citations?user=99g8GI8AAAAJ&hl=en>)

1. Ahmad, Naeem, Md Gulzarul Hasan, and Rejaul Karim Barbhuiya. "Identification and prioritization of strategies to tackle COVID-19 outbreak: A group-BWM based MCDM approach." *Applied soft computing* (2021): 107642.
<https://doi.org/10.1016/j.asoc.2021.107642>
2. Barbhuiya, Rejaul Karim, and Naeem Ahmad. "IoT applications in translational bioinformatics." *Translational Bioinformatics in Healthcare and Medicine*. Academic Press, 2021. 69-79. <https://doi.org/10.1016/B978-0-323-89824-9.00006-9>
3. Barbhuiya, R. K., Ahmad, N., & Akram, W. (2022). Application of convolutional neural networks in cancer diagnosis. In *Computational Intelligence in Oncology: Applications in Diagnosis, Prognosis and Therapeutics of Cancers* (pp. 95-109). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-16-9221-5_5
4. Sunitha, P., Ahmad, N., Barbhuiya, R. K., Gunjan, V. K., & Ansari, M. D. (2022, May). Impact of covid-19 on education. In *ICCCE 2021: Proceedings of the 4th International Conference on Communications and Cyber Physical Engineering* (pp. 1191-1197). Singapore: Springer Nature Singapore.
https://doi.org/10.1007/978-981-16-7985-8_124
5. Barbhuiya, Rejaul Karim, and Srivastava, Ashish Kumar. "Immersive ICT Tools for Teaching and Learning Science." *School Science* 54(2) (2016), pages 13-17.
<https://ncert.nic.in/pdf/publication/journalsandperiodicals/schoolscience/School%20Science-%20June-sept-2016.pdf>.
6. Barbhuiya, Rejaul Karim, Khurram Mustafa, and Suraiya Jabin. "A personalized learning system with adaptive content presentation and affective evaluation facilities." *International Journal of Computer Applications* 70.26 (2013).
<https://doi.org/10.5120/12230-8360>

7. Barbhuiya, Rejaul Karim, Khurram Mustafa, and Suraiya Jabin. "Design specifications for a generic Intelligent Tutoring System." *Proceedings of the International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government (EEE)*. The Steering Committee of The World Congress in Computer Science, Computer Engineering and Applied Computing (WorldComp), 2011.

<http://pascal->

[francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=26100119](http://pascal-francis.inist.fr/vibad/index.php?action=getRecordDetail&idt=26100119)

8. Barbhuiya, Rejaul Karim, Khurram Mustafa, and Suraiya Jabin. "Design Perspectives of Intelligent Tutoring System." *Proceedings of the Fifth Indian International Conference on Artificial Intelligence (IICAI)*. 2011.

PUBLICATIONS AT NCERT

1. *Computer Science - a textbook for class 11*, Publisher: NCERT, ISBN: 978-93-5292-117-1, URL: <https://ncert.nic.in/textbook.php?kecs1=0-11>, Year : 2019.
2. *Computer Science - a textbook for class 12*, Publisher: NCERT, ISBN: 978-93-5292-338-0, URL: <https://ncert.nic.in/textbook.php?lecs1=0-13>, Year : 2020.
3. *Informatics Practices - a textbook for class 11*, Publisher: NCERT, ISBN: 978-93-5292-148-5, URL: <https://ncert.nic.in/textbook.php?keip1=0-8>, Year : 2019.
4. *Informatics Practices - a textbook for class 12*, Publisher: NCERT, ISBN: 978-93-5292-361-8, URL: <https://ncert.nic.in/textbook.php?leip1=0-7>, Year : 2020.
5. *National Achievement Survey (NAS)- National Report to Inform Policy, Practices and Teaching-Learning*, in collaboration with Ministry of Education, Govt. of India and UNICEF, Publisher: NCERT, ISBN: 978-93-5292-299-4, URL: https://ncert.nic.in/pdf/NAS/WithReleaseDate_NPPTL.pdf, Year : 2019.
6. *Pragyata: a Guideline for Digital Education*, Published by the Department of School Education & Literacy, Ministry of Education, Government of India, 2020.
7. *Be Safe in Cyber World - Do's and Don'ts for Teachers*, CIET-NCERT, URL: https://ciet.nic.in/upload/Cyber_safety_for_teachers_new.pdf
8. *Be Safe in Cyber World - Do's and Don'ts for Students*, CIET-NCERT, URL: https://ciet.nic.in/upload/Cyber_safety_for_students_new.pdf
9. *Alternative Academic Calendar for the Primary Stage (2021-22)*, https://ncert.nic.in/pdf/English_AAC_Eight_Week_Primary_Stage.pdf (English), https://ncert.nic.in/pdf/Hindi_AAC_Eight_Week_Primary_Stage.pdf (Hindi)

Invited Lecture/Talk/Workshop Session

Sl. No	Role and Program	Topic	Institution	Date
1	Resource Person in the training programme for State Resource Groups (SRGs) and DIET faculty	Development of e-contents	School Education Department, UT of Ladakh	17-21 October 2022
2	Resource person for Refresher course by HRDC	Open Educational Resources	Doctor Harisingh Gour Vishwavidyalaya, MP	24 June 2022
3	Resource Person in the training programme	Development of e-contents	Bhagyodaya Campus, Sankhu, Kathmandu, Nepal	January 24-30, 2021
4	Resource Person	Digital learning initiatives by Government of India	Amrita University	26, November 2022
5	Resource person for short term course on MOOCs	i) Open Learning Platform-overview, and ii) NCERT as a Case study for Online teaching	HRDC, AMU	24 Feb – 01 March 2020
6	External Examiner for B.Sc.	DBMS	Department of CS, AMU	28 Dec 2015
7	4-days hands-on training programme	Python	Andaman & Nicobar School Education Deptt	16-19 Jan 2019
8	Resource Person for one week FDP 'Flipped Learning: Art of effective Teaching'	Effective Internet Searching and Copyright Issues	Guru Nanak College of Education GGSIP University, Delhi	5-11 May, 2018

ADDITIONAL INFORMATION

I have experience of working in Python, Pandas and Numpy.

NATURAL LANGUAGE KNOWN

- Can Read and Write: English, Hindi, Bengali, Assamese, Arabic
- Can Comprehend and Communicate fluently: English, Hindi, Bengali

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