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Learning for Understanding the World and Ourselves

Proceedings of the 1st Asian Pacific Conference on Concept Mapping (CMC-AP 2017)

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Preface

During Sept. 20 – 22, 2017, more than 120 participants, including researchers, teachers, administrators and students, have joined the 1st Asian Pacific Conference on Concept Mapping (CMC-AP 2017) at Beijing, China.

The theme for CMC-AP 2017 was "Learning for Understanding the World and Ourselves". With the development of technology and society, the ability of meaningfully processing but not owning, memorizing, or accessing information has become more and more essential. For example, in mathematics, doing arithmetic or calculus is becoming less important than describing the world with mathematical concepts and abstracting mathematical concepts from the world. Meaningful learning is the key to understanding, and concept mapping helps to develop the ability to learn meaningfully.

The focus on understanding, although not there yet, has gradually become the trend of education all over the world, especially in recent years in Asia-Pacific region, where we clearly see that there are more and more researchers and practitioners of concept mapping. Therefore, the organizers of the original International Conference on Concept Mapping (CMC) which has been successfully held in Pamplona (Spain), San José (Costa Rica), Tallinn (Estonia) & Helsinki (Finland), Viña del Mar (Chile), Valletta (Malta), Santos (Brazil) and Tallinn (Estonia), and a few of us proposed to have a regional extension of CMC in China for the Asia-Pacific region last year (2016) when we were working on a concept map-based course named as "Learning How to Learn and Think" at Beijing Normal University (BNU). Luckily, the Faculty Development Centre of BNU decided to support this proposal with great passion and full enthusiasm. The centre not only sponsored the conference but also coordinated the whole event. As academic organizers, we are so happy and lucky to have their support. Without the local organizers, including the staff members and the volunteers, this conference would not have been possible. We would like to take this opportunity to express our deep gratitude to the local organizers, including the Faculty Development Centre of Beijing Normal University, the Institute of Economics and Business of Beihang University, the Institute for Human and Machine Cognition, USA and the Alliance of Thinking Schools.

The conference was aimed at all those who were interested in the use of concept maps (based on the work of Dr. Joseph Novak). The conference agenda included, but was not limited to: facilitation of learning; eliciting, capturing, archiving, and using "expert" knowledge; planning instruction; assessment of "deep" understanding; research planning; collaborative knowledge modeling; creation of "knowledge portfolios"; curriculum design; e-Learning, and administrative and strategic planning and monitoring.

During the conference, we had six invited presentations, seven research presentations, nine talks on innovative experiences and eight posters. As had been announced in the Call for

Papers, here we collect and publish the full papers for all those presentations.

We hope that this conference has been and will continue to be a platform of communication, collaboration, stimulation, and also friendship. Furthermore, by publishing these outputs with Beijing Normal University Press, we hope the proceedings will also become such a platform among researchers, teachers, practitioners and students.

Jinshan Wu, on behalf of the Organizing Committee
September, 2017

序　言

2017 年 9 月 20 日至 22 日，120 多名研究者、管理者、教师及学生在中国北京参加了首届亚太地区概念图大会（1st Asian Pacific Conference on Concept Mapping，CMC-AP 2017）。

本届大会的主题是“为了理解世界和自己而学习”。随着社会的进步和技术的发展，相比拥有记忆和访问信息，学会加工、处理信息的能力变得越来越重要。比如在数学中，和使用数学概念描述世界以及将现实世界抽象成数学概念相比，做算术或做更高级的微积分运算变得越来越微不足道。进行有意义学习是理解的关键，概念构图有助于提升有意义学习的能力。

专注于理解正逐渐成为全世界各国教育的发展趋势，尤其是近些年来在亚太地区。在这里我们清楚地看到不断涌现的概念地图研究者和实践者。国际概念地图大会已经在潘普洛纳（西班牙）、圣何塞（哥斯达黎加）、塔林（爱沙尼亚）/赫尔辛基（芬兰）、比尼亚德尔马尔（智利）、瓦莱塔（马耳他）、桑托斯（巴西）和塔林（爱沙尼亚）等地成功举办。去年，适逢我们在北京师范大学举办“学习如何学习和思考”的概念地图基础课程之际，概念地图大会创始人与我们中的一些人倡议，应该在中国举行亚太地区概念地图大会，以作为国际概念地图大会的区域性扩充。而且值得庆幸的是，北京师范大学教师发展中心决定支持这个倡议，并对此充满了热情和激情。该中心不仅赞助了会议，而且负责组织了整个活动。作为学术组织者，能得到他们的支持，我们感到非常高兴和幸运。这次会议的成功举办离不开当地组织者及各位工作人员和志愿者，我们借此机会向他们表达深深的谢意。此外还要感谢北京师范大学教师发展中心、北京航空航天大学经济与商学研究院、美国人机认知研究所以及思维发展型学校联盟。

本次大会欢迎所有对概念地图（基于 Joseph Novak 博士的工作）感兴趣的人士。会议议题包括辅助学习，提取、收集、存储和应用“专家”知识，教案规划，“深层”理解评估，研究规划，协同知识建模，“知识资产”创建，课程设计，数字化学习、管理以及战略规划和执行等，但又并不局限于此。

这次会议共有 6 个特邀报告、7 个研究报告、9 个创新经验讲座并展出了 8 张海报。如征稿启事中宣布的那样，我们收集整理了这些报告的全文并付梓出版。

我们希望，这次会议能够成为并将继续成为一个交流、合作、启发和共建友谊的平台。此外，北京师范大学出版社出版的会议论文集也将成为研究者、实践者、教师和学生交流的平台。

吴金闪，代表组委会全体成员

2017 年 9 月

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