

Informal Science Education. Science Museums and Science Fairs

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Abstract:

The importance of informal and non-formal science education both out and in-school is being widely recognized. Across all age levels and school grades, including at pre-school and on lifelong learning, a large number of initiatives and projects were developed in different countries and contexts exploring non-formal and informal science education. Among those science fairs, in hands-on inquiry-based approaches, and later on interactive hands-on science centers and museums, are particularly relevant.

In this keynote lecture I will briefly present the Portuguese experience based mostly on the activities of the Portuguese National Agency for Scientific Culture, *Ciência Viva*, and of the Hands-on Science Network, HSCI.

By the end of the 20th century, in 1996, the Portuguese Ministry of Science and Technology created the *Ciência Viva* (“alive science”) program to promote science education and culture in Portugal. A large number of very interesting projects in Portuguese schools were financed. Most were in-school formal education but projects in non-formal and informal contexts involving hand-on activities soon gained more relevance. Several science museums (the *Ciência Viva* centers) were established. Today the 21 *Ciência Viva* Centers cover all Portuguese regions. All museums are mostly interactive and support and implement a wide variety of hands-on activities. Some are thematic (water, astronomy, ecosystems, ...) and cover all fields of science and age levels. Some are located in the major towns but also some are located in small villages using the particular socio-cultural or geographical characteristics of the local region.

Since 2011, by initiative of the Hands-on Science Network, annual national science fairs were organized with a focus on the hands-on investigative and inquiry-based process developed by the students in their efforts of discovering science, in a successful attempt to explore the major potential of non-formal and informal Science Education.

日程安排 Agenda

时间：2021年9月15日14:00-16:10

Time: 14:00-16:10, September 15th, 2021 (UTC+8)

地点：北京科学中心/zoom线上会议室

Venue: Beijing Science Center/Zoom

跨文化视角下的科普理念与实践

Cross-cultural Perspectives in the Studies and Practices in Science Communication

时间 Time	内容 Activity	人员 Speaker
主持人：付萌萌 北京科普发展与研究中心主任 Hosted by Ms. FU Mengmeng, Director of Beijing Research and Development Center of Popular Science		
14:00-14:20	14:00-14:05 嘉宾介绍 Introduction of Guests	付萌萌 北京科普发展与研究中心主任 Ms. FU Mengmeng, Director of Beijing Research and Development Center of Popular Science
	14:05-14:15 欢迎致辞 Opening Remarks	陈维成 北京市科学技术协会副主席，北京科学教育馆协会常务副理事长 Mr. CHEN Weicheng, Vice-president of Beijing Association for Science and Technology
	14:15-14:20 合影 Collective Photos	全体参会人员 All the participants
	主持人：刘萱 中国科协创新战略研究院副所长、副研究员 Hosted by Ms.LIU Xuan, Deputy Director, Association Professor of National Academy of Innovation Strategy	
14:20-16:00	14:20-14:40 主旨演讲 信息时代的非正式科学教育与终身学习 Keynote Speech Informal Science Education and Lifelong Learning in Information Age	张宝辉 国际科学教育学会理事会 (ICASE) 主席, 陕西师范大学教授 Mr.ZHANG BaoHui, President of International Council of Association for Science Education (ICASE); Prof. of Shannxi Normal University
	14:40-15:00 主旨演讲 非正式科学教育与科学展览 Keynote Speech Informal Science Education and Science Fairs	曼努埃尔·飞利浦·科斯塔 国际科学教育学会理事会 (ICASE) 执行委员会成员, 葡萄牙米尼奥大学 Mr. Manuel Filipe Costa, Executive Committee Member of ICASE, University of Minho
	15:00-15:20 主旨演讲 科学场馆的非正式科学教育 Keynote Speech Informal Science Education in Science Museums	安妮·M·迪杰斯特拉 荷兰屯特大学行为管理与社会科学学院科学传播系副教授 莉丝贝特·巴克 荷兰乌得勒支大学科学传播讲师 Ms. Anne M. Dijkstra, Assistant Professor in Science Communication at the University of Twente Ms. Liesbeth de Bakker, Lecturer in Science Communication at Utrecht University
	15:20-15:40 主旨演讲 从历史和文化中学习科学 Keynote Speech Learning Science and Wisdom from History and Culture	盖尼加·陈 泰国国家科技馆副馆长 Ms. Ganigar Chen, Vice President of NSM
	15:40-16:00 主旨演讲 英国科学博物馆集团的文创探索之路 Keynote Speech Cultural and Creative Products in Science Museum UK	达维德·马蒂斯 英国科学博物馆集团商品运营主管 Mr. Davide de Matteis, Head of Commercial Operations (Product)
16:00-16:10	总结 Summery	刘萱 中国科协创新战略研究院副所长、副研究员 Ms.LIU Xuan, Deputy Director, Association Professor of National Academy of Innovation Strategy

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Venue: Beijing Science Center/Zoom

科学传播与公众参与 Science Communication and Public Engagement

时间 Time	内 容 Session Activity	人 员 Speaker
15:00-15:02	嘉宾介绍 Start and Introduction	主持人:杰森·费伊利,诺丁汉大学亚洲知识交流中心 Prsider: Jason Feehily, Director of Knowledge Exchange Asia, UoN
15:05-15:10	欢迎致辞 Opening Remarks	罗伯特·莫卡亚教授, 诺丁汉大学副校长 Prof. Robert Mokaya, Pro-Vice-Chancellor of Global Engagement, UoN
15:10-15:15	欢迎致辞 Opening Remarks	陈维成, 北京市科协副主席, 北京科学教育馆协会常务副理事长 Vice President of Beijing Association for Science and Technology, Executive Vice President of Beijing Association for Science Education Museums
15:15-15:20	合作谅解备忘录签订 MoU Signing	罗伯特·莫卡亚教授, 诺丁汉大学副校长 Prof. Robert Mokaya, Pro-Vice-Chancellor of Global Engagement, UoN 付萌萌, 北京科普发展与研究中心主任 Director of Beijing Research and Development Centre of Popular Science
15:20-15:35	主旨演讲 诺丁汉湖畔艺术中心的公共参与活动 Keynote Speech Public Engagement at University of Nottingham-Lake Art Centre	詹姆斯·帕金森, 诺丁汉湖畔艺术中心商务发展主管 James Parkinson, Head of Business and Development at Nottingham Lakeside Arts
15:35-15:50	主旨演讲 中英动画联合创作项目-面向未来的科学普及 Keynote Speech UK-China Animation Co-creation Projects at University of Nottingham-for Future Science Popularisation	朱利安·斯金格, 东亚文化研究中心副主任 Dr. Julian Stringer, Deputy Director of the Centre for East Asian Cultural Studies
15:55-16:10	主旨演讲 诺丁汉大学如何做科普 Keynote Speech Science Popularisation Partcipance by University of Nottingham	汤姆·哈特曼博士, 生命科学院课程主管 Dr. Tom Hartman, Course Director of School of Life Sciences
16:10-16:25	主旨演讲 “中国恐龙”的国际化科普之路 Keynote Speech “Dinosaur of China” Project Learning Points	王原 中国古动物馆馆长 WANG Yuan, Director of palaeozoogeography museum of China

16:25-16:40	<p style="text-align: center;">主旨演讲</p> <p style="text-align: center;">科学传播与公众参与活动策划 Keynote Speech Science Popularization and Public Engagement Arrangement by Wollaton Hall</p>	<p>蕾切尔·埃文斯，诺丁汉自然历史博物馆自然科学馆馆长 Rachael Evans, Business Manager of Wollaton Hall/Nottingham Natural History Museum</p>
16:40-17:20	<p style="text-align: center;">科学对话</p> <p style="text-align: center;">英国博物馆中的科普实践 Science Dialogue The UK Practices on Science Popularisation</p>	<p>主持：丽兹·莫里亚蒂，大英博物馆前馆长 Host by Lizzy Moriarty, Former Deputy Director of British Museum 安德烈·班戴洛，英国科学画廊首席执行官 Andrea Bandelli, CEO of Science Gallery 凯伦·戴维斯，英国科学博物馆集团学习与研究资源部主管 Karen Davies, Head of Learning and Research Resources, Science Museum 支持： 贝丝·霍金斯，科学博物馆集团学院经理 黄琇瑜，科学博物馆集团国际合作经理 Supporting by: Beth Hawkins, Academy Manager, Science Museum Group Cherie Huang, International Engagement Manager (East Asia), Science Museum Group</p>

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Venue: Beijing Science Center/Zoom

第八届北京国际科学节圆桌会议暨北京国际城市科学节联盟年会 The 8th Beijing International Science Festival Round-table Conference 2021 Annual Meeting of Beijing Global Network of Science Festivals

主题：新形势下国际科学传播的创新与发展

Theme: Innovation and Development of Science Communication in New Normal

时间 Time	内容 Session Activity	人员 Speaker
15:00-15:10	嘉宾介绍 Introduction of Guests	主持人：苏国民 北京国际城市科学节联盟秘书处副总干事，北京科技国际交流中心主任 President: Mr. SU Guomin, Deputy Director-general of BGNSF, Director of Beijing International Science and Technology Exchange Center
15:10-15:20	致欢迎词 Welcome Remarks	陈维成 北京国际城市科学节联盟秘书处总干事，北京市科学技术协会副主席 Mr. CHEN Weicheng, Director-general of BGNSF, Vice President of Beijing Association for Science and Technology
15:20-15:35	秘书处工作总结及展望 Last-year Work Report and 2021 Work Plan	付萌萌 北京国际城市科学节联盟副总干事，北京科普发展与研究中心主任 Ms. FU Mengmeng, Deputy Director-General of BGNSF, Director of Beijing Research and Development Center of Popular Science
15:35-15:50	国际科普资源合作签约仪式 Signing Ceremony of Resource Cooperation Agreement	1. 泰国国家科技馆+北京科普发展与研究中心（国际摄影大赛） Beijing Research and Development Center of Popular Science+National Science Museum, Thailand on International Photo Contest 2. 世界科学出版社+清华出版社（《科学传播导论》） World Science Publishing+Tsinghua University Press on book Science Communication:An Introduction 3. 北京科学教育馆协会+国际科学教育学会理事会（学术交流） Beijing Association for Science Education Museums+ICASE on Academic Exchanges
15:50-15:55	合影 Collective photo	
	主旨演讲 新形势下科学传播的创新与发展 Keynote Speech Innovation and Development of Science Communication in New Normal	茜茜·阿斯克沃.欧洲科学参与协会主席 Ms. Cissi Askwall, President of the European Science Engagement Association

15:55-16:25	<p style="text-align: center;">主旨演讲</p> <p>新常态下亚太科学与科技馆联盟成员 如何利用跨媒体平台进行交流互鉴 Keynote Speech The Use of Transmedia Platforms as a new norm to Communicate and Promote Science Among ASPAC Members</p>	<p>林直明，亚太科学与科技馆联盟主席，新加坡科学中心馆长 Mr.Lim Tit Meng,President of the Asia Pacific Network of Science and Technology Centres,Chief Executive of Singapore Science Centre</p>
国际科普资源推介 Science Popularization Resources Promotion		
16:25-17:15	<p style="text-align: center;">国际科普资源推介 Resources Promotion</p>	<ol style="list-style-type: none"> 1. 泰国国家科技馆（博物馆教育中的专题研究法与场所学习） National Science Museum, Thailand（Thematic approach and place-based learning in museum education） 2. 荷兰屯特大学(科普书籍《科学传播导论》) University of Twente（book:Science Communication:An Introduction） 3. 波兰下西里西亚科学节（工作坊、科学秀等） Lower Silesian Science Festival（Workshop and Science Show） 4. 英国科学博物馆集团（科学参与项目） Science Museum, UK(Science Engagement and and Experience) 5. 北京科普发展与研究中心（首都科技创新成果展—人类与传染病的 博弈） Beijing Research and Development Center of Popular Science （Beijing Science and Technology Innovation Exhibition—Humans' Fight Against Infectious Diseases)
17:15-17:55	<p style="text-align: center;">自由讨论 Open Discussion on the Theme</p>	<p>全体成员(每人3-5分钟) Delegates (3 to 5 mintues for every organization)</p>
17:55-18:00	<p style="text-align: center;">总结 Closing</p>	