UNESCO
United Nations
Educational, Scientific and
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联合国教育科学及文化组织

ICHEI
International Centre
for Higher Education Innovation
under the auspices of UNESCO
联合国教科文组织高等教育创新中心

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ICT支持的高等教育创新：促进高等教育可持续发展

ICT-enabled Higher Education Innovation:

Empowering Higher Education for Sustainable Development

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ICT支持的高等教育创新：促进高等教育可持续发展
ICT-ENABLED HIGHER EDUCATION INNOVATION:
EMPOWERING HIGHER EDUCATION FOR SUSTAINABLE DEVELOPMENT

序言

1. 我们是"国际创新创业教育大会"的参加者。该次大会由联合国教科文组织亚太教育局、中国联合国教科文组织全国委员会、深圳市政府共同主办，南方科技大学和联合国教科文组织国际高等教育创新中心联合承办，2016年6月7日至8日在中国深圳市举行。我们向会议组织者和承办者为启动、组织和举办本次盛会所付出的努力表示诚挚的感谢。

2. 我们共同回顾并重申对联合国教科文组织"建设和平世界、消除贫困、长久发展和跨文化交流"使命的支持，并进一步回顾1998和2009年"高等教育国际会议"上强调的使高等教育与21世纪相适应，"投资高等教育使其成为建立一个全面的、多样化的知识型社会的主体力量，以满足推动研究、创新和创造力的需求"。

3. 在高等教育创新中心（ICHEI）作为联合国教科文组织二类机构正式成立的历史性时刻，我们重申联合国教科文组织1990年在Jomtien提出、2000年在Dakra重申的建设"全民教育"（EFA）、2015年在仁川宣言中提出的教育2030行动框架。为此，我们呼吁要为全民实现平等的高质量教育和终身学习提供行动指南。

1. We, the participants of the International Meeting on Innovation and Entrepreneurship Education jointly organized in Shenzhen, People's Republic of China on June 7 and 8, 2016 by the UNESCO Asia and Pacific Regional Bureau for Education, the Chinese National Commission for UNESCO, and the Shenzhen Municipal Government, and co-hosted by the Southern University of Science and Technology (SUSTech) and the UNESCO International Centre for Higher Education Innovation (ICHEI), express our sincere appreciation to the organizers and hosts for initiating, organizing and hosting this auspicious event on innovation and entrepreneurship education.

2. We remember and reiterate support for UNESCO's mission to contribute to the building of peace, global citizenship education, poverty eradication, lasting development and intercultural dialogue; and further recall the 1998 and 2009 World Conferences on Higher Education which highlights the need to adapt higher education to the 21st century and "the need to invest in higher education as a major force in building an inclusive and diverse knowledge society, and to advance research, innovation and creativity" respectively.

3. On this historic occasion, which includes the launching of the International Centre for Higher Education Innovation (ICHEI) as a UNESCO Category 2 Centre we reaffirm the vision of the worldwide movement for Education For All launched in Jomtien in 1990, and reiterated in Dakar in 2000, and in the 2015 Incheon Declaration and the Education 2030 Framework for Action, which advocates for equitable quality education and lifelong learning for all and provides guidelines for action for achieving such goals respectively.

4．我们强调和重申了对2030可持续发展目标（SDGs）的支持，尤其是对SDG4（确保包容和公平的优质教育，让全民终身享有学习机会）、SDG5（实现性别平等，增强所有妇女和女童的权能）、SDG9（建造具备抵御灾害能力的基础设施，促进具有包容性的可持续工业化，推动创新）和SDG10（减少国家内部和国家之间的不平等）。

5．我们关注联合国教科文组织2012年在巴黎发布的"开放教育资源宣言"和2015年在青岛发布的"青岛宣言"（在中国青岛发布的第一个针对ICT教育应用的国际宣言）。这两个宣言旨在促进开放教育资源（OER）使用、创建ICT教育应用环境和建设开放教育资源联盟。此外，在利用ICT实现可持续发展目标（SDGs）中的公平、可达、高质和终身学习的教育目标提出了相应倡议。

6．我们认为高等教育能够在可持续经济和社会发展中扮演重要角色，我们也关注到发达和发展中国家之间（甚至是国家内部）存在信息鸿沟。在高等教育中使用ICT可以帮助个人和企业在国际经济环境中提高竞争力。通过提高技能型劳动力和促进社会流动性，尤其是通过在高等教育中应用ICT可以有效达成上述目标。同传统的知识传授途径相比，ICT具有提高入学率、促进公平和提升质量的能力。

7．我们认为，虽然针对全民教育、2030可持续发展目标及在前面所提及的宣言和框架所开展的全球运动非常重要，但是为促进高等教育发展建立ICT支持的集成创新实践体系将成为实现SDG目标的更加迫切的需求。

8．我们认为ICT支持的高等教育环境，不仅能够扩大受众范围、提升教育质量、促进教育公平，而且能够促进企业、经济和社会的发展，并且推动全民终身学习。

4. We highlight and reaffirm support for the 2030 Sustainable Development Goals (SDGs) especially for SDG 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all); SDG 5 (Achieve gender equality and empower all women and girls); SDG 9 (Build resilient infrastructure, promote sustainable industrialization and foster innovation); and SDG 10 (Reduce inequality within and among countries).

5. We note that the 2012 Paris Open Education Resources Declaration and the Qingdao Declaration, the first global declaration on ICT in education approved in Qingdao, China in May 2015, promotes the use of Open Educational Resources (OER), the establishment of enabling environments for the use of ICTs, and fostering alliances for OER, in addition to advocating for the use of ICTs to achieve education targets for equity, access, quality and lifelong learning in the Sustainable Development Goals (SDGs) respectively.

6.Given the role of higher education in sustainable economic and social development, and the ongoing existence of a digital divide between developed and developing countries (and even within individual countries), it should be noted that the application of ICTs in higher education can help individuals and industries participate in the global economy. This is achieved by creating a skilled workforce and facilitating social mobility, especially through the application of ICTs in higher education and its multiplier effect, mainly due to its ability to increase access, enhance equity and quality, and minimizing costs related to the delivery of traditional instruction.

7. Notwithstanding the importance and significance of the global movement for Education For All, the 2030 Sustainable Development Goals, and the above-mentioned declarations and framework, there is a need to have a focused ICT for higher education strategy that integrates innovation in higher education practices and systems to support the achievement of the SDGs.

8.As such, we envisage an ICT-enabled higher education environment which not only increases access, equity and quality, but also enhances entrepreneurship, economic and social development, and lifelong learning for all.

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ICT，高等教育与可持续发展

9．确保包容和公平的优质教育，让全民终身享有学习机会是一项非常有挑战性的任务。但是，ICT的增效作用和其在高等教育中的应用将为实现这项任务提供充分的支撑。

10．我们认为，实现性别平等应让所有女性从她们接受教育开始，尤其在高等教育领域，可以让她们通过掌握21世纪的必备技能，更好地适应以知识为基础的社会，以提高全球竞争力。

11．只有系统获得科学、技术、工程、艺术和数学（STEAM）领域知识和技能，成为接受良好教育的劳动力，才能建设适应性基础设施、推动可持续的工业化进程和培育创新。社会和人文科学对社会发展的贡献不能被忽视或低估，因为经济发展应该同社会发展相适应。

12．减少国家内部和国家之间的不平等是另一个艰难的挑战。不仅如此，高等教育所扮演的社会流动角色和高等教育中应用ICT日渐增长的合作，将成为达成上述目标的必要工具。

13．虽然ICT在高等教育中的应用和创新不是达成SDG挑战的灵丹妙药，但是它为促进实现2030可持续发展目标提供了必要工具。

ICT, Higher Education and Sustainable Development

9. Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all is an extremely challenging task. However, the multiplier effect of ICT and its application in higher education may provide sufficient leverage for its achievement.

10. Achieving gender equality and empowering all women and girls can start with their education, especially in higher education, where they learn the 21st century skills necessary to participate globally within an increasingly knowledge-based society.

11. Building resilient infrastructure, promoting sustainable industrialization and fostering innovation can only be achieved with a highly-educated workforce equipped with the necessary skills to engage in the Science, Technology, Engineering, Arts, and Mathematics (STEAM) fields. The social sciences and humanities contribution to social development, however, should not be overlooked or underestimated, given that economic development should be accompanied by social development.

12. Reducing inequality between and within countries is another challenge. Notwithstanding this, higher education's social mobility role and increased cooperation in the application of ICTs in higher education provide the necessary tools towards achieving the above-mentioned task.

13. ICT application and innovation in higher education is not a panacea for achieving the SDG challenges. Instead, it facilitates and provides the necessary tools to help achieve the 2030 Sustainable Development Goals.

创建ICT支持的高等教育环境

14. 中国政府实施的"一带一路"计划强调国家之间的联系与合作的重要性，只有通过加强国与国之间的互惠联系与合作，才能实现建设ICT支撑的高等教育环境的目标。

15. ICT在高等教育中优秀的实践经验应作为可分享的案例资源，可以成为ICT应用尚处于初级阶段的高等教育系统的借鉴和示范。对于期望通过应用ICT来提升高等教育系统的发展中国家而言，信息共享变得尤为必要。

16. 国际ICT在高等教育中应用的优秀实践，不应仅局限于高等教育机构或者开放教育资源开发层面，而应该涵盖ICT在高等教育中的应用的各个层面，如政策研制与实施，包括学生、教职人员和产业界等在内的各利益相关方。

17. 对于发展中国家来说，难以承受过高的ICT基础设施（包括硬件和软件）费用。通过建立全球合作伙伴关系，包括公私合作伙伴关系（PPP），可以帮助减少高等教育机构和其它参与方在相关ICT技术上的支出。

18. 高等教育ICT技术领域的PPP模式有助于降低ICT基础设施成本，从而提高高等教育机构的承载能力，为教育质量平等和终身学习提供支持。尤其在创业教育中利用该模式，能够促进高等教育利益相关者投入到创业中，以提高就业机会，满足日益增长的全球高等教育毕业生人数。

19. 此外，知识产生、能力建设、技术保障、政策研制和支持、信息共享是培育ICT支撑的高等教育环境的核心。

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14. Citing the People's Republic of China's "One Belt One Road" initiative, which focuses on connectivity and cooperation among countries, the vision towards an ICT-enabled higher education environment can only be achieved through mutual connectivity and cooperation among countries.

15. Given that international best practices in the application of ICT in higher education should be shared resources to serve as examples to less ICT-enabled higher education systems, information sharing becomes a necessity, particularly to developing countries seeking to enhance their higher education systems through the application of ICT.

16. These international best practices should not be limited to the application of ICT to higher education at the higher education institutional level or the development of OERs, but should include all aspects of ICT application in higher education, including policy development and implementation, and relevance to various stakeholders including students, teaching personnel and industry.

17. Given the prohibitive costs of ICT infrastructure (including hardware and software) to developing countries, establishing global partnerships, including Public-Private Partnerships, helps facilitate a reduction in costs of applicable and relevant ICTs to higher education institutions and other stakeholders.

18. Establishing Public-Private Partnerships for ICT in Higher Education has the potential to establish an affordable and relevant ICT infrastructure required to increase higher education institutions' capacity to provide equitable quality education and lifelong learning for all. Especially with the incorporation of entrepreneurship education into their mandate, these Public-Private Partnerships can encourage higher education stakeholders to embrace entrepreneurship and contribute to job creation required to absorb the increasing number of higher education graduates worldwide.

19. Furthermore, knowledge production, capacity building, technical support, policy development and support, and information sharing are essential to cultivate an ICT-enabled higher education environment.

ICHEI的职责

20. 高等教育创新中心是接受联合国教科文组织指导的二类机构，在2015年11月13日举行的第38届联合国教科文组织大会上批准设立，其使命包括：

（1）同UNESCO开展密切合作，以帮助亚太地区高等教育机构尽其社会责任，同时为UNESCO成员国发展需要提供支持；

（2）探索ICT在发展中国家的高等教育中扩大受众范围、提升教育质量和促进教育平等的潜力；

（3）建立区域协同发展和地区合作网络。

21. ICHEI为ICT在亚太地区高等教育应用提供思想实验室和知识共享平台，以为UNESCO成员国建立和传播创新的方案与提出政策建议。

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22. 基于ICHEI的四个战略性目标：知识生产、能力建设、技术支持、信息共享，ICHEI旨在加强国际和地区间在高等教育创新的合作，包括以亚太地区为主的联盟培育、智力合作、知识共享、合作关系建立；为政策发展和实施提供相关建议；并通过促进ICT在高等教育中的应用来发展机构和个人提供高等教育的能力。

23. 迄今为止，ICHEI同深圳市著名的ICT领域国际性大公司建立了紧密联系，包括华为、中兴和腾讯等。以深圳作为"学习型城市"和创新枢纽为基础，我们希望在今后同其他区域拓展更深入的地域性伙伴联系，包括规模较小的和刚起步的伙伴，鼓励他们今后更多地参与、并为高等教育创新和创业教育做出贡献。
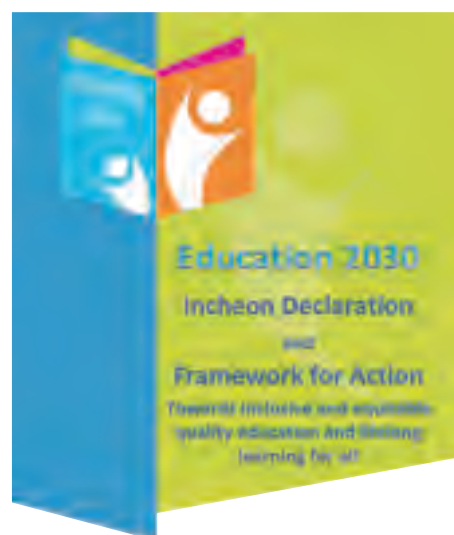
The Role of ICHEI

20. The International Centre for Higher Education Innovation (ICHEI), is a Category 2 Centre under the auspices of UNESCO, approved on November 13, 2015 by the 38th General Conference of UNESCO, whose mission is:
a. Broadly, to work closely with UNESCO to help higher education institutions, governments and enterprises in the Asia-Pacific region to be better prepared and equipped for fulfilling their social responsibilities and serving the development needs of Member States; b. In particular, to exploit the potential of ICT to support expansion, improve quality and promote equity in higher education in developing countries; and c.To build synergies and strengthen sub-regional and regional networks.

21. ICHEI serves as a laboratory of ideas and a knowledge-sharing platform for the application of ICTs in higher education for the Asia-Pacific to generate and disseminate innovative proposals and policy advice for the consideration of UNESCO Member States.

22. Based on its four strategic objectives of knowledge production, capacity building, technical support and information sharing, ICHEI will attempt to strengthen international and regional cooperation in higher education innovation, including fostering alliances, intellectual cooperation, knowledge-sharing and operational partnerships primarily in the Asia-Pacific region; provide relevant advice for policy development and implementation; and develop institutional and human capacities for higher education through the promotion and the application of ICTs in higher education.

23. To date, ICHEI has been instrumental in building a Public-Private Partnership with Shenzhen's key players in the ICT sector, namely Huawei, Zhongxing, and Tencent. Given Shenzhen's reputation as a "learning city" and a hub of innovation, we hope this partnership expands in terms of geographic reach and depth, including smaller players and start-ups, to encourage their participation and contribution to higher education innovation and entrepreneurship

24．我们支持ICHEI为促进和提高在高等教育中使用ICT所付出的努力，也期望今后能够同ICHEI所举办的项目开展合作，在建立ICT支撑的高等教育环境的基础上，为实现2030可持续发展目标提供支持。

25．为促进ICT在高等教育中发展和应用，提升高等教育入学率和多个利益相关方之间的相关性，构建基于ICT的高等教育环境，我们鼓励建立全球伙伴关系，包括公私合作伙伴（即PPP）关系。这些伙伴关系应该同创业教育相结合，以促进未来企业家人数的提升，从而在国家、区域和全球层面上为可持续发展的经济和社会发展做出贡献。

26．为确保高质量的高等教育创新，我们认为高质量的高等教育需要建立指导纲领/准则。该指导纲领/准则不是为了让高等教育创新实践实现标准化，而是为了建立面向多个利益相关方的，反映入学率、公平性、高质量和相关性的最好国际实践案例。

27．深圳共识建立在全民教育运动、巴黎开放教育资源宣言和青岛宣言的基础上，重申了对仁川宣言及2030可持续发展目标的支持。因此，深圳共识为促进、提高和合作在高等教育中开发和应用ICT做出了历史性承诺，有力地支撑了联合国教科文组织促进和平、消除贫困、推动持久发展和跨文化交流的不变使命。

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24. As such, we express support for ICHEI and its worthy endeavor to promote and enhance the application of ICTs in higher education. Furthermore, we also express our desire to collaborate with ICHEI's activities in the coming years to establish an ICT-enabled higher education environment that supports the achievement of the 2030 Sustainable Development Goals.

25. We encourage the establishment of global partnerships, including Public-Private Partnerships, for the development and application of ICTs in higher education to facilitate enhanced access and relevance to multiple stakeholders to an ICT-enabled higher education environment. These

26. To ensure quality and relevant higher education innovation, we recognize the need to establish guidelines/principles for quality higher education innovation. Such guidelines/principles do not seek to standardize higher education innovation practices, but, rather, establish international best practices which take into consideration access, equity, quality and relevance of these innovations to multiple stakeholders.

27. Building on the legacy of the education for all movement, the Paris OER Declaration, and the Qingdao Declaration, and reiterating support for the Incheon Declaration and the 2030 Sustainable Development Goals, this Shenzhen Consensus is a historic commitment to promote, enhance and collaborate on the development and application of ICTs for higher education, and support UNESCO's ongoing mission to promote peace, global citizenship education, poverty eradication, lasting development and intercultural dialogue.

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