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工作简报

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王祖浩教授主编《普通高中课程标准（2017年版2020修订）教师指导-化学》

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工作综述

夏阳酷暑，山河无恙。

在疫情防控攻坚战取得决定性胜利的重要时期，华东师范大学课程与教学研究所全体同仁众志成城，以笃学之功求真，在共克时艰中勇毅前行，取得了令人欣喜的成果。

孜孜不倦育人才，勤勉耕耘钻学术

课程所秉持“为课程，为学生，为未来”的专业信念，以科研育人为抓手，将培养高水平、国际化、德才兼备的人才作为工作重点。本季度，课程所喜迎2020级新生，也收获了新荣誉、新发展。崔允漷教授荣获“上海市劳动模范”称号，周文叶副教授领衔的《“课程思政”引领下的课程与教学论专业建设与实践》入选学校2020年研究生“课程思政”示范引领计划，刘钧燕老师作为项目负责人的一级学科学位基础课《教育统计基础》获研究生课程建设项目立项。在学术成果方面，钟启泉、崔允漷、王祖浩、杨晓哲等专家分别独著、主编或主审的新书陆续出版；雷浩、王涛、杨晓哲等青年骨干教师深耕学术，发表多篇具有国际影响的期刊论文。

磨砻淬励为教育，建言咨政促发展

课程所作为推动国家课程改革的中坚力量，持续服务国家重大战略，助力国家教育事业发展。本季度，课程所高德胜教授申报的课题获2020年度国家哲学社会科学重点项目立项，王哲副教授、石雨晨博士申报的课题分别获得全国教育科学“十三五”2020年度国家一般课题立项和国家青年课题立项。崔允漷、胡惠闵、吴刚平、王祖浩、杨向东、杨晓哲等专家深度参与国家义务教育课程修订，多次出席国家课程方案和课标修订研讨会。此外，王祖浩教授出席教育部中考命题评估会议，高德胜教授多次出席线上大型学术研讨，并作主题报告。不仅如此，围绕课程整合、中考命题、教材舆情问题，吴刚平、王祖浩、雷浩等专家的3份咨询报告获得了省部级以上部门采纳。教育部重大攻关项目、5个基地重大项目陆续收尾，成果产出丰硕。

扎根本土守初心，面向全球共分享

课程所作为“中国经验，世界共享”的前沿阵地，扎根中国大地开展课程与教学研究，大力推进国际化建设，提升基地的国际影响力。本季度，课程所正式聘请全球教育专业排名第一的伦敦大学学院(UCL)教育学院的邓宗怡教授担任2020年华东师范大学高端外国专家。由Mark Bray教授领衔的课程所国际校外教育研究中心团队持续分享影子教育研究的最新成果，在SSCI国际期刊《European Journal of Education》发表了3篇文章。此外，课程所张薇博士受聘为丹麦奥尔胡斯大学荣誉教授，作为顾问多次参与联合国教科文组织全球教育监测报告顾问委员会会议，并作主题报告。

建设亮点

（一）立德树人，崔允漷教授荣获“上海市劳动模范”称号

近期，上海市劳模评选委员会办公室公布了“2015-2019年度上海市劳动模范（先进工作者）”名单，华东师范大学课程与教学研究所所长崔允漷教授荣获“2015-2019年度上海市劳动模范”称号。上海市政府每五年开展一次的“上海市劳动模范”评选工作，主要是表彰为上海市做出突出贡献的劳动者。长期以来，崔允漷教授坚持立德树人，带领团队持续推动国家基础教育课程改革，为新时代教育发展贡献智慧和力量。

（二）奋发有为，课程所3位教师获国家级课题立项

本季度，全国教育科学规划领导小组办公室和全国哲学社会科学工作办公室先后公布了全国教育科学“十三五”2020年度课题和2020年国家社科基金后期资助项目立项名单。8月，经严格评审，课程所王哲副教授的《小学统编教材中图文整合效应研究》获国家一般课题立项，石雨晨博士的《议题教学应用于德育课堂有效性的实证研究》获国家青年课题立项。9月，高德胜教授的《道德情感与道德教育》获国家哲学社会科学重点项目立项，此次华东师范大学共有14个项目入选国家社科基金后期资助项目，课程所高德胜教授申报的课题是本年度学校唯一获得立项的重点项目。至此，“十三五”期间，课程所共承担了20项国家或教育部的纵向项目。

（三）创新引领，周文叶副教授领衔的《“课程思政”引领下的课程与教学论专业建设与实践》项目入选校研究生“课程思政”示范引领计划

9月，校研究生院公布了华东师范大学2020年研究生“课程思政”示范引领计划建设项目立项名单。经团队申请、学部推荐、专家评审，课程所周文叶副教授作为项目负责人的《“课程思政”引领下的课程与教学论专业建设与实践》成功入选。华东师范大学研究生“课程思政”示范引领计划项目旨在遴选部分基础好的院系和学科以“点”带“面”，以“面”成“体”地推进“课程思政”建设，此次全校共有9个项目入选示范学科专业建设项目。

近期资讯

（一）崔允漷教授等专家出席教育部课程方案和实施系列研讨会

课程所专家团队利用自身专业优势，一直积极为国家课程改革和实施贡献力量。本季度，课程所崔允漷、胡惠闵、吴刚平、王祖浩、杨向东、杨晓哲等专家深度参与国家义务教育课程修订，多次受邀出席教育部基础教育课程教材发展中心、课程教材研究所举办的课程方案和课标修订研讨会。

序号	时间	会议内容
1	7月14日	义务教育课程修订综合组第九次会议
2	8月25日	义务教育课程修订综合组第十次会议
3	8月26-28日	义务教育课程修订第二次全体会
4	9月15日	义务教育课程修订专题研讨会
5	9月27-29日	义务教育课程修订第三次全体会

（二）王祖浩教授出席教育部中考命题评估会议

为配合教育部基础教育司、课程与教材发展中心提高全国中考命题质量的工作目标，王祖浩教授以教育部中考命题评估化学学科组组长身份，出席教育部中考命题评估综合组会议。围绕“2020年全国中考命题评估工作”这一议题，王祖浩教授及与会专家就如何提高命题质量、深化命题改革等系列问题进行了深入地研讨交流。

（三）伦敦大学学院(UCL)教育学院邓宗怡教授受邀担任华东师大高端外国专家

课程所以争创“国际一流”的决心，积极参与国际对话交流。7月，经课程所推荐申报，学校严格评审，伦敦大学学院(UCL)教育学院的邓宗怡教授正式受聘担任2020年华东师范大学高端外国专家。邓宗怡教授是课程与教学界的国际知名学者，更是课程所的老朋友和长期合作伙伴。此次受聘，将促成邓教授再次来访课程所，就开设“国际课程理论前沿”工作坊、“讲好中国课程的国际故事”工作坊给予指导，同时为课程所的国际发展战略提供咨询。邓教授的来访，将进一步提升课程所的国际视野，为课程所提供更加广阔的国际学术网络平台，从而实现引领中国课程与教学理论的发展，提升课程所国际影响力的重大目标。

（四）张薇博士获聘奥尔胡斯大学荣誉教授

课程所专家积极参与全球教育治理，与国际学术界开展深度对话交流。本季度，课程所国际校外教育研究中心执行主任张薇博士受聘为丹麦奥尔胡斯大学荣誉教授。张薇博士于2018年底加入课程所，担任课程所下设“国际校外教育研究中心”执行主任，致力于推动全球影子教育实践与政策的前沿研究、协同推进校内校外教育的课程与教学政策与实践的发展。张薇博士也是UNESCO-GEM研究顾问，此次获聘奥尔胡斯大学荣誉教授，将进一步加快课程所参与全球教育治理的步伐，强化课程所作为国家人文社科基地在顶级国际平台发挥的专业核心影响力。

（五）刘钧燕博士主持的《教育统计基础》入选华东师大2020年研究生课程建设项目

近日，华东师范大学研究生院公布了2020年研究生课程建设项目立项名单。由教育学部开设、课程所刘钧燕老师作为项目负责人的一级学科学位基础课《教育统计基础》成功获得立项。华东师范大学一级学科学位基础课程建设项目是推进课程教学与科研训练有机融合，优化硕博课程一体化设计，整体提升研究生课程质量和培养质量的重要项目。刘钧燕老师负责的《教育统计基础》课程，是全校17个立项项目之一，旨在为学生开启一扇理性视角和严谨方法的大门，提供审视教育现象和问题的新角度，为成为“未来教育引领者”奠定坚实基础。

（六）追求卓越育人，课程与教学质量提升研讨会圆满举办

为进一步优化研究生课程体系，提升研究生教学培养质量，7月1日上午，课程与教学研究所在文科大楼1606室组织召开了课程与教学质量提升研讨会，特邀教育学部副主任朱军文教授、教学事务部主任赵琦老师莅临指导。会议由课程所副所长周文叶副教授主持，课程所全体教师通过线上线下相结合的会议方式全程参与研讨。会议现场气氛热烈，远在市（国）外的老师也通过视频会议的方式积极交流授课心得与设想。研讨的过程不仅有助于课程所对已开展的各项工作进行有效的总结与反思，更有助于推进下一阶段各项工作的规划与部署。

（七）喜迎新生，课程所新生见面会顺利召开

9月16日上午，课程所2020级研究生新生见面会在文科大楼1613室如期举行。课程所的导师们通过线上线下相结合的方式，向加入课程所大家庭的39位研究生新生表达最热烈的欢迎与最诚挚的祝福。作为华东师范大学首批“立德树人教师团队”，课程所已为新生们配备了专业的导师队伍和前沿的课程体系。出席新生见面会的导师们，通过分享各自的研究方向，向全体新生传达了课程所教科研团队 “为课程，为学生，为未来”的专业信念，愿与学生一起点亮梦想，助力远航，携手相伴，共赴前程。

（八）高德胜、张薇等专家出席多个学术活动

课程所坚持“参与课程实践，共享智识”的学术使命，积极开展与海内外学者的交流与研讨，推动课程与教学领域的“中国经验，世界共享”。

序号	出席人	会议内容
1	高德胜	• 7月28日，受苏州大学邀请，作了主题为《宽容美德与宽容教育》的线上学术报告。 • 8月2日，受华中科技大学邀请，就“双一流建设项目‘拔尖创新人才培养’系列”，作了主题为“道德勇气及其培育”的报告。 • 8月18日，受华中师范大学邀请，在“未来的德育变革”的云端学术研讨会上作主题为《道德伪善的教育学思考》的报告。
2	张薇	• 6月27日，出席“Transforming Education in the Era of New Normal Experiences and Prospects in Asia-Pacific”会议，作主题为“Turning Crises into Opportunities: Responses of Education Systems in China”的报告 • 7月1-2日，作为联合国教科文组织全球教育监测报告研究员，出席联合国教科文组织全球教育监测报告顾问委员会大会，且于8-9月期间多次例行参会。

（一）“中小学课程实施过程监测研究”重大课题攻关项目成果持续产出

首席专家崔允漷教授主持的教育部哲学社会科学重大课题攻关项目“中小学课程实施过程监测”本季度持续推进，项目成果持续产出：

（1）毛玮洁，崔允漷. 义务教育阶段体育课程实施：问题、成因与对策. 《教育科学》（待发表）

（2）王丹艺，崔允漷. 义务教育阶段艺术课程是如何产生落差的：基于课程实施层级的分析. 《现代基础教育研究》（待发表）

（3）王丹艺，崔允漷. 义务教育阶段课前服务难题及其治理——基于系统论视角的分析（审稿中）

（4）文艺，毛玮洁，崔允漷. 《从2234份班级课程表看上海市义务教育课程计划的落实情况》（投稿中）

（5）雷浩，王希婧. 《义务教育阶段道德与法治类课程实施状况及其对策研究》（完成初稿）

（6）雷浩等关于“教材舆情”咨政报告获中共中央办公厅采纳。

（二）“中国课程改革的历史文化传统与理论建构”项目进入收尾阶段

7月至9月，周勇教授主持的基地重大项目《中国课程改革的历史文化传统与理论建构》进入收尾阶段，主要工作包括：对结题成果即52万字专著书稿进行校对、修改及完善，目前该项工作已完成，等待统一通知结题；在项目基础上进一步拓展，从民族复兴的角度重点对近代中国科学课程改革及教育理论研究演变展开梳理，为接下来申请其他项目奠定基础，目前也已完成初步成果，在《教育发展研究》、《南京师范大学学报》发表论文2篇。

（三）“基于核心素养的课程整合研究”项目进展顺利

本季度，“基于核心素养的课程整合研究”课题组研究团队，进一步梳理和总结了核心素养视角下课程整合和综合课程改革的本土思考与国际经验，为国家基础教育课程改革提供了基于核心素养的课程整合研究咨询报告，被教育部教材局采用。并就“加强义务教育语文课程跨学科双向整合设计问题”专门提出政策建议，相应的研究成果以《中美语文课程跨学科整合设计比较研究》为题，拟发表于2020第11期《全球教育展望》杂志。

（四）“促进课堂转型的中小学教研体系重建”项目继续完善成果

基地重大项目“促进课堂转型的中小学教研体系重建”课题组在胡惠闵教授的带领下继续推进文献研究、调查研究和个案研究，继续修改和完善三个方面的成果：

第一，在教研职能的变革与影响方面，课题组进一步完善了《我国基础教育教研职能变迁》《我国三级教研机构的类型与职能现状分析》《课程实施中地方教研机构作用的个案研究》等报告。

第二，在教研内容与方式的变革及对课堂教学的影响方面，《中小学教师对教研活动认同感研究》《从教研员视角看教研活动与内容的有效性》等论文进入待发表状态。

第三，在教研员专业定位与要求方面，课题组对《教研员素质现状与提升途径》《教研员工作投入及影响因素》《课程领导理论视野下的教研员准许标准》等成果进行精心雕琢。

（五）“中国学生数学核心素养测评研究”项目即将完成结题报告

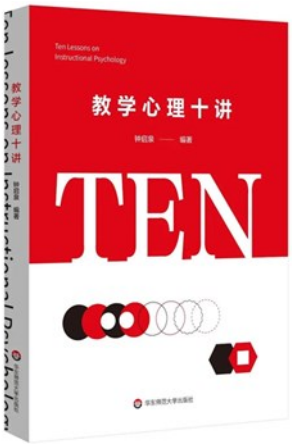
徐斌艳教授主持的基地重大项目“中国学生数学核心素养测评研究”的标志性成果“Beyond Shanghai and PISA: Cognitive and non-cognitive competencies of Chinese students in mathematics”的英文书稿全部定稿，达到提交Springer出版社的标准。澳大利亚墨尔本大学Kaye Stacey 教授为此书撰写评论时，高度赞扬此书是一份关于中国学生数学素养很有价值的研究成果，必将引起国际学者的关注。另外，项目组即将完成课题结题报告，结题工作接近尾声。

（六）“基于核心素养的课程标准研制的关键问题研究”项目进展良好

王祖浩教授主持的基地重大项目“基于核心素养的课程标准研制的关键问题研究”本季度进展良好，目前正在整理近几年成果，做结题准备。2020年9月，王祖浩教授主编的《普通高中课程标准（2017版2020修订）教师指导——化学》一书已于上海教育出版社正式出版。

重要成果推介

（一）心系教育，笔耕不辍，钟启泉教授出版三部新作



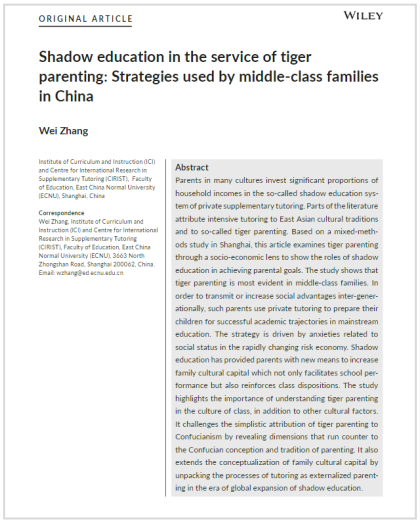
华东师范大学课程与教学研究所名誉所长钟启泉教授站在新的时点、新的高度、新的视角，奉献了三本新作《解码教育》《教学心理十讲》《透视课堂：日本授业研究考略》，从教师学习、教学心理、授业研究三个方面分享自己的教育智慧。日前，三本著作均已在华东师范大学出版社出版。

《解码教育》一书尝试从学习科学的视点与实证研究的证据相印证的角度，分“真实的学力”“探究的课堂”“成长的教师”3辑，共计25章，对若干实证资料加以梳理和教育实践“有效成分”进行分析，旨在拓展教育思维的疆界、增强改革实践的力度，为我国方兴未艾的学校教育改革，特别是课堂转型的实践呐喊助威。

《教学心理十讲》针对学校课堂教学的种种要素与课堂转型的愿景，从认知心理学的基础研究，以及学习科学引出的教学方法的前沿研究的视角，围绕儿童的发展与学习的特征、能动学习的方式、教师应有的姿态，阐述“课堂转型”过程中不可回避的一系列教学理论与实践的课题。

《透视课堂：日本授业研究考略》一书系统梳理了日本授业研究演进与发展的历史经验，并将其作为一种难得的“国际文本”加以解读，揭示授业实践与研究支撑儿童学习、助力教师成长的重要意义，通过透视课堂，准确把握新时代授业研究的脉动。

（二）国际校外教育研究中心团队发表多篇SSCI刊论文，分享影子教育成果



ORIGINAL ARTICLE WILEY

Shadow education in the service of tiger parenting: Strategies used by middle-class families in China

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Abstract

Parents in many cultures invest significant proportions of household incomes in the so-called shadow education system of private supplementary tutoring. Parts of the literature attribute intensive tutoring to East Asian cultural traditions and to so-called tiger parenting. Based on a mixed-methods study in Shanghai, this article examines tiger parenting through a socio-economic lens to show the roles of shadow education in achieving parental goals. The study shows that tiger parenting is most evident in middle-class families. In order to transmit or increase social advantages inter-generationally, such parents use private tutoring to prepare their children for successful academic trajectories in mainstream education. The strategy is driven by anxieties related to social status in the rapidly changing risk economy. Shadow education has provided parents with new means to increase family cultural capital which not only facilitates school performance but also reinforces class dispositions. The study highlights the importance of understanding tiger parenting in the culture of class, in addition to other cultural factors. It challenges the simplistic attribution of tiger parenting to Confucianism by revealing dimensions that run counter to the Confucian conception and tradition of parenting. It also extends the conceptualization of family cultural capital by unpacking the processes of tutoring as externalized parenting in the era of global expansion of shadow education.

ORIGINAL ARTICLE WILEY

Comparative research on shadow education: Achievements, challenges, and the agenda ahead

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Abstract

This paper reviews research on private supplementary tutoring, widely known as shadow education, during the initial decades of the present century. It takes as its starting point the first global study of the phenomenon, published in 1999, though notes some scattered national and subnational literature prior to that date. During the initial two decades, great expansion of the research on shadow education brought more depth and stronger awareness of commonalities and differences in different cultures. From initial mapping and identification of factors shaping demand came work on ecosystems with deeper sociological and economic analyses, together with greater attention to research methods. The agenda ahead will need to keep up with changing times, e.g., through the impact of technology, and develop stronger interdisciplinarity to explore additional domains. It will also need continued attention to definitions and methods.

1 | INTRODUCTION

Historians have shown that in some countries what is now widely called shadow education has distant origins. In Russia, for example, Mikhaylova (2019) identified advertisements by private supplementary tutors in the mid-19th century. In Greece, Tsiloglu (2005) documented the emergence of tutorial institutions known as frontistiria towards the end of the 19th century. In Japan, the parallel development of what are known as jukus since the beginning of the 20th century has been documented by Sato (2012); and in Mauritius, Foondun (2002, p. 488) quoted a 1901 comment about private supplementary tutoring by the head of what was then the only state secondary school for boys. However, only in the 1980s and 1990s did the theme begin to emerge as a specific topic in the

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国际校外教育研究中心主任Mark Bray教授、团队核心成员张薇博士、刘钧燕博士先后在SSCI国际期刊《European Journal of Education》55卷第3期上发表了3篇文章，与国内外学者分享影子教育的相关成果：

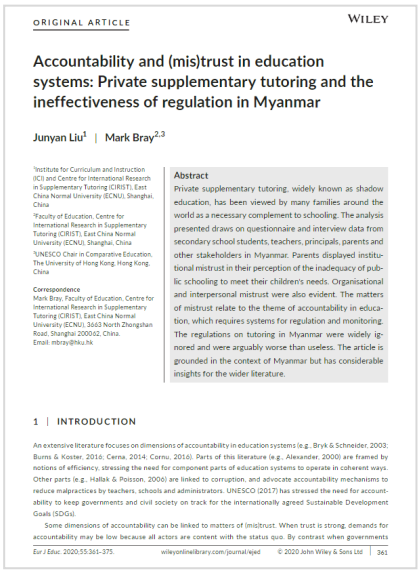
1.Zhang Wei (2020). Shadow education in the service of tiger parenting: Strategies used by middle-class families in China. European Journal of Education.

本研究基于4年的混合研究数据，针对国际文献中盛行的将影子教育简单归因于科举制度，并将其等同于儒家文化的观点进行了深入剖析，分析了影子教育和密集型育儿背后的多重文化因素。

2.Zhang Wei & Mark Bray (2020). Comparative research on shadow education: Achievements, challenges, and the agenda ahead. European Journal of Education.

文章将1999年发表的首项影子教育全球研究报告作为影子教育研究领域的起点，回顾了影子教育研究二十年的成就与挑战，提出了影子教育的未来研究议程需要持续关注相关定义及研究方法，也需要与时俱进，关注技术的影响，并加强跨学科研究以探索更为广阔的领域等观点。

3.Junyan Liu & Mark Bray (2020). Accountability and (mis)trust in education systems: Private supplementary tutoring and the ineffectiveness of regulation in Myanmar. European Journal of Education.



ORIGINAL ARTICLE WILEY

Accountability and (mis)trust in education systems: Private supplementary tutoring and the ineffectiveness of regulation in Myanmar

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Abstract
Private supplementary tutoring, widely known as shadow education, has been viewed by many families around the world as a necessary complement to schooling. The analysis presented draws on questionnaire and interview data from secondary school students, teachers, principals, parents and other stakeholders in Myanmar. Parents displayed institutional mistrust in their perception of the inadequacy of public schooling to meet their children's needs. Organisational and interpersonal mistrust were also evident. The matters of mistrust relate to the theme of accountability in education, which requires systems for regulation and monitoring. The regulations on tutoring in Myanmar were widely ignored and were arguably worse than useless. The article is grounded in the context of Myanmar but has considerable insights for the wider literature.

1 | INTRODUCTION

An extensive literature focuses on dimensions of accountability in education systems (e.g., Bryk & Schneider, 2003; Burns & Koster, 2016; Cerna, 2014; Cornu, 2016). Parts of this literature (e.g., Alexander, 2000) are framed by notions of efficiency, stressing the need for component parts of education systems to operate in coherent ways. Other parts (e.g., Hallak & Poisson, 2006) are linked to corruption, and advocate accountability mechanisms to reduce malpractices by teachers, schools and administrators. UNESCO (2017) has stressed the need for accountability to keep governments and civil society on track for the internationally agreed Sustainable Development Goals (SDGs).

Some dimensions of accountability can be linked to matters of (mis)trust. When trust is strong, demands for accountability may be low because all actors are content with the status quo. By contrast when governments

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文章基于缅甸仰光市中学生及其家长、学校教师、校长、补习老师等问卷和访谈数据，对缅甸校外教育进行研究。缅甸家庭普遍认为校外教育是学校教育必不可少的补充，家长不信任学校和老师能满足孩子的教育需要，这种不信任存在于教育体系、学校及人际层面。尽管缅甸政府早在1984年就对校外教育开展监管治理，但治理政策形同虚设，校外教育已与学校教育呈相互交错影响的态势，这使得缅甸教育体系的变革愈加困难。

（三）雷浩、王涛、杨晓哲等专家发表多篇具有国际影响的期刊论文

课程所瞄准教育前沿问题，立足全球化、时代化背景，开展深入的学术研究。本季度，课程所雷浩、王涛、杨晓哲等专家分别在《Children and Youth Services Review》《ECNU Review of Education》《Educational Technology & Society》等刊物上发表具有国际影响力的论文，其中，王涛副教授的文章在刊出后获 University World News、EurekAlert等国外媒体纷纷报道和转载：

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Computational thinking and academic achievement: A meta-analysis among students

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Keywords:
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ABSTRACT

This meta-analysis examines whether greater computational thinking is linked to greater academic achievement among students from 1st graders in primary school to 4th year seniors at university. Results from 34 studies showed that computational thinking and academic achievement were positively correlated (0.288). Moderator analysis showed that this correlation was (a) stronger among students in Eastern cultures than Western cultures; (b) strongest among primary school students, less strong among secondary school students, and weakest among undergraduates; (c) stronger among females than males; and (d) strongest when assessing academic scores, less strong with GPA, course grade, or tests, and weakest with quizzes. Neither subject content (e.g., math, science) nor sampling strategy (e.g., randomized, convenience) moderated the link between computational thinking and academic achievement. In sum, the positive link between computational thinking and academic achievement is moderated by culture, grade, achievement indicators, and gender.

1. Introduction

The advent of computers has influenced curriculum, learning processes, and learning outcomes (Lee, Liu, & Lai, 2019). Specifically, schools are increasingly teaching computational thinking, "the thought processes involved in formulating a problem and expressing its solution (s) in such a way that a computer—human or machine—can effectively carry out" (Wing, 2006, p. 33). In the last decade, many countries have incorporated computational thinking into their curricula (e.g., South Korea, Jeong, 2016; Ministry of Education of the People's Republic of China, 2017). Computational thinking's key elements of procedures/algorithms and abstraction help students understand and build systems of understanding that can cut across different academic subjects such as mathematics, science, and language—which in turn can improve student learning outcomes in them (Grover & Pea, 2013).

However, past studies of computational thinking and learning outcomes show mixed results, ranging from slightly negative links to small positive links to large positive links (Doleck, Bazelais, Lemay, Saxena, & Basnet, 2017; Grover, Pea, & Cooper, 2015; Liang & Liu, 2015). Hence, this meta-analysis synthesizes the results of 34 past studies to determine an overall result and to test for significant moderators (culture, grade level, subject content, gender, assessment type, and sampling strategy).

1.1. Computational thinking and academic achievement

Computational thinking aids interpretation, analysis and solution of many problems via abstraction, algorithms, and systemic thinking (Wing, 2011). Abstraction identifies key features and their relations while ignoring irrelevant distractions to represent a problem properly. Algorithms are abstractions of processes that use the problem representation's inputs to execute a sequence of actions and produce an output solution. Applying abstraction and algorithms aids construction of larger systems that help students look beyond the immediate stimuli to see and act on the complex relations inherent in many real-world situations.

These computational thinking processes of abstraction, algorithmic processing, and systemic thinking can aid students' understanding of many academic domains such as mathematics, science and language (Grover & Pea, 2013). In mathematics, students learn to abstract numbers from quantities of objects, apply arithmetic algorithms (e.g., multi-digit multiplication), and build arithmetic systems (subtraction as inverted addition, multiplication as repeated addition, etc.). In science, students abstract the elements of compounds (raqun's atomic $C_6H_{12}O_6$), apply chemical algorithms (photosynthesis: $6CO_2 + 6H_2O + light \rightarrow C_6H_{12}O_6 + 6O_2$), and build systems (carbon cycle with photosynthesis, decomposition, respiration, etc.). In language, students learn to abstract

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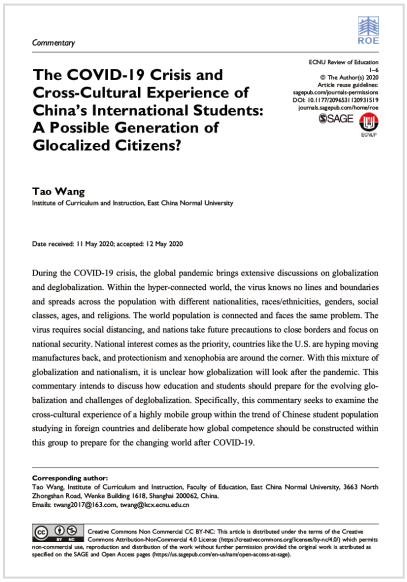
Available online 12 September 2020
0190-7409/ © 2020 Elsevier Ltd. All rights reserved.

1.Lei, H. (2020). Computational thinking and academic achievement: A meta-analysis among students. Children and Youth Services Review.

随着信息时代的到来，学生计算思维研究受到了越来越多学者的关注。文章从计算思维的功能出发，探究其与学生学业成绩之间的关系。研究表明，计算思维能够影响学生的学业成绩，并且计算思维对东方文化背景学生学业成就的影响要大于西方文化背景的学生；同时，计算思维对学生学业成就的影响还受到学段、性别以及学业



Commentary

ECNU Review of Education
1–6
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The COVID-19 Crisis and Cross-Cultural Experience of China's International Students: A Possible Generation of Glocalized Citizens?

Tao Wang
Institute of Curriculum and Instruction, East China Normal University

Date received: 11 May 2020; accepted: 12 May 2020

During the COVID-19 crisis, the global pandemic brings extensive discussions on globalization and deglobalization. Within the hyper-connected world, the virus knows no lines and boundaries and spreads across the population with different nationalities, races/ethnicities, genders, social classes, ages, and religions. The world population is connected and faces the same problem. The virus requires social distancing, and nations take future precautions to close borders and focus on national security. National interest comes as the priority, countries like the U.S. are hyping moving manufactures back, and protectionism and xenophobia are around the corner. With this mixture of globalization and nationalism, it is unclear how globalization will look after the pandemic. This commentary intends to discuss how education and students should prepare for the evolving globalization and challenges of deglobalization. Specifically, this commentary seeks to examine the cross-cultural experience of a highly mobile group within the trend of Chinese student population studying in foreign countries and deliberate how global competence should be constructed within this group to prepare for the changing world after COVID-19.

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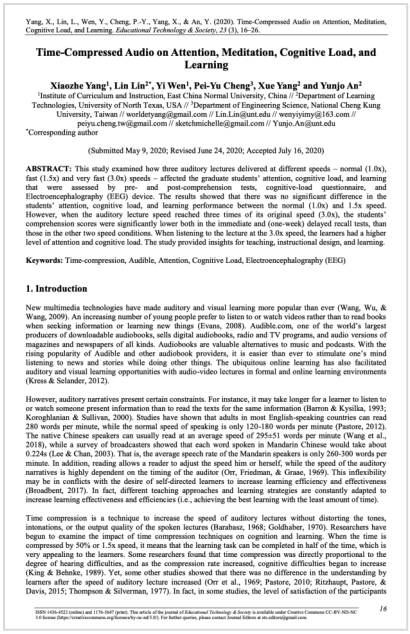
成绩指标的调节作用。

2. Wang, T. (2020, Online). The COVID-19 crisis and cross-cultural experience of China's international students: A possible generation of glocalized citizens? ECNU Review of Education.

在新冠病毒大流行期间，中国留学生面临着逆全球化与民族主义带来的挑战，在跨文化交流中遭遇着双重污名化的处境。反思新自由主义式全球化与强国家控制的不足，如何在国家认同和全球认同之间进行平衡与取舍变得愈发艰难。文章针对全球公民教育的两难问题，初步提出了地化全球素养（glocalized competence）的概念和框架，并提出学生需要坚定文化自信、具备国际视野、求同存异、树立人类命运共同体意识，为集体福祉和可持续发展而行动。



Yang, X., Lin, L., Wen, Y., Cheng, P.-Y., Yang, X., & An, Y. (2020). Time-Compressed Audio on Attention, Meditation, Cognitive Load, and Learning. *Educational Technology & Society*, *23* (3), 16-26.

Time-Compressed Audio on Attention, Meditation, Cognitive Load, and Learning

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ABSTRACT: This study examined how three auditory lectures delivered at different speeds – normal (1.0x), fast (1.5x) and very fast (3.0x) speeds – affected the graduate students' attention, cognitive load, and learning that were assessed by pre- and post-comprehension tests, cognitive-load questionnaire, and Electroencephalography (EEG) device. The results showed that there was no significant difference in the students' attention, cognitive load, and learning performance between the normal (1.0x) and 1.5x speed. However, when the auditory lecture speed reached three times of its original speed (3.0x), the students' comprehension scores were significantly lower both in the immediate and (one-week) delayed recall tests, than those in the other two speed conditions. When listening to the lecture at the 3.0x speed, the learners had a higher level of attention and cognitive load. The study provided insights for teaching, instructional design, and learning.

Keywords: Time-compression, Audible, Attention, Cognitive Load, Electroencephalography (EEG)

1. Introduction

New multimedia technologies have made auditory and visual learning more popular than ever (Wang, Wu, & Wang, 2009). An increasing number of young people prefer to listen to or watch videos rather than to read books when seeking information or learning new things (Evans, 2008). Audible.com, one of the world's largest producers of downloadable audiobooks, sells digital audiobooks, radio and TV programs, and audio versions of magazines and newspapers of all kinds. Audiobooks are valuable alternatives to music and podcasts. With the rising popularity of Audible and other audiobook providers, it is easier than ever to stimulate one's mind listening to news and stories while doing other things. The ubiquitous online learning has also facilitated auditory and visual learning opportunities with audio-video lectures in formal and online learning environments (Kress & Selander, 2012).

However, auditory narratives present certain constraints. For instance, it may take longer for a learner to listen to or watch someone present information than to read the texts for the same information (Barron & Kysilka, 1993; Koroghlanian & Sullivan, 2000). Studies have shown that adults in most English-speaking countries can read 280 words per minute, while the normal speed of speaking is only 120-180 words per minute (Pastore, 2012). The native Chinese speakers can usually read at an average speed of 295±51 words per minute (Wang et al., 2018), while a survey of broadcasters showed that each word spoken in Mandarin Chinese would take about 0.224s (Lee & Chan, 2003). That is, the average speech rate of the Mandarin speakers is only 260-300 words per minute. In addition, reading allows a reader to adjust the speed him or herself, while the speed of the auditory narratives is highly dependent on the timing of the auditor (Orr, Friedman, & Graae, 1969). This inflexibility may be in conflicts with the desire of self-directed learners to increase learning efficiency and effectiveness (Broadbent, 2017). In fact, different teaching approaches and learning strategies are constantly adapted to increase learning effectiveness and efficiencies (i.e., achieving the best learning with the least amount of time).

Time compression is a technique to increase the speed of auditory lectures without distorting the tones, intonations, or the output quality of the spoken lectures (Barabasz, 1968; Goldhaber, 1970). Researchers have begun to examine the impact of time compression techniques on cognition and learning. When the time is compressed by 50% or 1.5x speed, it means that the learning task can be completed in half of the time, which is very appealing to the learners. Some researchers found that time compression was directly proportional to the degree of hearing difficulties, and as the compression rate increased, cognitive difficulties began to increase (King & Behnke, 1989). Yet, some other studies showed that there was no difference in the understanding by learners after the speed of auditory lecture increased (Orr et al., 1969; Pastore, 2010; Ritzhaupt, Pastore, & Davis, 2015; Thompson & Silverman, 1977). In fact, in some studies, the level of satisfaction of the participants

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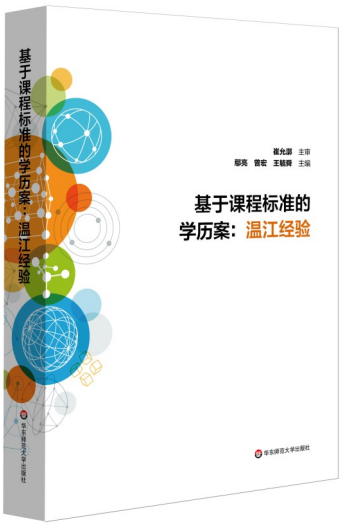
（四）王祖浩教授主编
《普通高中课程标准（2017年版2020修订）教师指导-化学》

王祖浩教授主编的《普通高中课程标准（2017年版2020修订）教师指导-化学》近期在上海教育出版社出版。为帮助广大教师更好地理解新版高中化学课程标准，在教学中落实化学学科核心素养，本书征集了教师在高中化学课程标准实施中遇到的一系列问题，结合了化学课程标准提出的重要观点和实践案例，对有关化学学科核心素养、课程目标、课程内容、学业质量标准和化学学科核心素养的教学设计、化学学科核心素养的教学评价等一系列理论与实践问题进行深入分析和释疑，以提高化学教师课程实施的有效性，促进教学实践问题的解决。

（五）杨晓哲副教授关注中小学生人工智能课程学习
主编《人工智能》系列教材

国际课堂分析实验室执行主任杨晓哲副教授主编的《人工智能》系列教材由华东师范大学出版社正式出版。本套教材共三本，包括《人工智能启蒙》《人工智能应用》《人工智能设计》，综合考虑了不同学龄段学生的能力差异，是面向中小学生人工智能课程学习的系列教材，旨在培养学生们增强信息意识、发展计算思维、提高数字化学习与创新能力、树立起信息社会责任。

（六）崔允漷教授主审的新书《基于课程标准的学历案：温江经验》出版



本书是全国第一本规范出版的义务教育阶段学历案样例集，记录了继《教案的变革：基于课程标准的学历案》《学历案与深度学习》在高中阶段引发课堂变革之后，学历案在义务教育阶段的全新尝试，同时也是成都市温江区学历案区域推进改革实验项目的阶段性成果，展现了超越单一学校，在整个区域全面推进学历案的先锋式探索。本书共分三个部分：第一部分“区域推进学历案的温江经验”介绍了温江选择学历案的缘由、推进经验、初步成效、问题与反思等。第二部分“小学学历案精选”和第三部分“初中学历案精选”，集中呈现了各学段、各学科具有示范性、代表性、操作性的学历案。每篇学历案都配有“导读”，揭示特色亮点或创新点，还配有“设计说明”，阐释“为什么这样设计”，生动呈现了学历案从理论向实践转化的过程。该书由鄢亮、曾宏、王毓舜主编。

（七）吴刚平、王祖浩、雷浩等专家3份咨政报告获省部级以上部门采纳

利用自身专业优势，为推进国家课程改革提供高质量的政策咨询与服务，是课程所团队一直以来的发展宗旨。本季度，吴刚平教授、王祖浩教授、雷浩副教授等专家围绕“课程整合、中考命题、教材舆情”的系列问题，先后有3份咨询报告获得了省部级以上部门采纳。

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