the iafor journal of education

Volume 5 – Issue 3 – Winter 2017

Editor: Bernard Montoneri

ISSN: 2187-0594

iafor
The IAFOR Journal of Education
Volume 5 – Issue 3 – Winter 2017

IAFOR Publications

The International Academic Forum

IAFOR Journal of Education

Published by The International Academic Forum (IAFOR), Japan
IAFOR Publications, Sakae 1-16-26-201, Naka-ward, Aichi, Japan 460-0008

Executive Editor: Joseph Haldane
Layout: Bernard Montoneri

IAFOR Journal of Education
Volume 5 – Issue 3 – Winter 2017

Published December 01, 2017

ISSN: 2187-0594

ije.iafor.org

Cover Image: https://www.pexels.com/photo/architecture-art-artistic-artwork-384522

IAFOR Journal of Education

Volume 5 – Issue 3 – Winter 2017

Edited by Dr Bernard Montoneri

Table of Contents

Notes on Contributors

Dr Luisa Daniele works for the National Agency for Active Labour Market Policies (ANPAL). She specialises in Adult Learning and has collaborated or coordinated many research efforts on this issue, relating to the Italian system of Adult Learning, as well as in comparison with other European Countries. She holds a Master's Degree in Political Sciences from the Sapienza University of Rome and a PhD in "Adult Learning – Evaluation of Vocational Education and Training Systems" from Roma Tre University and Paris X – Nanterre University (co-tutorship), with a thesis on "Lifelong learning and University. Individuation and validation of prior learning in France and in Italy" (2010).
Email: luisa.daniele69@gmail.com

M. Oyetoro Oyebode Stephen is a Lecturer in the Department of Arts and Social Science Education of the Obafemi Awolowo University, Ile-Ife, Southwestern Nigeria. He teaches courses in curriculum and teaching, curriculum and program evaluation and education research methods at the undergraduate level. He is an action research enthusiast and an educator who engages in drawing out the pragmatic implications of education theories, models and philosophies for context-situated praxis. He holds a BSc Ed (Accounting) from the Olabisi Onabanjo University, Ogun State, MA Ed (Curriculum Studies) from Obafemi Awolowo University, Ile-Ife and is presently a doctoral student of Curriculum Studies (Social Science option) in the Department where he teaches.
Email: oyebode_oyetoro@hotmail.com

Dr Oloyede Ezekiel Ojo is a Reader in the Department of Science and Technology Education. He earned his PhD (Curriculum Studies), MA Ed (Curriculum Studies) and BSc Ed (Physics/Mathematics) from the University of Ife (now Obafemi Awolowo University, Ile-Ife). He teaches courses in curriculum and teaching, educational research methods and statistics. His research interest research lies in curriculum theories and instructional effectiveness in Science Education (Physics and Mathematics). He has published widely in national and international journal of repute in these areas of research interest. He was formerly the Head of the Department of Science and Technology Education.
Email: eoloyede@oauife.edu.ng

Dr Anna Gadd Colombi attended Università degli Studi di Milano, Italy, where she completed her BA and MA in Modern Languages - translation curriculum - in English and Spanish in 2009. Both her BA and MA theses are on Translation Studies. The topic of her BA thesis is the dubbing and subtitling into Italian of the film Taxi Driver, while her MA thesis examines the 1993 Feltrinelli translation of Woolf's Mrs Dalloway into Italian. From 2011 to 2015 she held a scholarship for doctoral studies at The University of Western Australia, where she completed a thesis titled "Australia Translated: a source-oriented translation of Elizabeth Jolley's Mr Scobie's Riddle" under the supervision of Professor John Kinder. Anna has written articles on Translation Studies and Second Language Acquisition published on peer-reviewed journals such as AALITRA: The Australian Association for Literary Translation, JASAL: Journal of the Association for the Study of Australian Literature, JUTLP: Journal of University Teaching and Learning Practice, Colloquy and others. Anna has attended and presented at translation and language teaching and learning conferences in Australia, Europe and Canada. She has been teaching and coordinating units of Translation Studies, Italian Studies and Spanish Studies at The University of Western Australia since 2012, and is a NAATI certified professional translator from English into Italian.
Email: anna.gadd@uwa.edu.au

Dr Nikša Dubreta is an associate professor at The Faculty of Mechanical Engineering and Naval Architecture in Zagreb. He received his PhD in Sociology from the University of Zagreb, Croatia. His current research interests cover areas of educational sociology and sociology of work and organization with an emphasis in societal and organizational levels of engineering careers and opportunities for employment as well as theoretical and field research considerations of work cultures. Currently, he is an editorial board member of Interdisciplinary Description of Complex Systems Journal (Thompson Reuters). He is a member of the Croatian Sociological Association.
Email: niksa.dubreta@fsb.hr

M. Damir Miloš is a research assistant at the Catholic University of Zagreb with research interest in sociology of work and education. At the moment, he is studying for a PhD in Sociology at The Faculty of Humanities and Social Sciences at the University of Zagreb, Croatia. He has participated in realisation of scientific research of religion and human rights as well as in the research of social dimension of education. Currently, for the purpose of his dissertation, he is focused on sociological aspects of work and migrations in Croatia.
Email: damir.milos@unicath.hr

Dr Imam Suyitno, MPd, is a full-time lecturer of Indonesian language at Faculty of Letters, State University of Malang (UM). He hold Doctorate degree in Indonesian Language Education at State University of Malang (UM). Since becoming a lecturer, he manages the BIPA learning program, namely the COTI program (Consortium of Teaching Indonesia), CSASP (Cooperative Southeast Asian Studies Program), Darmasiswa Program, and AFS (American Field Studies). In 1992, Yitno had the opportunity to teach BIPA at the SEASSI (Southeast Asian Summer Studies Institute) program in Seattle, Washington State, USA. Yitno wrote many papers, articles, teaching material, and research on BIPA learning and language skills. It was these works that positioned Yitno to hold a professor degree in the field of Indonesian Language Teaching for Foreigners. Yitno teaches in Bachelor (S1), Master (S2), and Doctorate (S3) Programs. Subjects include Language Learning, Cross-Cultural Understanding, Cultural Studies, Innovative Language Learning. In the last five years, Yitno has produced two research works, 14 articles published in national/international journals, 7 monographs, and 15 national and international seminar papers.
Email: imam.suyitno.fs@um.ac.id

Dr Ayobami Gideon Adeleke is a faculty member (teaching and research staff) at the Institute of Education, Faculty of Education, Obafemi Awolowo University, Ile-Ife, Nigeria. His background in Early Childhood Development and Education with a bias for ICT applications in the teaching-learning process has spurred relentless investigations of various tools, including ICT based teaching and learning strategies, aimed toward using the right techniques with the right gadget in the classroom. In recent times, Dr Adeleke has developed two ICT integrated learning packages for pupils in numeracy and spatial reasoning. He was meritoriously awarded the lead postdoctoral prize of the Fafunwa Educational Foundation in Nigeria (2015). He is presently exploring modes of easing learning for the multivariate categories of challenged children in Nigerian schools.
Email: aygold10@gmail.com

Dr Dian-Fu Chang is a professor at Tamkang University College of Education in New Taipei City, Taiwan. He received his PhD in Teachers College from Columbia University, New York. His research centers on education and educational policy issues in national and international levels. He has over 20 years' experiences on teaching, research, and policy

related studies in education. He is a member of HERA (Higher Education Research Association), Committee Member of Higher Education Research Society, Taiwan, and Committee Member of China Education Society.
Email: 140626@mail.tku.edu.tw

M. Sheng-Nan Chen is a teacher and director at Yong Fu Elementary School in New Taipei City, Taiwan. He received his master degree in Graduate School of Educational Policy and Leadership from Tamkang University of New Taipei City, Taiwan. His recent research interests in teachers' professional development in elementary education level. He works with the team for better teacher professional development in Yong Fu Elementary School.
Email: shinnerchen@gmail.com

Dr Wen-Ching Chou is a fulltime researcher at the Graduate Institution of Educational Policy and Leadership, Tamkang University to conduct global mobility related project supported by Department of Science and Technology. She received a PhD from College of Education, National Chi Nan University. Her research focuses on enhancing employability and preparing career capital for students in higher education institutions.
Email: sauichou1226@gmail.com

Dr. Birgit earned her PhD in Education (summa cum laude) from the interdisciplinary Lifelong Learning Doctoral Program at the Klagenfurt University, Austria, and her Master's degree in Transcultural Communication and Adult Education at the Karl-Franzens University in Graz, Austria. After traveling, living and working in over 60 countries, she joined the FH Burgenland as a senior lecturer, where she is the Head of the English Program in the Health Department. She has taught ESP courses for health, science and engineering students, as well as courses in critical thinking, project work and presentation, intercultural communication, business ethics and CSR, and professional self-development through reflection at both the undergraduate and graduate level. Her research interests include intercultural communication, new media didactics and learning technologies, as well as informal and transformative learning processes.
Email: birgitphillips@gmail.com

IAFOR Journal of Education Editors and Reviewers

Editor: Dr Bernard Montoneri
National Chengchi University, Taiwan

Bernard Montoneri earned his PhD (African, Arab, and Asian Words; History, Languages, Literature) and his BA in Chinese from the University of Provence, Aix-Marseille I, France. He has taught Literature (European, French, Children, American, and British) and languages (French, English, and Italian) for two decades. He has studied eight languages, including Sanskrit, and has obtained eight university diplomas. He is, as of August 1, 2017, an Associate Professor in the Department of European Languages and Cultures, at National Chengchi University, Taipei, Taiwan. He has around 50 publications, including journal papers, conferences papers, and books. He is the co-founder and editor-in-chief of the IAFOR Journal of Education. His research interests include French literature, children's literature, translation studies, French and English writing, automated scoring systems, teaching and learning evaluation, data envelopment analysis, networking, and teaching methods. He is a reviewer for top academic journals and has obtained more than 20 teaching and research grants.
Email: montonerishu@gmail.com
ResearchGate: www.researchgate.net/profile/Bernard_Montoneri

Co-editor: Dr Lucy K. Spence
University of South Carolina, USA

Lucy K. Spence received her PhD in Curriculum & Instruction from Arizona State University, USA in 2006 and her BS in teaching from Grand Canyon University in 1989. She has taught multilingual students since 1989. She is currently an associate professor in the College of Education at the University of South Carolina, USA. Her current research interests are teacher perceptions of multilingual student writing, bilingual education, and writing instruction in Japan and the USA. In 2013, she was invited to Kansai University in Osaka, Japan as a visiting researcher, and then returned for a sabbatical research project in 2015. Her book on student writing was published in 2014. She has published articles in national and international journals and reviews books and articles for top journals related to her interest area, such as Teacher's College Record, Language Arts, and English Education.
Email: lucyspence@sc.edu

Associate Editor: Dr Yvonne Masters
University of New England, Australia

Yvonne Masters is currently an Adjunct Senior Lecturer with the University of New England, NSW, Australia. She has been a teacher and teacher educator for 40 years and is passionate about education. She was a senior lecturer in Professional Classroom Practice in the School of Education, UNE, a position that she accepted after five years as Director of Professional Experience in the same School. Prior to taking up her position at UNE, she had 30 years' experience in secondary schools including in the roles of Curriculum Coordinator, Deputy Principal and Principal, roles that developed her skills in leadership, project management, curriculum and assessment. Her teaching experience spans three Australian states. Her research interests centre on teacher education and policy, professional experience, teacher identity, online learning and virtual worlds, with a particular focus on distance education students. Yvonne was awarded her PhD, focused on school principalship, from Deakin University. She is an active researcher and has gained, in collaboration with other researchers, 4 Internal School

of Education Research grants. She has been a partner in a $200,000 ALTC (OLT) grant, VirtualPREX: Innovative assessment using a 3D virtual world with pre-service teachers, in 2014 achieved a UNE Seed Grant for a one year project to explore teacher quality, and in 2015 gained a $50,000 OLT seed grant to develop resources to assist pre-service teachers to gain online teaching skills to assist them in teaching wholly online into virtual schools. She serves as a reviewer for several journals and is a senior reviewer for IAFOR conferences. She is also a co-chair of the Asian Undergraduate Research Symposium, run alongside IAFOR's annual ACE conference. She is currently expanding her research into the impact of undergraduate research and she presents on both teacher education policy and online teaching at a range of conferences, both Australian and international.
Email: yfmasters@gmail.com

Associate Editor: Dr Massoud Moslehpour
Asia University, Taiwan

Massoud Moslehpour is an intercollegiate educator working as an assistant professor of Business Administration and Foreign Languages at Asia University, Taiwan. He received his Doctorate of Philosophy from University of Missouri-Columbia, USA, in Industrial Technology (Support Areas: Higher and Adult Education, Curriculum Development, and Spanish Language). His major areas of interests are Marketing, Management, Quantitative Analysis, Cross-Cultural Studies and Foreign Language Teaching. During the past 15 years he has written several textbooks, to name a few: *Internet English, Culture through Movies, English Presentation Skills* and one on TOEIC preparation. He has also published several journal articles in various international peer-reviewed journals in the areas of Purchase Intention, Customer Satisfaction, Customer Loyalty, Corporate Culture, English Teaching and Internet Addiction.
Email: writetodrm@gmail.com

Members of the Editorial Board

Dr Cassandra Atherton, Alfred Deakin Research Institute, Australia
Cassandra Atherton is an award-winning writer, critic and senior lecturer at the Alfred Deakin Research Institute. She has a Harvard Visiting Scholar's position from August 2015 – September 2016 to work on a project concerning public intellectuals in academe. A Visiting Fellow at Sophia University, Tokyo in 2014 and an affiliate of the Monash Japanese Studies Centre in 2015, Cassandra is currently working on a book analyzing Miyazaki Hayao's anime. Cassandra has published 8 books and was invited to be on the judging panel of the Victorian Premier's Literary Awards, Prize for Poetry in 2015.
Email: cassandra.atherton@deakin.edu.au

Vasileios Paliktzoglou, University of Eastern Finland, Finland & Bahrain Polytechnic, Bahrain
Vasileios Paliktzoglou has several years of experience in universities such as the University of Pisa, the Aegean University, Robert Gordon University, Mediterranean University College and the University of Wales having an active role as: Researcher, Tutor, Supervisor, Lecturer and Programme Manager. He is active in research with papers presented at international conferences, and published at academic journals. His research interests are in the fields of social media, web 2.0, communities of practices, e-learning in which he is actively involved in several international research projects. He is currently a doctoral researcher at the University of Eastern Finland and faculty member at Bahrain Polytechnic.

Email: paliktzoglou@gmail.com

Dr Santosh Kumar Behera, Sidho-Kanho-Birsha University, India
Santosh Kumar Behera is an Assistant Professor in the Department of Education, Sidho-Kanho-Birsha University, India. After completion of a Graduate Degree from Fakir Mohan University, Orissa, he was admitted to the MA in Education program at Vinaya Bhavana, Visva Bharati and then did his PhD entitled "An Investigation into the Attitude of SC and ST Children of Southern Orissa towards Education" at Vinaya Bhavana. He has also published several research papers and articles in various journals and edited volumes of national and international repute across the country. He is the Editor-in-Chief, EDUQUEST, An International Refereed Journal in Education (ISSN: 2277-3614), International Journal of Academic Research in Education and Review (ISSN: 2360-7866) and Academic Research Journal of History and Culture (ARJHC).
Email: santoshbehera.jkc@gmail.com

Dr Yilin Chen, Providence University, Taiwan
Yilin Chen (PhD in Drama and Theatre, Royal Holloway, University of London) is a Professor at the Department of English Language, Literature and Linguistics, Providence University in Taiwan. Her current research interests are the global dissemination of Japanese manga Shakespeare and the representation of gender and sexuality in manga adaptations of Shakespeare.
E-mail: yc276@yahoo.com

Dr Shiao-Wei Chu, National Tsing Hua University, Taiwan
Shiao-wei Chu is a creative, hard-working, collaborative, reflective and proficient educator who loves teaching English language learners of all ages. She is originally from Taichung, Taiwan. She received her doctoral degree (PhD) with an emphasis on creating a new paradigm in ESL teachers' professorial development from the College of Education at the University of Idaho in the fall of 2013. She has her MA in TESOL from Chaoyang University of Technology in Taichung, Taiwan. Her research focuses are ESL/EFL teaching and learning including teaching methods, material design and assessment design, and professional development for English language teachers in both face-to-face and web-based environments. Currently, she is an assistant professor in Taiwan. She gained experience teaching ESL learners at two intensive English for Academic Purposes programs in Idaho State, America since 2012 and as a graduate teaching assistant in the Department of Curriculum and Instruction at the University of Idaho. She previously taught English in Taiwan for approximately eight years.
Email: shiaowei0819@gmail.com

Dr Raymond Q. Datuon, Pace Academy, Philippines
Raymond Q. Datuon completed a Bachelor in Secondary Education, majoring in history (2002), at the Philippine Normal University, a Masters in Educational Management (2010) in Polytechnic University of the Philippines-Open University Systems and a Doctorate in Educational Management (2013) at the Polytechnic University of the Philippines. He served as Executive Officer and volunteer campus minister of Marian Youth Movement in the Archdiocese of Manila. He was appointed as Chief Justice in the Student Government of the Philippine Normal University in 2001–2002. He was full-time Faculty in St. Mary's Academy of Caloocan City from 2003 to 2005; he was the School of Education Dean, concurrently the Officer In-charge of the Student Life Office, Head of Faculty and Staff Development Office and Senior High School Program in Chiang Kai Shek College (Manila, Philippines) from 2015 to 2017. He was also appointed as Head of Research, Publication, and Faculty Development

Office at Chiang Kai Shek College from October 2013 to June 2014. At present, he is a Faculty in Pace Academy and currently Part-Time Assistant Professor Lecturer at the Far Eastern University-Institute of Technology and in Philippine Cultural College. He is a Licensed Secondary Teacher, President of the PUP-Doctor in Educational Management Society, member of the Board of Incorporators and PRO-External (2012–2015); Vice-President for Internal Affairs (2015 to present) of Kalipunan ng mga Guro ng Araling Panlipunan, Assistant Treasurer of University of Santo Tomas-Santisimo Rosario Parish, Member of the Editorial Board of International Economics Development and Research Center (IEDRC), Review for Business Research, and Journal of Educational System; Keynote Speaker at the 3rd International Conference on Economics and Management (ICEM 2016) and designated as Co-Chair of the International Committee Board of the said conference; and International Board Member of The Institute of Research Engineers and Scientists (The IRES). He served as session chair and presented his paper at different international research conferences namely in Singapore; Chiang Mai, Thailand; Hong Kong, China; Beijing, China; San Francisco, USA; Harvard University, Boston, USA; Timisoara, Romania; Barcelona, Spain; and Shanghai, China. He has been a consistent recipient of the Teaching Excellence Award at the Far Eastern University-Institute of Technology since 2011 and he has been an Outstanding Teacher since 2010 at Chiang Kai Shek College. He was recognised and awarded by the City Government of Manila as one of the 12 Outstanding Private School Educators in 2014.
Email: raymondqdatuon@yahoo.com

Dr Heloísa Orsi Koch Delgado, Pontifical University of Rio Grande do Sul, Brazil
Heloísa Orsi Koch Delgado is an English language educator and a translator of scientific literature. She is the Dean of the Office for International Affairs and an Associate Professor at the Department of Foreign Languages, which she coordinated for six years. She holds a BA in Translation Studies (PUCRS) and postgraduate qualifications in Tertiary Education (PUCRS) and Terminology (University Pompeu Fabra, Spain). She holds a Master degree in Education (PUCRS) and a PhD in Language Studies (Federal University of Rio Grande do Sul/UFRGS). She is a research member in GELCORPSUL (Corpus Linguistics Study Group) and GPEOCS (Olympic Studies and Health Sciences Research Group), contributing mainly in the areas of terminology and translation. She is the leader of the CorIntEsp research group (Corpora for Interdisciplinary Studies with emphasis on medical terminology) and the coordinator of the DicTrans Project (Pedagogical Multilingual Online Dictionary about the Bipolar Disorder), partially supported by CNPq and PUCRS. She has published articles in various national and international peer-reviewed journals in the areas of Education, Language Teaching, Terminology and Translation. She has been a member of the Editorial team of HOW – a Colombian Journal for Teachers of English – for ten years and an invited ad hoc reviewer for national and international journals of language teaching and related areas. Her major fields of interest are internationalization, medical terminology, translation pedagogy and multicultural/multidisciplinary education.
Email: heloisa.delgado@pucrs.br

Dr Alaster Scott Douglas, University of Roehampton, London
Alaster Scott Douglas is a Reader in Education and Professional Practice. He worked as a teacher and senior manager in four high schools and led an Expressive Arts faculty before becoming a deputy head teacher in two schools. Having completed an MA in Education (Publishing), and an MSc in Educational Research Methodology, Dr Douglas earned a PhD in teacher education from the University of Oxford. He is a fellow of the Higher Education Academy in the United Kingdom and holds a Teaching Fellowship. He is also Director of the research group Teaching and Learning in Schools at the University of Roehampton, an

associate member of the Oxford Centre for Sociocultural and Activity Theory Research at the University of Oxford. His research interests include cultural-historical activity theory and developmental work research in general. Current research is focused on universities and schools in the preparation of teachers. Dr Douglas has been the recipient of funded research projects on the differentiated teaching practices in UK and USA classrooms, the relationship between teaching, learning and research and the education and learning of pre-service teachers.
Email: alaster.douglas@roehampton.ac.uk

Dr Leda Kamenopoulou, University of Roehampton, London
Leda Kamenopoulou is a senior lecturer in Special and Inclusive Education at the University of Roehampton and a Fellow of the Higher Education Academy. Leda initially trained as a teacher of classics at the University of Athens in Greece. After completing a Master's degree in Special Educational Needs from the Graduate School of Education at the University of Bristol, she obtained a PhD in SEN and inclusion from the Institute of Education, University of London. Her doctoral thesis focused on the social outcomes of mainstream inclusive education for young people with a dual sensory impairment. Leda has worked as a research associate, research fellow, research advisor and visiting lecturer at the University of London and other United Kingdom-based academic Institutions. Her research expertise is in systematic literature reviews, qualitative, mixed methods and evaluation research designs, participatory research with children and young people, and sensory/multi-sensory and emotional needs.
Email: leda.Kamenopoulou@roehampton.ac.uk

Eddy Li, University of Cambridge, United Kingdom
Eddy Li received his initial teaching education from The Chinese University of Hong Kong (CUHK). Upon earning his dual degrees in English Studies and English Language Education, Eddy was awarded the Chevening Scholarship, and subsequently the Jardine Scholarship – both of which funded his postgraduate studies with the Faculty of Education, University of Cambridge. His research interests include inclusive education, eLearning strategies, teachers' professional craft knowledge, and second language teacher education. He is particularly keen on researching with Hong Kong teachers their inclusive pedagogy, and exploring how this contextual understanding may ethically, theoretically, and methodologically inform the development of inclusive teacher education in the wider Confucian-heritage Culture.
E-mail: eddyli@cantab.net

Jillian Marchant, James Cook University, Australia
Jillian Marchant holds a Master's Degree in Public Administration with a major in Policy and is presently a PhD Candidate with the School of Education at James Cook University in Australia. She is a published author of several articles that seek to appreciate the unfolding association between increasingly accessible formal adult learning and social development in remote and sparsely populated areas. As a resident of a community that is relatively isolated and has a low population density, Jillian remains committed to exploring the ways in which adult tertiary education may be facilitated to assistant the inhabitants of these fragile areas. She is an invited ad hoc reviewer for Australian education conferences as well as recently contributing as an associate editor at Common Ground Publishing. Her research interests include the impact of adult education on the life chances of individuals and other practices that interrupt social and political stratification.
Email: jillian.marchant@my.jcu.edu.au

Dr Dave E. Marcial, College of Computer Studies, Dumaguete City, Philippines
Marcial holds various positions in many professional organizations in the Philippines. He is the founder of the Society for ICT in Teacher Education (ICT4TEd) in the Philippines. He is the founding president of the ICT Association of Dumaguete & Negros Oriental (ICT-Dgte), Philippines. Formerly, he is President of the Philippine Society of IT Educators (PSITE) and Board Secretary of the Computing Society of the Philippines (CSP). He is currently Board of Trustee of the Philippine e-Learning Society (PeLS). He is also member of the Technical Committee for Information Technology of the Philippine Commission on Higher Education. His research interest lies in e-learning, local knowledge computing, and information systems where he has been the recipient of some local, national and international research grants. Dr Marcial is the dean of the College of Computer Studies, Dumaguete City, Philippines.
Email: demarcial@su.edu.ph

Dr Richard Mather, Buckinghamshire New University, United Kingdom
Richard Mather is a Course Leader in the Department of Computing where he teaches software engineering and co-leads research in Technology Enhanced Learning (TEL). He holds postgraduate qualifications in software engineering (MSc, Oxford) and in environmental sciences (DPhil, Oxford; MSc, UCNW). His pedagogic research and PhD supervision include adaptive assessment practices, technologies and collaborative behaviours for learning computer science subjects. For the past twenty years he has also provided services to education, governments and industry concerning the development and use of Geographical Information Systems (GIS) and Remote Sensing for environmental management. In 2010 he was awarded The Institution of Analysts and Programmers Prize for Software Engineering after developing a system to automate vegetation mapping from aerial imagery. His geospatial project outputs provide a rich source of case studies for undergraduate and postgraduate teaching.
Email: richard.mather@bucks.ac.uk

Dr Catalino N. Mendoza, Our Lady of Fatima University, Philippines
Catalino N. Mendoza is an academic consultant, module designer and developer, writer, professor/lecturer, research editor and thesis and dissertation consultant. He has to his credit almost two doctorate degrees – Doctor of Management Science, Doctor of Philosophy in Human Resource Management and a candidate for Doctor of Business Administration. He was an HR, Management, and Effective Communication consultant (in government and private companies) was formerly the Coordinator, Head, and College Dean of CBA, MBA, MBBA, MBBHRM, PhD, and PhDBM in various colleges and universities in the Philippines and visiting professor/lecturer both in the graduate and undergraduate schools. He also served as resource speaker, panel discussant and participants in various seminars in the graduate and undergraduate programmes and in the government and private agencies/companies both locally and internationally. He is also an awardee in the 2009 International Business and Economics Research and International Teaching and Learning Research Conferences held in Las Vegas, Nevada, United States, October 5–7, 2009 and published books entitled Human Resource Management Practices in the Philippines and Phenomenological Study on the Philippine Women at Forty in Germany by Lambert Academic Publishing Company on August 2012 and August 2013, respectively. A former Director for Publications, Research, Linkages and Liaison and professor in the graduate school, college of business and accountancy, college of engineering and college of tourism and hospitality management and college of education in the University of Batangas, Philippines. He is now working as Faculty of Arts and Sciences in both Graduate and Undergraduate programs, member of the ISO Internal Audit Team, and Chair of the Ethics Committee on Research Development and Innovation Center of the Our Lady of Fatima University - Pampanga Campus.

Email: catfish3789@yahoo.com

Dr William C. Frick, University of Oklahoma, USA
William C. Frick is the Rainbolt Family Endowed Presidential Professor of Educational Leadership and Policy Studies in the Jeannine Rainbolt College of Education at the University of Oklahoma, USA. He is the founding director of the Center for Leadership Ethics and Change, an affiliate body of the international Consortium for the Study of Leadership and Ethics in Education (CSLEE) of the University Council for Educational Administration (UCEA). He serves on the editorial board of the *Journal of School Leadership* and is currently the editor of *Values and Ethics in Educational Administration*. He is widely published in selective registers and is a former Core Fulbright US Scholar to the Republic of Georgia. His tripartite scholarly research agenda includes 1) ethics in educational administration, 2) linkages between school system reform and broader community revitalization efforts, and 3) cultural studies in education addressing the intersection of identity and schooling.
Email: frick@ou.edu

Dr Marcel Lebrun, Plymouth State University, USA
Marcel Lebrun is a professor at Plymouth State University in New Hampshire, USA. He is the Chair of the Department for Educational Leadership, Learning and Curriculum, which includes all graduate programmes that lead to Master's, CAGS and EdD degrees. He obtained his PhD at the University of San Jose and his Med at the University of Manitoba. He has 39 years' experience in Education. He has published 13 books, over 40 articles and presented throughout the world on issues in Special Education, Ethical Leadership and Advocacy, Social Justice and Mental Health issues in students. He travels extensively and he has visited 89 countries worldwide. His quest is to bring awareness and strategies of mental health issues to the school system as well as in society. It is only in building awareness that we can empower adults and educators to give children a different experience than what they would normally get. Change can happen and will happen if we become advocates to empower all students worldwide.
Email: mrlebrun@plymouth.edu

Professor Beena Giridharan, Curtin University, Malaysia
Beena Giridharan is the Deputy Pro Vice-Chancellor at Curtin University, Sarawak, Malaysia. In her role, she reports to the Pro Vice-Chancellor, and provides academic, financial, strategic, and administrative leadership to Curtin Sarawak, with a particular focus on academic operational efficiency. Prior to taking on this position, she was the Dean for Learning and Teaching at Curtin University, Sarawak from 2011 to 2016. She attained a doctoral degree in Applied Linguistics and Education from Curtin University, Western Australia. She has a first class Master's degree in English Language and Literature and a first class Bachelor's Degree in Science. Her research and academic interests include vocabulary acquisition in ESL, educational administration and leadership; higher education practices, transnational education, work-integrated learning, and ethnolinguistic studies in indigenous communities. As a member of an OLT (Office of Learning and Teaching, Australia) funded a project entitled "Learning without Borders" she has investigated leadership roles in Trans-National Education (TNE) and internationalization of the curriculum. Beena has been a fellow of the Higher Education Research and Development Society of Australasia (HERDSA) since 2006. She mentors aspiring HERDSA fellows and is a panel assessor for HERDSA fellowship portfolios. She won the 2006 Carrick Australian Award for University Teaching, and the 2006 Curtin University, Australia, Excellence in Teaching and Innovation award. Beena Giridharan was a visiting professor at the Virginia Commonwealth University, Richmond, Virginia, USA between 2007 and 2008. She was an associate editor of the *IAFOR Journal of Education*, and a reviewer for

a number of international journals in higher education. Her publications include a book on *Vocabulary Acquisition Patterns in Adult Tertiary (ESL) Learners* (2013), an international handbook on *Transnational Education: Leadership* in transnational education and internationalization of the curriculum, several book chapters, and publications in journals and refereed conferences. She is often invited as a keynote speaker and a plenary speaker at a number of higher education conferences regionally and internationally.
E-mail: beena@curtin.edu.my

Dr Luisa Daniele, ANPAL, Italy
Luisa Daniele has worked at ISFOL – the Italian Institute for the Development of Vocational Training of Workers (institution supervised by the Ministry of Labour) – since 1998. She now works for the National Agency for Active Labour Market Policies (ANPAL). She specialises in Adult Learning and has collaborated or coordinated many research efforts on this issue, relating to the Italian system of Adult Learning, as well as in comparison with other European Countries. She holds a Master's Degree in Political Sciences from the Sapienza University of Rome and a PhD in “Adult Learning – Evaluation of Vocational Education and Training Systems” from Roma Tre University and Paris X – Nanterre University (co-tutorship), with a thesis on “Lifelong learning and University. Individuation and validation of prior learning in France and in Italy” (2010). She is a reviewer for the SIRD Italian Journal of Educational Research, a member of the Scientific Committee of BioSelfLab LTD Training Center and Biographical Project for Employability, and a founding member of the Centre for Research and Services on skills of the Department of Studies on Educational Cultural and Intercultural Processes in Contemporary Society, Roma Tre University.
E-mail: luisa.daniele69@gmail.com

Dr Alice Schmidt Hanbidge, Renison University College, University of Waterloo, Canada
Alice Schmidt Hanbidge, Assistant Professor in the Bachelor and Masters degree programs in the School of Social Work at Renison University College, University of Waterloo, Ontario, Canada, combines the applied practices of community mental health within an academic setting to effectively contribute to the advancement of knowledge, research and program delivery. Key research areas of interest include advancing technology in the teaching of social work, community mental health children’s programming and evaluation, evidence-based group work methodology, and furthering field education in social work. Alice’s 20-year extensive social work practice experience includes a specialisation in community mental health that contributes to her clinical, teaching and research social work interests.
E-mail: ashanbidge@uwaterloo.ca

Dr Ilana Ronen, Kibbutzim College of Education Technology and Arts, Israel
Ilana Ronen earned her PhD in Science Education from Tel Aviv University. Following five years of biochemistry research focusing on bile acid synthesis and recovery of hepatic clearance in the rat liver, she began her educational career. She headed the excellent program and the Science specialisation at Kibbutzim College of Education, Technology and Arts. She established communities of learners as part of service learning and led changes in the practice of pre-service students in line with the PDS model. As a member of the science faculty, she is teaching physics and chemistry courses and supervising M.Ed students who conduct research in environmental education. Her research interests include alternative conceptions in science education; emergent knowledge in communities of learners; improving science education via professional development schools access; community service learning; collaborative learning; and ICT implementation in education.
E-mail: klima.ronen@gmail.com

Dr Raimond Selke, School of Foreign Studies, Osaka University
Raimond Selke holds a PhD in Art History from the University of Regensburg (Bavaria, Germany), specialising in 19th-century Victorian Painting and Art of the Weimar Republic. He is currently Associate Professor at Osaka University, Graduate School of Language and Culture. He teaches undergraduate and post graduate students in German language and in special seminars on Ethics in Business and Intercultural Competence and Communication plus German Art History. He has been researching and teaching overseas for many years, including at the University of Warwick, United Kingdom, The Cleveland Museum of Art, United States of America, East China University of Science, Technology, China, and Universiti Putra Malaysia, Malaysia. His research interests are in Teaching German and Fine Arts and Business Studies. He publishes widely in academic journals and professional magazines.
Email: sonoteger@gmail.com

Dr Anna Toom, Touro College, USA
Anna Toom is Associate Professor of Psychology and Education at Touro College Graduate School of Education, United States of America. She earned a MS in Computer Science from Moscow Institute of Radio Engineering, Electronics and Automation in 1972 and a MS in Psychology from Moscow State University, Russia, in 1978. In 1991, she attained her PhD in Psychology from Moscow State University of Management, Russia. After graduation, for 12 years, she worked as a university researcher and taught psychology from time to time. In the USA, teaching became her permanent activity. She is a pioneer of distance education in New York City. She has been designing, developing and instructing various online psychology courses for 17 years. A few years ago Anna left the traditional classroom to devote her teaching and research to online education. Now, she teaches Child Development and Learning in Cultural Context and History of Education Internet-based courses. Her primary scientific interest concerns learning in the virtual environment. She studies online students' adjustment, motivation, cognitive activity, and communication in the virtual classroom.
Email: annatoom@gmail.com

Dr Daniel Velasco, The Chicago School of Professional Psychology, USA
Daniel Velasco earned his BA in both English and French from UCLA, and his MEd from National University. He spent the first part of his career in the field of international/cross-cultural education as an instructor, administrator, student counselor, and academic director at a variety of post-secondary institutions. His role as an international student counselor prompted him to diversify his education, and he soon earned an MA in psychology from Antioch University, and started a private practice specialising in positive psychology. He continued on to The Chicago School of Professional Psychology, where he earned a PhD in International Psychology. Dr Velasco currently resides in Japan, where he is a mental health counselor, associate professor, researcher, and public speaker. He regularly lectures on intercultural communication, teaching strategies, positive psychology, and counseling strategies with a focus on adaptation and acculturation. He is an active member of the Japanese Psychological Association (JPA), the American Psychological Association (APA), the International Council of Psychologists (ICP), the International Mental Health Professionals Japan (IMHPJ), the Japan Association for Language Teaching (JALT), and Teachers of English to Speakers of Other Languages (TESOL).
Email: dvelasco@thechicagoschool.edu

Dr Monty P. Satiadarma, Tarumanagara University, Indonesia
Monty P. Satiadarma is a clinical psychologist who has been teaching psychology at Tarumanagara University since 1994. He was one of the founders of the Department of

Psychology at Tarumanagara, as well as the Dean of Psychology, Vice Rector and Rector of the university. He graduated with a degree in psychology from the University of Indonesia, art therapy from Emporia State, Kansas, family counselling from Notre Dame de Namur, California, and clinical hypnotherapy from Irvine, California. He has nationally published a number of books with a particular interest in educational psychology, and in music and art therapy – methods with which he treated survivors of the Indonesian tsunami on behalf of the International Red Cross and the United Nations. He is a board member and area chair of the International Council of Psychology, and a founder and board member of the Asian Psychology Association.
Email: monty_satiadarma@yahoo.com

Dr Tony Yeigh, Southern Cross University, Australia
Tony Yeigh is a Lecturer in the School of Education at Southern Cross University (SCU), Australia, where he teaches in the areas of educational psychology and classroom management. Dr Yeigh has also had extensive consultancies relating to the Australian Government Quality Teacher Programme (AGQTP), working with classroom teachers at both the primary and secondary levels of professional development. His research interests are in the areas of working memory (WM) and classroom instructional design, and in this respect his PhD thesis examined the relationship between cognitive load and cognitive inhibition, an executive function of the WM system. Dr Yeigh is a research associate with the Centre for Children and Young People (SCU), as well as a member of the Association for Mindfulness in Education (AME) and of the Teacher Education Research Group (SCU). He is also leader of the School of Education Learning Sciences Research Group, which focuses on the cognitive-psychological, social-psychological and cultural-psychological foundations of human learning. Based on these research affiliations Dr Yeigh has published widely in high quality education research journals and texts, and is currently pursuing research in the areas of pre-service teacher training, educational mindfulness and social-emotional wellbeing.
Email: tony.yeigh@scu.edu.au

Dr Ivy Chia, Singapore University of Social Sciences, Singapore
Ivy Chia is the Head of Programme (Education) at the School of Human Development and Social Sciences, Singapore University of Social Sciences, Singapore. She earned her PhD (Education) from the University of Cambridge and her MA (Educational Management and Administration) from University College London, Institute of Education. Prior to joining Singapore University of Social Sciences, she headed the Standards and Research Branch at the Academy of Singapore Teachers, Ministry of Education. She is also a trained quality assurance assessor and had undertaken assessment of private institutions delivering higher education degree programmes. Her research interests include teaching and learning within the higher education sector, e-learning and the use of analytics for improving teaching, curriculum and instruction, work-based learning and quality assurance. She was formerly Editor-in-Chief of Singapore University of Social Sciences' in-house scholarship of teaching and learning journal.
Email: ivychiasm@suss.edu.sg

Dr Yoshihiko Yamamoto, Shizuoka University, Japan
Yoshihiko Yamamoto is currently teaching English at Shizuoka University and has lived in both Australia and New Zealand for more than 10 years. He holds a PhD (Education), University of Canberra, MA in TESOL, University of Canberra, BA in Education & in Linguistics, Victoria University of Wellington. His research areas are Discourse Analysis (gender talk), Sociolinguistics (gender stereotypes) and Applied Linguistics (in general).
Email: auyamayoshi@yahoo.co.jp

Dr Alyson Miller, Deakin University, Australia
Alyson Miller is a writer, critic and scholar from Geelong, Australia. Her research focuses on scandalous literature, and the representation of freaks in literary and popular texts, as well as gender, feminism, postmodernism, and dystopian Young Adult fiction. Alyson's work has been published extensively in national and international journals, alongside two books: a literary monograph, titled Haunted by Words: Scandalous Texts, and a collection of prose poems, Dream Animals. A 2015–17 Victorian Arts Council grant is funding her most current project, a graphic novel/prose poem collection examining a post-atomic Alice's Adventures in Wonderland in collaboration with Cassandra Atherton and Phil Day. She currently teaches literary studies, and professional and creative writing at Deakin University.
Email: alyson.miller@deakin.edu.au

Dr Suja R. Nair, Independent Researcher, India
Suja R. Nair holds BA (Hons) and MBA degrees, as well as a PhD in Retail Marketing, from Jain University, Bengaluru, India. Currently, she is a Strategic Marketing Consultant at Educe Micro Research, Bengaluru. Her working experience spanning over two decades includes about 18 years with the industry and 4 years in active academics. She has been a prolific writer since 1999 having written many textbooks in the areas of Marketing Research, Consumer Behavior, Retail Management and Organizational Behavior published by Himalaya Publishing House, Mumbai, India. Her chapter contributions have been published by well acclaimed international publishers such IGI Global and Palgrave Macmillan. A reviewer for international journals and books, she has papers published in referred Indian journals and top international journal, Inderscience Publishers, to her credit. Her major fields of interest include Ethics, Education management, Retail marketing and Consumer Behaviour.
Email: sujarnair269@gmail.com

Reviewers

Dr Christina Belcher, Redeemer University College, Canada
Christina Belcher earned her PhD (Philosophy of Education) at Monash University, Melbourne, Australia. She has worked in higher education in Australia, New Zealand, British Columbia and is currently Chair of the Education Department at Redeemer University College in Hamilton, Ontario. Her research interests include worldview, children's literature, higher education, culture, collaborative inquiry, partnerships and technology. She has been the former Editor of the ICCTE-J journal, and is currently their book review editor. Her academic publications include book chapters, peer-reviewed journals, and education journals/magazines for teacher audience as well as collaborative research projects. She is an unapologetic "book-a-holic", and loves to read.

Dr Rachid Bendriss, Weill Cornell Medicine-Qatar, Qatar
Rachid Bendriss received his Doctorate of Education in Educational Leadership and MA in TESOL from the University of Central Florida (UCF), USA. He has been teaching multilingual students since 1999. He is currently an associate professor of English for Academic Purposes and Assistant Dean for Student Recruitment, Outreach and Foundation programs at Weill Cornell Medicine-Qatar (WCM-Q). Prior to joining WCM-Q, Dr Bendriss taught and managed educational programs at UCF and Valencia College in Florida, USA. He has lectured and written extensively on issues related to the internationalization of higher education, second language literacy, academic English development, information literacy, college readiness, and educational technology. Dr Bendriss is an international education leader who received the prestigious US Department of State Fulbright Award of International Education, the

distinguished Florida Association of International Education Annual Award, and multiple awards for excellence in teaching.

Dr Angelina E. Borican, Polytechnic University of the Philippines, Philippines
Angie Borican is the Director of the Publications Office under the Office of the Vice President for Research, Extension and Development of the Polytechnic University of the Philippines in Sta. Mesa, Manila. She supervises the unit in charge of producing the University journals and other publication projects of the University. She is an associate professor in the Department of Journalism, College of Communication, and handles journalism and research subjects. She also teaches in the PUP Open University as course facilitator in the Master in Communication and Master in Educational Management programs and handles research, organizational communication and development courses. A Bachelor of Arts in Communication, major in Journalism graduate, cum laude from the University of the Philippines in Diliman, she finished her Master in Business Administration degree also in UP Diliman and earned her Doctor in Educational Management degree from the PUP Graduate School. She is actively involved in research and publications. Her research outputs have been presented locally and abroad in research conferences organized by the Association of Southeast Asian Institutions of Higher Learning (ASAIHL), Asian Media and Information Center (AMIC), the Philippine Association of State Universities and Colleges (PASUC) among others. She has likewise authored and/or edited a number of modules and books both in the field of communication and education.

Dr Bachir Bouhania, University of Adrar, Algeria
Bachir Bouhania got both his MPhil (1999) and PhD (2007) from the University of Oran, Algeria. Since 1999, he has been teaching at the University of Adrar, in the south of the country, in the Department of Arts and English Language, Faculty of Arts and Languages. Former head of department (2002–2012), Vice-Dean for postgraduate studies (2012–2013), person in charge of the domain of foreign languages (2011–2017), and secretary of the National Pedagogical Committee for the Domain of Foreign Languages (CPND-LLE), he is the current Erasmus+ coordinator at the university level. Professor Bouhania reviews academic papers for several local, national and international journals such as SageOpen. He was a senior reviewer for IAFOR's European Conference on Language Learning held in Brighton, UK, in 2014.

Dr Joanie Crandall, University of Saskatchewan, Canada
Joanie Crandall is Coordinator of the Centre for Forensic Behavioral Science and Justice Studies at the University of Saskatchewan in Canada. She teaches for the College of Education and is an Executive Committee member of both of the unions to which she belongs. She completed her doctoral degree at the University of Saskatchewan in Interdisciplinary Studies, during which time she was a principal at a K-6 school in the Arctic and Limited Term Appointment at the University of Prince Edward Island. She taught grades 7 to 12 on a remote rural Cree reservation in northern Canada and has a background in Instructional Design and Educational Media. She is a facilitator of Instructional Skills workshops. She was the Book Review Editor for the Journal of Canadian Association of Curriculum Studies for four years and she brings three years of experience reviewing manuscripts for the Canadian Journal of Education. She has worked with non-profits and government agencies and has published her research in a variety of contexts. Her research interests include Indigenous writing, interdisciplinary learning models, multimodal emergent and early literacies, social justice approaches in teaching and writing, and qualitative methods.

Dr Nick Chown, Independent Researcher, Spain
Nick Chown is an independent autism advocate, mentor, researcher and trainer. He has undertaken research on support for students with autism at university, barriers to learning for students with autism in further education, autism awareness in the police service, viva protocols for doctoral students with autism, and diagnostic pathways for autistic adults. His most recent published research – undertaken in conjunction with various university colleagues – involved the development of a framework for "inclusive" research in autism. In addition to leading a team of independent researchers in the field of autism, he has also been engaged with a university project mentoring autistic adults. He is currently undertaking an investigation of autism research over the past 20 years and writing entries for an encyclopedia of autism. His book entitled Understanding and Evaluating Autism Theory was published in November 2016. He is a member of the editorial board of the Journal of Autism and Developmental Disorders. Prior to this, he had a lengthy career in corporate risk management.

Dr Denise E. De Souza, Nanyang Technological University, Singapore
Denise De Souza completed her doctoral degree at the National Institute of Education, Nanyang Technological University (NTU) in Singapore. She has a Postgraduate Diploma in Education and a Master of Education (EL) from the same institution. She currently lectures at the Language and Communication Centre in NTU, where she collaborates with the Scientific Communication team. She has been involved in a range of education-related research and has peer-reviewed manuscripts for Evaluation (Sage Journals), the Asian Journal of Social Psychology, Pedagogies: An International Journal and book chapters published by Routledge. Her research interests include the application of Critical Realism and Realist Social Theory in research practice, Academic Literacies, Multimodal Communication, Educational Technology and Program Implementation and Evaluation.

Dr Ilaria De Santis, Hawaii Tokai International College, USA
Ilaria De Santis earned an Ed. D. in Instructional Leadership from Argosy University, Sarasota Fl, a MA in Western Literature and Linguistics from the University of Naples "Federico II" and a BA in Art History and Literature from the University of Naples "Federico II". She is currently employed as an Assistant Dean of Liberal Arts and as Accreditation Liaison Officer at Hawaii Tokai International College in Kapolei, Hawaii. She also serves as adjunct assistant professor of Writing, Speech, and Spanish language at the University of Maryland University College, Adelphi, MD. She has been an Assistant Professor of Humanities at Tidewater Community College, Portsmouth, VA, teaching classes in Creative Thinking and Writing, Ancient, Modern and Contemporary Art. In the past, she worked as a lecturer of Italian and Latin languages at the University of Hawaii at Manoa and trained military linguists and Flag Officers for the Defense Language Proficiency Test (DLPT) in Advanced Spanish language. Her research interests include foreign language learning (Classics, ESL, Italian, Spanish), Western/Eastern Literature and Mythology, and Education with emphasis on Homeschooling and Curriculum Development. Her publications include articles published on the Journal of Interdisciplinary Humanities and several presentations held at the Accrediting Commission for Community Junior Colleges (ACCJC) Conference in Irvine, CA, at Tokai University Shonan Campus, Japan, and at South University, Virginia.

Dr Intakhab A. Khan, King Abdulaziz University, Saudi Arabia
Intakhab A. Khan is an Assistant Professor (Pedagogy of English) at King Abdulaziz University, Jeddah, Saudi Arabia. He holds postgraduate qualifications in English (MA, AMU, India), MEd (Jamia Millia Islamia, India), MPhil and PhD (JMI, India). His research and publications include education, language education, teaching of English, peace education,

culture-based teaching of English, educational policy and curriculum development. For the past 24 years he has been actively engaged in teaching, training, professional development, conference presentations, research, publication and community services. An author of 12 books and 60 articles/papers, Dr Khan has been carrying out sponsored projects on writing textbooks in the area of English language teaching in Saudi Arabia.

Dr Lynda Leavitt, Lindenwood University, USA
Lynda Leavitt is an associate professor in the School of Education, Educational Leadership, Lindonwood University, USA. She is Director of the Future Institute Research Center and Editor of the Journal of Educational Leadership in Action (ELA). Teaching responsibilities include EdD Capstone coursework in the Educational Leadership doctoral program along with serving as dissertation chair and committee member to many doctoral students. Dr Leavitt received recognition as Lindenwood University President's Scholar-Teacher and national recognition as Alpha Chi Honor Society Sponsor of the Year. She earned her EdD in Educational Leadership from Saint Louis University and holds an MA International Studies, MA Curriculum and Instruction, BS Elementary and Special Education and BS Political Science. Recent publications: Handbook of Research on Advancing Critical Thinking in Higher Education and Cultural Awareness and Competency Development in Higher Education.

Jessica Loh, Institute of International Education, Thailand
Jessica Loh is the Director of Outreach with the Institute of International Education in Bangkok where she oversees outreach initiatives for global scholarships in Asia-Pacific. Equipped with an MA in International Education, she served six years at Payap University in Chiang Mai, Thailand, where she established the International Campus Life unit, implementing programs for Payap's foreign student body to support international student development and integration. She then joined the University of Michigan, where she advised engineering students and faculty on co-curricular education abroad program design, and co-developed an Engineering Across Cultures study abroad in Thailand. She served as mentor for the IIE pilot course, "Connecting with the World: International Relations at Higher Education Institutions", to familiarize Myanmar universities with campus internationalization. She is interested in combining arts and education, as exemplified by her organization of Chiang Mai's first Southeast Asian Film Festival, which focused on society and human rights. With over ten years of working in international education in Asia, she is knowledgeable about comparative education topics, especially pertaining to student mobility, internationalization, and institutional best practices for international programs.

Dr Alyson McGee, Massey University, New Zealand
Alyson McGee earned her PhD (Educational Research) at Gothenburg University, Sweden. Initially, she was a primary school teacher in the United Kingdom before studying to be a TESOL educator and working in France, Spain, Turkey, and Greece. As an academic, she has worked in the United Kingdom, Sweden, United Arab Emirates and New Zealand. Currently, she is the Academic Advisor for Internationalization and TESOL program at the Institute of Education at Massey University, New Zealand. Her research interests include internationalization in higher education; TESOL in schools and higher education contexts in English speaking and non-English speaking countries; leadership of TESOL; professional development and learning for teachers and teacher's educators; and qualitative research, particularly action inquiry. She has academic publications in peer-reviewed journals, education journals/magazines for teachers, published research projects, has been solicited for guest writings for publication in book chapters and has served as a keynote speaker.

Dr Thelma D. Manansala, Bataan Peninsula State University, Philippines
Thelma Manansala is a full-time permanent faculty member of the Bataan Peninsula State University, Philippines. She was accredited into full professor by virtue of NBC Cycle 5 in December 2014. She has been the cluster chair of the Mathematics Department from 2006 to 2016. She finished her Doctor of Education major in Educational Supervision and Management at the Bataan Peninsula State University in the Philippines, and Master of Arts in Educational Management at the same university. She has been in the teaching profession for 27 years. She has authored text books in College Algebra, Trigonometry, and Statistics. Her research interest focused on education in the Philippines including analysis of policies in education, management of both public and private institutions, curriculum and instructional development. She is a committee reviewer of the International Conference on Leadership and Governance, European Conference on Social Media, and was a senior reviewer at IAFOR's IICSSDubai2017 conference. She is also a reviewer for the following journals: Merit Research Journal of Education and Review, African Education Review, and Journal of US-China Public Administration.

Dr Teri Marcos, National University, USA
Teri Marcos completed her doctoral degree in Organizational Leadership, with an emphasis in Educational Management at University of La Verne, in California, USA. She currently serves as Professor, Lead Faculty, Educational Administration at National University’s Los Angeles Regional Center for the Sanford College of Education. Having served as a middle school educator and school administrator for 20 years she is leading several multi-university research projects including how districts engage leadership from a distributed lens, the collective efficacy of staff academic optimism on growth in student learning, and how iPrincipals best lead Technology Language Learners. To date, she has peer-reviewed four school leadership book manuscripts for Corwin-Sage, as well as manuscripts for the Journal of Women in Higher Education. She has served on the editorial board for the Journal of Urban Learning, Teaching, and Research (The American Educational Research Association). Her qualitative and mixed-methods research interests include: the collective efficacy of high-performing school staff in low socio-economic schools; the effects of legislated educational reform on student learning; coaching school leaders for equity; digital reflective portfolios; and assessment of curriculum and instruction.

Dr Elena Raevskikh, Centre Norbert Elias, France
Elena Raevskikh is a research fellow at the French National Centre for Scientific Research (CNRS), at the Centre Norbert Elias in Marseille, France. She holds a PhD in sociology from the School for Advanced Studies in the Social Sciences (EHESS). Her PhD thesis is entitled “The Genesis and renewals of institutional forms of culture: a study of music conservatories and their territorial anchors”. Dr Raevskikh has also graduated in international public law from the Lomonosov Moscow State University Law Faculty in Russia, where she studied the legal aspects of the process of economic and monetary integration in the European Union. She is currently involved in the ANR-Curricula research project funded by the French National Research Agency, which aims to analyze the reorganization of cultural institutions in cities designated “European Capitals of Culture” in four European countries (France, Sweden, Poland and Italy). For this project, Dr Raevskikh is developing new conceptual and methodological approaches to identify the creative territories and the socio-cultural dynamics of artistic innovation.

Dr Sonal Mobar Roy, National Institute of Rural Development and PR, India
Sonal Mobar Roy is an Assistant Professor at the Center for PG Studies and Distance Education at the National Institute of Rural Development and PR, India. She has worked as a Consultant at the Center for Equity and Social Development at the same institute and carried out monitoring and evaluation of sponsored government projects on the right to education and education for all. She worked as a Research Scientist at the Center for Exact Humanities at the International Institute of Information Technology, Hyderabad, before joining NIRDPR. Dr Roy has an MA in Social Anthropology, along with an advanced level diploma in Computer Applications. She earned her PhD in Sociology from the Department of Humanities and Social Sciences, Indian Institute of Technology Kanpur, one of the premier institutes in India. Her doctoral study focused on stigma related to TB and HIV in the Ladakh region of India, and the fieldwork was sponsored by Parkes Foundation, UK. Her research interests include Sociology of Education and Health, Culture Studies, Rural Development, Ethnography and Crowd sourcing. She has been involved in teaching, research and training at her institute and is currently working on compiling a compendium of best practices in rural development in India. She has national and international publications to her name and strives to bridge the gap between theory and practice through her writings and research.

Dr Akihiro Saito, Hakuoh University, Japan
Akihiro Saito is a lecturer in the Faculty of Education, Hakuoh University, Japan. His research interests include pedagogy, attitudes and identity in language learning, education policy and discourse theory. He is currently an editorial board member of Dialogic Pedagogy Journal. Meanwhile, he serves as a reviewer for System (Elsevier), The Asia-Pacific Education Researcher (Springer), and Eurasian Journal of Applied Linguistics. His articles have appeared in International Journal of Applied Linguistics (Wiley-Blackwell), System (Elsevier), and International Journal of Pedagogies and Learning (Taylor & Francis). He is the recipient of the 2016 Japanese Association of Qualitative Psychology International Research and Collaboration Promotion Award.

Dr Najwa Saba ’Ayon, Rafik Hariri University, Lebanon
Najwa Saba ’Ayon is a full-time assistant professor in the College of Arts at Rafik Hariri University, Lebanon. She is the advisor of the English Language Program and the coordinator of all English and Intensive courses in the department in addition to Arabic Communication Skills. Dr Saba ’Ayon has a BA in English Language, a teaching diploma in TEFL, as well as an MA in TEFL from the American University of Beirut, Lebanon, and a Doctorate of Education (EdD) from the University of Sussex, UK. She has a great deal of experience teaching English as a foreign language (EFL). Besides teaching English courses, she has taught elective courses, namely Intercultural Communication and Public Speaking. Moreover, Dr Saba ’Ayon has published and presented in national and international conferences on flipped learning, intercultural communication, student motivation, collaborative learning in ESP courses, as well as EFL teachers’ conceptions of teaching and their practice. She is interested in teacher training and development, ESP, intercultural communication, and preparation of professional communicators. Recently, Dr Saba ’Ayon served as an editor for Sage Open and a senior reviewer of abstracts in The IAFOR International Conference on Education – Dubai 2017. She is also reviewing abstracts for The IAFOR International Conference on Education – Dubai 2018.

Dr L. Bethe Schoenfeld, Western Galilee College, Israel
Bethe Schoenfeld completed her doctoral degree entitled “Dysfunctional Families in the Wessex Novels of Thomas Hardy” at Anglia Ruskin University, UK. Prior to that she

completed her MA in English Literature entitled "Shakespeare's Concept of Law and Justice" at the University of Haifa, Israel. She has been teaching English as a Foreign Language (EFL) and English for Academic Purposes (EAP) since 1985 in Israel. Her current research interests include student behavior and learning strategies in online foreign language courses as well as the socio-cultural impact of increased awareness of Israelis of the American rock band The Grateful Dead. She has co-authored several tertiary level textbooks, focusing on both critical thinking skills and academic-level articles and questions, for students of English learning English in a non-English-speaking environment at the Intermediate and Advanced levels. She has also been senior editor for department-wide EFL exams at the Intermediate and Advanced levels for the past 10 years at the Western Galilee College, where she has been lecturing since 1996.

Dr Chung-chin Wu, National Pingtung University, Taiwan
Chung-chin Wu is Assistant Professor at National Pingtung University, Pingtung, Taiwan. He is originally from Taichung, Taiwan. He received his doctoral degree with an emphasis in achievement motivation and juvenile delinquency from the Institute of Education at the National Cheng Kung University in the winter of 2015. He holds a Master's degree in early childhood education from Chen Chi University in Taipei, Taiwan. His research focuses are achievement motivation and juvenile delinquency for young child and adolescents, respectively. He was awarded funding by the Ministry of Technology in Taiwan to conduct multidisciplinary research with junior high school students during 2014. He is currently working on a research project regarding preschool teachers' classroom goals and preschoolers' learning motivation.

Dr Huanshu Yuan, University of Washington, USA
Huanshu Yuan holds a Master of Education degree with distinction in Bilingual and Multicultural Education. She received her PhD in 2017 in the field of Multicultural Education from the University of Washington (College of Education). She is a frequent presenter at national and international education conferences. Her teaching and research interests are multicultural and social justice education, culturally responsive teaching, curriculum development and reform, ethnic studies, and teacher education. Huanshu's current research concentrates on creating multicultural learning environments for students from diverse backgrounds, as well as preparing culturally responsive teachers for future students.

Editors' Introduction

It is our great pleasure and honour to introduce our December 2017 issue of the *IAFOR Journal of Education*. This issue is a selection of papers submitted directly to our journal as well as studies presented at the following conference:

1. The IAFOR International Conference on Education 2016. ECE2016 was held at The Jurys Inn Brighton Waterfront, Brighton, United Kingdom, on June 29 – July 3. Conference Theme: "Education and Social Justice: Democratising Education."

The first paper, entitled "Students with a foreign background in Italian Initial Vocational Education and Training (IVET) and the access to Italian as Second Language" is authored by Luisa Daniele, a researcher working at National Institute of Research on VET and Labour Market, Italy, a governmental agency with the responsibility of monitoring and evaluating labour market policies, including training policies for employed and unemployed adults. The article is based on the results of a 2014–2015 quantitative survey on a sample of 1,840 foreign students and 1,835 Italian students. These students attended courses in the Initial Vocational Education and Training (IVET) system in six Italian Regions. Some conclusive reflections on the enhancement of multilingualism in the Initial Vocational Education and Training (IVET) system are proposed for the development of national strategies in order to strengthen intercultural teaching and curricula, such as moving from spontaneous and scattered interventions to a systematic and formal plan to develop the provision of Italian as second language at regional and national level in primary education and for adults in the workplace.

The second paper, jointly authored by Oyetoro Oyebode Stephen and Oloyede Ezekiel Ojo, is entitled "Empirical Validation of Indices for Consideration in the Revision of Recommended Senior School Financial Accounting Textbooks in Southwestern Nigeria. This article is borne out of the need to identify specific indices of recommended Financial Accounting textbooks that need be revised and strengthened rather than cast platitudinous aspersions on the textbooks altogether. The study utilized the survey research design and the multistage sampling technique to draw out data on teachers' evaluations of the recommended textbooks. A robust non-parametric test-Kruskal-Wallis-was used to analyse gathered data. Inferences were drawn that textbook indices where significant differences exist among textbooks are likely indices for consideration in the revision of the recommended textbooks.

The third paper, entitled "The impact of Pecha Kucha Presentations in the Assessment of a Translation Studies Unit at The University of Western Australia", is authored by Anna Gadd Colombi. The article discusses the implementation of Pecha Kucha presentations in the assessment of a unit of Translation Studies – Translation Localisation – at The University of Western Australia, in semester 2, 2015. Pecha Kucha is comprised of 20 timed slides that appear on the screen for 20 seconds each, for a total of 6.40 minutes. Student presentations in the case study were aimed at assessing students' knowledge of the functioning of SDL Trados, a localisation software. The results obtained in this case study suggest fruitful avenues for additional exploration. The student cohort thoroughly enjoyed the Pecha Kucha experience and felt that preparing for and presenting a Pecha Kucha helped them achieve brevity, conciseness, and made them able to deliver large amounts of information in a short time. Furthermore, presentation times were drastically reduced and students' attention levels were extremely high during their peers' presentations. Most importantly students felt that the Pecha Kucha assessment helped improving their overall speaking and presenting skills.

The fourth paper, entitled “Elements of Motivational Structure for Studying Mechanical Engineering”, is co-authored by Nikša Dubreta and Damir Miloš. Nikša Dubreta and Damir Miloš, found that their research interests converged in the topic of students' extrinsic and intrinsic motivation to enrol higher education; they conducted a research with freshmen at the Faculty of Mechanical Engineering and Naval Architecture at the University of Zagreb, Croatia. The survey findings imply that relatively inconsistent structure of students' extrinsic and intrinsic motivation could be seen as inherent to an ambiguous process of study enrolment. It is expected that research outcomes will be useful to faculty management to shape and promote the engineering study programme that will encourage hesitant freshmen.

The fifth paper, written by Imam Suyitno, is entitled “Cognitive Strategies Use in Reading Comprehension and Its Contributions to Students' Achievement.” In the curriculum of the study program, reading is one of the subject matters that must be programmed by students. Students are required to take the course of reading and must master reading skills well. The various literature states that the strategy of reading affects the quality of reading comprehension. For that, in an effort to overcome the obstacles faced by students, in reading lectures, a researcher conducted an empirical study on the level of student competence in understanding a text and strategies used by students in understanding the text. The results of critical reflection show that in understanding the text, the students used various cognitive strategies. The diversity of cognitive strategies used by students influences the diversity of comprehension reading scores obtained by the students. Based on these findings, it is recommended that cognitive strategies that have significant positive contributions to textual understanding need to be trained in reading lecture practice.

The sixth paper, authored by Ayobami Gideon Adeleke, is entitled “Effects of Geographic Information System on the Learning of Environmental Education Concepts in Basic Computer-Mediated Classrooms in Nigeria” adopts Environmental Geographic Information System (EGIS) in computer-mediated classroom - a modern, powerful strategy via which educational improvement might be enhanced. The study found no significant effects of intervention on performance and retention. Result reflects on Nigeria’s unfitness for EGIS in her teaching-learning process at the moment. Subsequent researches across geo-political zones of the nation are needed to reiterate the needfulness of EGIS and facilitate its implementation.

The seventh paper, entitled “Investigating the Major Effect of Principal’s Change Leadership on School Teachers’ Professional Development”, is co-written by Dian-Fu Chang, Sheng-Nan Chen, and Wen-Ching Chou. This study is based on the data collected from elementary schools in New Taipei City. The research focuses on principals’ change leadership perceived by school teachers and explored which dimension of change leadership might impact on teachers’ professional development. This study demonstrates positive relationship between the principal’s change leadership and teacher’s professional development. The result reveals when the perceived principal’s change leadership existed in schools, it can reinforce the teacher profession development in terms of their willing to participating the teaching related enhancing activities and the expected effect of participation. It is expected that research outcomes might be applied to more wide practices to improve teachers’ performance in various settings.

The eighth article, written by Birgit Phillips, is entitled “Student-produced podcasts in language learning – Exploring student perceptions of podcast activities.” As the title suggests, the paper explores student perceptions of podcasts as a learning tool, thereby contributing to research on student-produced podcasts in the language classroom. After exploring the primary pedagogical implications of student-produced podcasts in language learning, the author describes two podcast assignments and the results of surveys conducted after the course aimed at exploring the students' level of acceptance and enjoyment of the podcast assignments, as well as the perceived learning benefits. The results indicate that incorporating student-produced podcast assignments into a course is challenging for both students and instructors. The paper addresses these challenges by presenting practical advice on how these challenges may be overcome. In addition, the article highlights some of the main learning benefits of student-produced podcasts, including increased motivation, digital literacy, language confidence, and fluency, as well as vocabulary acquisition.

Please note that we welcome original research papers in the field of education submitted by teachers, scholars, and education professionals, who may submit their manuscripts even though they did not participate in one of the conferences held by IAFOR. We also welcome book reviews, reviews of the literature in the field, and contributions introducing key educational scholars.

The *IAFOR Journal of Education* is an internationally reviewed and editorially independent interdisciplinary journal associated with IAFOR's international conferences on education. Like all IAFOR publications, it is freely available to read online, and is free of publication fees for authors. The first issue was published in May 2013, and the journal continues to publish three issues per year. The next issue, Volume 6 Issue 1 is scheduled for publication on March 1, 2018; this issue will also be a selection of papers submitted during the above mentioned conferences as well as papers submitted directly to our journal. IAFOR publications are freely accessible on the IAFOR website (Open Access).

Best regards,

Bernard Montoneri, Lucy Spence, Yvonne Masters, and Massoud Moslehpour

IAFOR Journal of Education
ije.iafor.org

Students with a foreign background in Italian Initial Vocational Education and Training (IVET) and the access to Italian as Second Language

Luisa Daniele
ANPAL - Italian Agency for Active Labour Market Policy

Abstract

This paper is based on the results of a 2014–2015 quantitative survey on a sample of 1,840 foreign students and 1,835 Italian students, of which, 41% of the Italians and 35% of those of foreign origins interviewed were female. The overall age was between 14 and 24, and these students attended courses in the Initial Vocational Education and Training (IVET) system in six Italian Regions: Emilia-Romagna, Lazio, Lombardy, Sicily, Tuscany, and Veneto. Language is the central issue in the survey, both in relation to the construction of multicultural and transcultural identity, and as a bridge to combine localisms with the global dynamics of migration, in its "dialect" edition. Some conclusive reflections on the enhancement of multilingualism in the Initial Vocational Education and Training (IVET) system are proposed for the development of national strategies in order to strengthen intercultural teaching and curricula.

Keywords: young people of foreign origins in Italy; initial vocational education and training; Italian as second language.

Introduction

The main critical issue for Italy is the extreme heterogeneity of the drop-out rates in different regions, with a steep increase in the regions of South Italy: 37.1% of 18–24 years-old drop-out in upper secondary school reside in the South (in 2010–2011). The ISFOL[1] research on the outcomes of Initial Vocational Education and Training (IVET) in 2015 ("Occupati dalla formazione. Seconda indagine sugli esiti occupazionali dei qualificati nei percorsi di IeFP – Employment and Vocational Training: second survey on occupational outcomes of qualified young people" in IVET, ISFOL, 2014) reveals that the drop-out rates grow especially in the transition from the first to the second year of upper secondary school. In the ISFOL (2014) survey it is demonstrated that many of the young people who leave high schools are then "rescued" within the Vocational Training agencies, which provide curricula aiming at delivering qualifications in the IVET system (from 2010–11 the IVET offer delivered in the VET agencies concur to compulsory education). The IVET curricula delivered in the training agencies are particularly appealing for this peculiar audience, the drop out component, attracted by didactic styles connected with a "learning by doing" approach, and in need of support and accompanying strategies, is witnessed by those who have attended a IVET education path in the training agency (ISFOL, 2014) in terms of satisfaction and success. Moreover, three years after qualification, 50% of the qualified students in IVET delivered by the training agencies have already found their first job, thus performing better than the students that qualified from the education path delivered in schools: in this latter case the rate diminishes at 38%.

Context Data

As for the contextual data, we see that the IVET in the 2014–15 educational year has had a positive trend, with more than 316,000 students enrolled in the triennial courses, that amounts to the 11.3% of the total of the secondary cycle population (ISFOL, 2015).

The inclusive nature of the IVET – Initial Vocational Education and Training is evident, incomparable with the parallel segments of our education system: in the year 2013–2014, those students with foreign origins enrolled in IVET totaled 46,375, accounting for 16.9% of total enrolments in IVET (except Islands, where data are not available) (ISFOL, 2015). If we compare this data with that related to other educational pathways, we see that students with foreign origins in upper secondary school (general education) are only 6.6%, while in the technical and professional schools are 15.2% of total enrolments (ISFOL, 2015) (see Table 1).

Table 1: Students with foreign background in IVET pathways (I, II, III year), training year 2013–14 (v.a.; %).

	Students with foreign origins in training agencies I-III year (v.a.)	Total enrolments in the training agencies I-III year (v.a.)	Percentage of students with foreign origins enrolled in the training agencies	Students with foreign origins in the schools I-III year (v.a.)	Total enrolments in the school (general; technical; professional pathways) I-III year	Percentage of students with foreign origins enrolled in the school (general; technical; profession	Total pupils with foreign origins enrolled in the training agencies + school (general;	Total students with foreign origins+ Italians in the training agencies and school	Percentage of students with foreign origins enrolled in the training agencies and in the

[1] ISFOL is a public institute of research on VET and Labor Market, supervised by the Italian Ministry of Labor.

			I-III (%)		(v.a.)	al pathways) I-III year (%)	technical; profession al pathways) I-III year (v.a.)	(general; technical; profession al pathways) I-III year (v.a.)	school (general; technical; profession al pathways) I-III year (%)
Total	22,836	119,445	19.1	23,539	155,321	15.2	46,375	274,766	16.9

Source: data elaborated by ISFOL (2015).

Turning our attention to the presence of non-Italian pupils in the school system, the availability of data collected annually from the 2001/2002 school year allows making some observations on the flows recorded in the last decade. The National Report 2013/2014 (Ministry of Education – MIUR ISMU, 2015) confirms a large increase of foreign students in the school population in the period 2001/02 – 2013/14 from 196,414 in the 2001/2002 school year (2.2% of the total school population) to 802,844 pupils with foreign origins in the 2013/2014 school year (9% of the total), although with a progressive deceleration from 2008/09 to date, in relation to the effects of the economic crisis in Italy (Ministry of Education – MIUR ISMU, 2015).

Generally, it is remarkable that foreign students enrolled between 2009/10 and 2013/14 grew by 19.2% compared with a decrease of -2.0% of Italian students and a decrease of -0.4% of the total school population (ISFOL, 2015) (see Table 2 below).

Table 2: School population by citizenship, school-year 2009/10, 2011/12 and 2013/14 (v.a.; %).

School year	Non Italian citizenship	Non Italian citizenship %	Italians	Total
2009/10	673,592	7.5	8,283,493	8,957,085
2011/12	755,939	8.4	8,204,227	8,960,166
2013/14	802,785	9.0	8,117,329	8,920,114

Source: data elaborated by ISFOL (2015).

Pupils with Romanian citizenship (154,621), Albanian (107,847) and Moroccan (101,176) are amongst the largest groups attending the Italian school in the school year 2013/14, then the group of Chinese origin students (39,211) follows, together with the Filipino group (24,839) (MIUR, 2015). Female pupils with a foreign background are 385,365, or 48% of all foreign students, a similar percentage is observed among native students (48.3%; MIUR, 2015).

Although in the Italian context some excellent practices in terms of the integration of pupils with foreign origins can be observed, nevertheless, international indicators are not satisfactory. An overview of the performance of foreign-born students is presented in the national report OECD PISA (2012) elaborated in Italy by INVALSI (an Institute of Research of the Italian Ministry of Education). From this data (representing 7.3% of immigrants, first and second-generation students) it is evident that the performance of immigrant students (first and second generation) are in all the observed disciplines – math, reading, science – lower than those of the natives, with marked geographical disparities between the South and North: with regard to the different levels of skills in mathematics, native students tend to have significantly higher skills than those of students immigrants, with an average score of 490 against 442 seconds. Data confirms the orientation of the pupils with foreign origins to the technical and vocational training school, while only 20% of students with foreign origins choose high schools with liberal arts curriculum (*licei*) (MIUR, 2015).

Italians follow a radically different model of choice with an extreme polarization of the choices on liberal arts high school. Thus, 43.9% of Italian families choose high schools focused on humanities or science education; 33.4% technical schools; and only 18.9% vocational education. This data justifies concern of a kind of "segregation" of the school population with foreign origins in technical and professional schools, but it is also plausible to resize the data by reading it in relation to the aforementioned "polarization" of the choices, that is an extreme overrepresentation of liberal arts high schools among the Italian families, a peculiar phenomenon, if we compare the data representing school choices in higher secondary level with the other major European economies.

Nevertheless, it is interesting to note that the students with foreign origins born in Italy (so-called G2 – Second Generation) have chosen liberal arts high schools (*licei*) in percentage superior to other generations of students with foreign origins: 33.8% choose high school, while the choice of vocational schools falls to 29.8% against 39.8% for other generations of foreigners (MIUR, 2015), a sign of rebalancing in the distribution of educational choices among Italian students and foreign students.

Literature Review and Conceptual Framework

The migration phenomenon has changed over the past years not only in the origin but also in the type of flows. In fact, from temporary and non-resident, migration has become increasingly more permanent. Immigration for the purpose of work, once the bulk of immigration fluxes, now coexists with immigration for the purpose of family reunification giving to the phenomenon of immigration a more permanent character (Ambrosini, 2004). In this transition from one phenomenon to another, the issue of social assimilation and school integration of children born in Italy or those newly arrived has become relevant.

Therefore, since the 1990s, it has been necessary to find a new framework with different categories and paradigms for the studies on immigration in Italy and in Europe. Immigration studies moved from the conceptual framework on the assimilation processes drafted by the Chicago School from the beginning of the Twentieth century, and then evolved into three models focusing on the family, cultural and social relationships. In the Chicago School's conceptual framework, an ascendant *linear process* is identified with the abandonment of ethnic identity in favor of the acceptance of the host middle class values and style of life, with the acquisition of good education, a good vocational integration and a full acculturation; secondly, a *selective process* is described, when the migrant retains the original ethnic identity and it is also thanks to the strong ethnic and family ties that the young immigrant improves his social position; finally, a descendant process (the *downward assimilation* in Portes & Zhou, 1993), where the entry in the host society occurs only through access to marginal and deviant groups, where ethnicity becomes a stigma of discrimination, with this, early school leaving and an attitude of rejection towards the host culture is widespread.

The European debate started from the categories developed in North American theories, but it drifted in the direction of a deeper analysis not only of the integration dynamics, but also of the assimilation processes. The European debate has also focused on the relationships among policies for active citizenship, education, training, work and the policies for migration. These issues have been rather neglected in American studies that tend to take for granted the institutional scenario of reference. European scholars have preferred to develop the debate on integration rather than assimilation, basing their analysis on a comparison of the integration contexts (Crul & Schneider, 2010) and then defining the integration process as an inclusive path in the main host country institutions and focusing on the ways these relationships with the economic, legal, cultural system are developed and their characteristics.

In Italy, moving from the scientific debate derived from the North American studies, an interpretative model of the integration in the host society was proposed, from the combination of two key variables: the economic integration and the cultural assimilation in the second generation (Ambrosini, 2004) (see Table 3 below).

Table 3: The economic integration and the cultural assimilation in the second generation.

Cultural assimilation	Economic integration	
	Low	High
Low	*Marginal assimilation*: young immigrants set in marginalized and discriminated communities, who develop oppositional feelings toward the host society and its rules	*Selective assimilation*: academic success and economic progress favoured by maintaining community ties and different cultural codes
High	*Anomic deceptive assimilation*: acquisition of western lifestyles, but in the absence of tools and opportunities to obtain the necessary means to have access to the corresponding consumption standards	*Classical linear assimilation*: cultural assimilation, with the abandonment of ancestral identity, which goes hand in hand with the economic and social advancement

Source: Ambrosini & Molina (eds.), (2004).

The table above shows that the new category introduced by Ambrosini & Molina (2004), in compairison with those adopted by Portes & Zhou (1993), is the *anomic or deceptive* assimilation, with an emphasis on consumptive and consumerist life style and not only on only on cultural and social opportunities.

In particular, in the field of sociology of education, the question of the inclusion of young immigrants in education and training courses is linked to the issues of identity and belonging: the definition of "second generation" given to the children of immigrants indicates that the immigrant status is inherited even if it is not lived in the first place, that is, it refers to the status of newcomer and therefore liable to discrimination, to have difficulties in the integration process, to be viewed with suspicion due to their ethnicity: all conditions that children would share with their fathers (Ambrosini, 2004). On the contrary, other authors insist on the fact that the young represent a new world in comparison with that of the fathers, as they hold values, attitudes, opinions similar to those experienced by young natives in the same age group, crossing over the identity of the native families and the values of the host communities. In this perspective, the contribution of Besozzi (2009) is particularly interesting, as she identifies the transnational identity as a characteristic trait of the "second generation":

children of migrants born in Italy or who have reached Italy in the school age. The so-called "second generation of migrants" share an identity with their peers in the native community which is suspended between the global and local dimensions, despite their different origins.

The concept of transnationalism had already been mentioned in Anglo-Saxon studies (Glick Schiller, Bach, & Szanton Blanc, 1992; Portes, 2003), and it indicates a new theoretical paradigm where migrants and their children are not represented as passive subjects within the inclusion/exclusion dynamics of the host communities, but as active subjects able to take initiatives according to their ambitions, the family values, the supranational relational networks, thus determining the social and relational success for themselves and for their children. This ability to bind the native and destination contexts, the original and the adoptive cultures, indicate a chance for the second generation to take advantage from both the local and global belonging for their aim of social, economic, relational improvement.

The Eurydice Report (2004) on school integration of immigrant children in Europe states that two models are adopted in European countries: an integration model (with support provided within the morning hours or in dedicated afternoon hours) and the separation model (immigrant children are organized in separated classes for a short or a long term).

Italy has chosen an intercultural paradigm where immigrant children are integrated in ordinary classes, thus respecting the national post-unification tradition (post-1861) when different children from different regions of Italy, with different origins, experiences, dialects (Vertecchi, 2001) were integrated in the same class, with the aim of educating the "new Italian citizen".

So today, children with foreign backgrounds are integrated in the same mainstream classes. Special measures are adopted depending on the strategies adopted by the Regional educational policies, for example, the number of children in the class is limited, educational activities to support the learning of Italian as a second language are added, or even artistic activities, for all children, native and foreign are foreseen, to support intercultural awareness.

In this political framework, an Italian scholar has defined intercultural education as: "the transformation of the educational context, through the implementation of communication processes between people with different cultural orientations, attitudes and lifestyles" (Besozzi, (ed.), 2005, p. 48).

Methodology of Research

Moving from the conceptual framework and the context above outlined, the field of survey has been defined as the analysis of the characteristics of the students with foreign origins participating in the system of initial vocational training.

The first version of the questionnaire was built on the basis of these research issues. The questionnaire then was subjected to a try-out test in order to verify the clarity of the questions, and the internal and external consistency.

The population of reference (pupils of foreign origin) in the training agencies was not known, as not all Italian Regions (responsible for the planning of the training activities, according to the Italian Constitution) keep the "foreign origins" variable when collecting data on the students attending initial vocational training courses. Thus, it was necessary to proceed to a two-stage sampling strategy, with the training agency considered as unit of reference. The intersection and systematization of data has produced an initial 1968 database of certified training agencies, from which the first-stage sample was selected. Moreover, a reserve list has been extracted from the same database, in case the agencies from the main sample refuse to participate in the survey. The next step to a second-stage sampling has allowed the identification of the students to be interviewed, but since the target population was only partially known, it was not possible to build a pure probabilistic sample.

The research was carried out by ISFOL in 2014–2015 (Daniele, 2014; 2015a; 2015b); on students with foreign background in IVET: 124 vocational training institutions in Lombardy, Veneto, Emilia Romagna, Tuscany, Latium and Sicily were reached. 3675 questionnaires were retained for the analysis, of which 1840 were filled in by students with foreign backgrounds. Of this latter sub-sample, 149 pupils had a foreign parent and one parent born in Italy (8.1%); 488 were students born in Italy, from foreign parents – G2 (26.5%); 212 were pupils arrived in Italy when they were less than 6 years – G1.75 (11.5%); 541 were students that arrived in Italy when they were between 6 and 12 years – G1.5 (29.4%); 434 were students arrived in Italy when they were between 13 and 17 years – G1.25. Only 16 (0.9%) questionnaires were compiled by pupils arrived in Italy at the age of 18 or more – G1, (for the definition of G2; 1.5; G1.75; G2, see Rumbaut, 1997) this quota, being statistically not significant, it has not been considered in the detailed analysis (see Table 4).

Table 4: Students with a foreign background interviewed, according to the migratory generation.

	Sample size	%
Students with a foreign parent and one parent born in Italy	149	8.1
Italian foreign students born in Italy G2.0	488	26.5
Students arrived in Italy when they were less than 6 years G1.75	212	11.5
Students arrived in Italy when they were between 6 and 12 years G1.5	541	29.4
Students arrived in Italy when they were between 13 and 17 years G1.25	434	23.6
Students arrived in Italy at the age of 18 or more – G1*	16	0.9
Total	1840	100

*This quota, being statistically not significant, it has not been considered in the detailed analysis.
Source: data elaborated by ISFOL (2015).

The core topics were: family situation and the migratory pathway; studies and training; satisfaction with the choice of VET and integration within the training centers; prospects and expectations regarding employment; linguistic and social integration outside the training context. The questionnaires were administered by ISFOL during the months of April-June 2013. The survey was financed by the Italian Ministry of Labor.

Results and Discussion

As stated above, the issue of the presence of foreign-born students, linked to the theme of the quality of the general education, has been present in the Italian scientific literature since the early 1990s. Less attention has been paid to the presence of foreign students in vocational training and education, not only in relation to the performance of pupils with foreign backgrounds, but also with regard to the integration, identity and belonging to the peer group in the training centres.

The term integration, therefore, refers also to the possibility of participation in a community, thereby "recognizing a full existence active and conscious – not without conflict – of the subjects to integrate" (Besozzi, Colombo, (eds.), 2012, p. 9). Thus, the question of integration, affiliation, personal identity formation, social and cultural development of the new citizens is relevant from the dual point of view of the relations between individuals and between them and the larger society.

Against this background, the general hypothesis that motivates this article is that the identity and cultural belonging is dynamically determined through the relationship with those who have a similar linguistic and cultural origin, but also with the new groups met in the country of destination. The relational dimension brings up a new paradigm concerning cultural identity, linked to the exchange with the various human, spatial and temporal contexts.

The wide diffusion of Italian as a "lingua franca" for those who has arrived in Italy from school age, but also for newcomers, has been growing since the early Nineties. In fact, the term of "Italian as second language" does not represent anymore the extensive and widespread use of this language made by the young people with foreign origin in the exchanges with the natives, but also in inter-ethnic relationships.

Italian has become actually a "second mother tongue", visited and practiced, next to the maternal language of origin. Italian, in fact assumes an important place in the construction of the identity for adults and young people, in the exchanges and in the narration of the personal or family migration. The Italian language then looks like:

- "The language of "survival" for the adults newly arrived in Italy;
- the language of work and exchanges for those who reside here since longer;
- the language "to certify" for those who demand the release of the residence permit;
- the language "of the children" for foreign families, whose children every day bring at home new terms, new meanings and stories."[2]

The context has therefore become very complex and diversified: the needs related to acquisition of Italian on behalf of the newly arrived adults and children, coexist with the needs to refine the language, to better the mastery and quality of expression in the workplace and in everyday situations, improving vocabulary, syntax, oral expression and writing. These needs are linked to the expression of the self and the strengthening of the social roles of the adult or young adult (student, citizen, user, patient, etc.).

Table 5 shows that the percentage of students with foreign background attending Italian courses as second language tends to increase with the age at arrival (from 14.4% to 70.6%). Worryingly, 21.9% of young people arrived in Italy between 13 and 17 years old report not having attended any Italian course. An alarm bell is ringing for this generation of students near to becoming full citizens at the age of 18 (see Table 5).

[2] National Observatory of the integration of foreign students – Osservatorio nazionale per l'integrazione degli alunni stranieri e per l'intercultura, p. 3.

Table 5: Students who have attended Italian as second language courses (%).

	Migratory generation			
	Italian foreign students born in Italy G2.0	Students arrived in Italy when they were less than 6 years G1.75	Students arrived in Italy when they were between 6 and 12 years G1.5	Students arrived in Italy when they were between 13 and 17 years G1.25
Yes, organized by the school that I attended before the CFP	21.2	10.8	33.9	49.0
Yes, organized by the CFP that I attend now	3.6	1.8	2.0	10.4
Yes, organized by associations or other bodies	6.1	1.8	4.7	11.2
No, I have not attended any courses	56.2	79.6	54.9	21.9
No answer	12.9	6.0	4.5	7.5
Total	100	100	100	100

Source: data elaborated by ISFOL (2015).

The questionnaire contained a question about the knowledge of Italian (speaking, reading and writing competence), a self-assessed measure which can give the representation of the perceived easiness in the everyday use of Italian. In the comparison between pupils with foreign background and Italians, as far as speaking and reading is concerned, there is no great difference: in both cases more than 90% of Italians and students with foreign origins declare to be good or very good, it is so evident that the students with foreign origins have reached the level of native children. More distance is recorded for writing: 8.2% of the students with a foreign background say they are poor or very poor in writing, compared with 3.1% of the Italian sample. If we consider into details this data, it is remarkable that 15.8% of the 1.25 Generation arrived aged between 13 and 17 years old (6.9% of G1.5; 3.9% of G1.75; 5.6 of G2.0) affirms to be poor or very poor: the question should be posed whether this generation will be able to bridge this important gap after the age of 18 without focused initiatives to avoid their permanent exclusion from an active and full citizenship.

Multilingualism is also a relevant issue. Italian educators are giving growing attention to this matter, considering that multilingualism could, on one side, enrich the curriculum of the monolingual students giving them more instruments in an intercultural world, on the other, valorize the migratory history of the foreign students, who are otherwise made invisible in their specificity. The foreign students, compared to Italian students, claim more frequently to know at least one other language besides Italian and in 31.5% of cases, even three languages. For Italians the second language indicated is predominantly English, while for students with foreign background, it is their mother tongue (Figure 1).

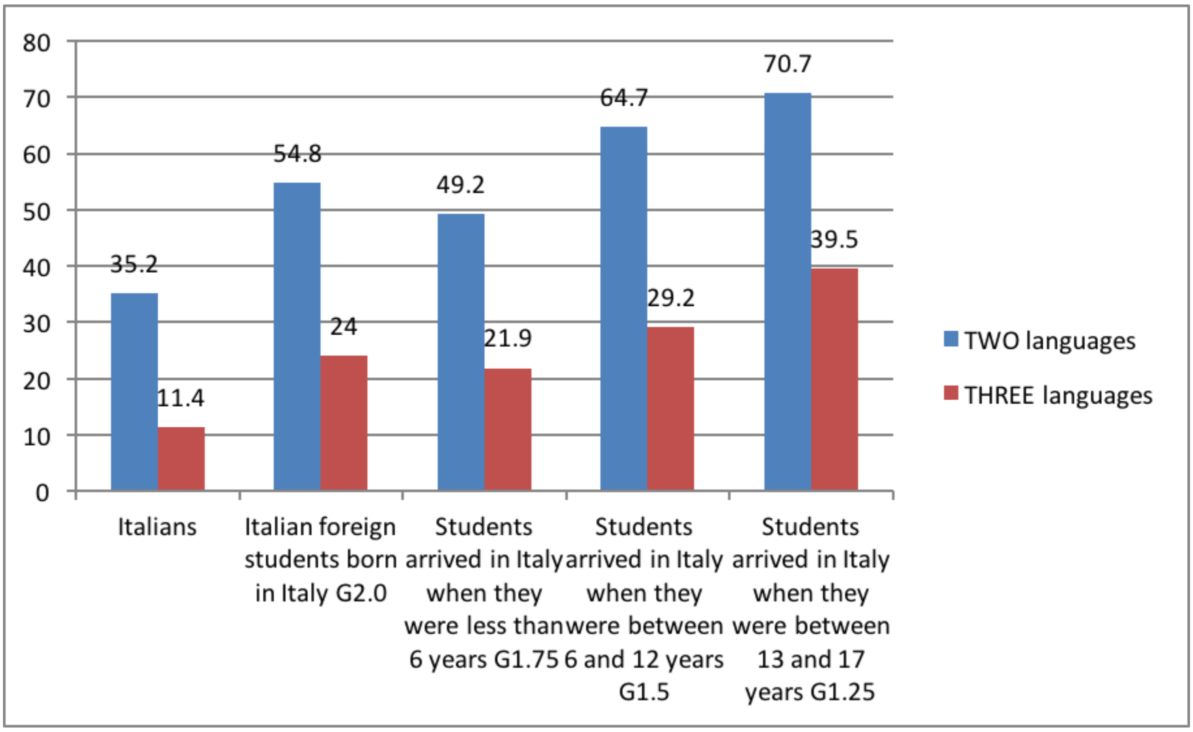


Figure 1: Multilingualism: comparison among Italians and foreign students*; migratory generations (Rumbaut, 1997); in %.

* Only valid responses "very good" and "fair" (in a scale of four values) to the question: can you speak, read or write a foreign language (Italian included in "two" or "three" languages).
Source: data elaborated by ISFOL (2015).

The analysis of the use of the language in everyday situations gives counter-intuitive results: Italian is the first language used by foreigners in relationships between peers, and this also applies to the most recent generations that arrived in Italy, but it is even more relevant that several generations of foreign boys and girls use Italian more frequently than the Italians, who (for 20.5% of the Italian sample), in many regions, prefer to use a dialect instead of Italian in their relationships with peers and within the family. Thus, in some regions the Italian language has become a vehicular language for the relationships within institutions, even schools and training centers. It is then possible to observe the presence of both intercultural and globalization dynamics and forces related to localism, which are still very strong and rooted in all Italian regions (Table 6).

Table 6: Italian (and dialect) in everyday life (1^ choice; %).

	Italians	G 2.0	G1.75	G1.5	G1.25
Italian	79.5	82.3	87.4	78.3	67.2
Foreign language	1.4	15.0	10.1	19.4	31.8
Italian dialect	19.1	2.7	2.5	2.3	1.0
Total	100	100	100	100	100
v.a.	1835	488	212	541	434

Source: data elaborated by ISFOL (2015)

The scene is completely different considering the language used in the relationships with family members: for the students with foreign backgrounds, their mother tongue becomes the first language spoken, even for the generations born in Italy (G 2.0) who still keep the mother tongue as the language which underlines their belonging to the native community. Similarly, in a symmetrical perspective, for the Italian students, in one case out of five, it is the dialect – the language of identity – that is dominant in domestic relationships within the family (Table 7).

Table 7: First Language spoken in family relationships (1^ choice; %).

	Italians	G 2.0	G1.75	G1.5	G1.25
Italian	78.5	39.2	42.5	30.3	19.0
Foreign language	0.6	59.9	57.5	69.3	80.8
Italian dialect	20.9	0.9	-	0.4	0.2
Total	100	100	100	100	100
v.a.	1835	488	212	541	434

Source: data elaborated by ISFOL (2015)

Conclusion

The above considerations, drawn from the results of research conducted by ISFOL, including the context analysis carried out through the interviews with directors, teachers and tutors of the training centers, lead us to present some concluding remarks in the field of strengthening of Italian as second language and the enhancement of a multilingual presence in the classroom as a cultural enrichment factor:

a) First, it seems necessary to move from spontaneous and scattered interventions to a systematic and formal plan to develop the provision of Italian as second language at regional and national level in primary education and for adults in the workplace. This plan should take into account regional specificities and promote collaboration between institutions that already have accumulated significant experience in the field, like in the case of the Adult Learning Centers, or the courses financed by the European Fund for the Integration-EFI, and the initiatives promoted by the non-governmental organizations with quality standards at European levels.

b) Secondly, it seems necessary not only to develop a training offer for the achievement of the A2 level (corresponding to the beginner’s level in the *Common European Framework of Reference for Languages* – CEFR) in Italian as second language (this certificate is necessary to get the residence permit for long-term residents), but also to develop devices and teaching methods to reach the most vulnerable users, those who are illiterate or with low literacy. It is necessary to develop learning content related to everyday situations. Also, it should no longer be delayed in the development of content that meet even the highest levels of Italian language command (B1, B2, C1, C2, in the *Common European Framework of Reference for Languages* – CEFR) for those who already received a tertiary education in their own country.

c) An alarm bell sounds for the foreign students that arrived in Italy that are aged 13 to 17 years: in 15.8% of cases they claim to have little or no expertise in writing in Italian. This circumstance can seriously impair their ability as citizens and workers in the absence of specific interventions for this group. Similarly, the argument can be extended to newly arrived pupils, whatever their age on arrival. In fact, comparative research, analyzing PIAAC data (Alieva Aigul, 2014), has demonstrated the limited usefulness of the model of "segregation" through the transit of newly arrived pupils in "special" classes before their introduction in general classes. Instead, the model of immediate "integration" in general classes, as it is in Italy, seems to give better results in terms of performance of the second generation. Nevertheless, it is also true that today this practice is based mostly on the informal capacity of learning and the adaptation of pupils of foreign origins, and it is supported by competences, as well informal, in terms of multicultural pedagogy and teaching methods, acquired by the teachers on the field. The provision of Italian as a second language should be, on the contrary, individualized, and organized in 6–8 hours of teaching per week with teachers with specific preparation (Aluffi Pentini, 1995). Moreover, for foreign-born students compensatory measures also should be considered: for example, the recognition of the level of command in the mother-tongue and the recognition of "credits" for incoming students from foreign school systems.

d) "The right to education can only be fully exercised if the learners master the specific linguistic rules that are applied in schools and are necessary for access to knowledge. (. . .) In this context, particular attention should be paid, right from the outset of schooling, to the acquisition of the language of schooling, which, as both a specific school subject and a medium of instruction in the other subjects, plays a crucial role in providing access to knowledge and cognitive development" (Recommendation of the Committee of Ministers to member States on the importance of competences in the language(s) of schooling for equity and quality in education and for educational success (CM/Rec(2014)5), pg. 4). It is really relevant to make students acquire a good understanding of the "micro-languages", the specialized languages related to each discipline: "every school subject (history, art, mathematics, etc., including the language of schooling as a specific subject) uses its own specific forms of oral and written expression: students should master these forms in order to successfully participate in school activities" (ibidem, p. 4). It is therefore important that teachers are aware of their role as facilitators of learning, and that they are supported in this role. In the 2014 Recommendation of the Council of Europe on the importance of competences in the language(s) of schooling, some operational runways are suggested for those responsible for educational contents and programs to promote effective consideration of the linguistic dimensions in the various school subjects by:

1. "Making explicit the specific linguistic norms and competences which learners must be able to master in individual school subjects;
2. making explicit in the programmes and curricula the learning modalities that should allow all learners, and in particular the most vulnerable among them, to be exposed to diversified language-learning situations in order to develop their cognitive and linguistic capacities;
3. highlighting, in the programmes, convergences in the linguistic dimensions of the various subjects, in such a way as to reinforce the effectiveness of the educational project;
4. recalling, in the programmes for the language of schooling as a specific school subject, the special place which this language holds because of its cross-cutting effect on all the learning processes conducted in that language;
5. encouraging authors of educational materials to ensure that such materials explicitly take account of the linguistic dimensions of the different subjects;
6. continuing and extending research in this field." (ibidem, p. 7).

References

Aileva A. (2014). *Accumulation of socio-economic inequalities among native and non-native students in comprehensive and stratified school systems*, Paper, Metropolis Conference, Milan, November 2014.

Aluffi Pentini A. (1995). *Per una pedagogia antirazzista. Teorie e strumenti in prospettiva europea*, Junior.

Ambrosini, M., & Molina, S. (eds.) (2004). *Seconde generazioni. Un'introduzione a futuro dell'immigrazione in Italia*. Torino: Fondazione Agnelli.

Besozzi, E. (ed.) (2005). *I progetti di educazione interculturale in Lombardia. Dal monitoraggio alle buone pratiche*, Milano, Fondazione ISMU, Regione Lombardia, Osservatorio regionale per l'integrazione e la multietnicità.

Besozzi, E. (ed.) (2009). *Giovani stranieri, nuovi cittadini. Le strategie di una generazione ponte*, Milano, Franco Angeli.

Besozzi E., & Colombo M. (eds.) (2012). *Relazioni interetniche e livelli di integrazione nelle realtà scolastico formative della Lombardia*, Milano, Fondazione Ismu, Regione Lombardia, Osservatorio regionale per l'integrazione e la multietnicità.

Council of Europe, (2014) Recommendation of the Committee of Ministers to member States on the importance of competences in the language(s) of schooling for equity and quality in education and for educational success, CM/Rec(2014)5.

Crul, M., & Schneider, J. (2010). Comparative integration context theory: Participation and belonging in new diverse European cities, *Ethnic and Racial Studies*, *33*(7), 1249–1268. https://doi.org/10.1080/01419871003624068

Daniele, L. (2014) *Giovani immigrati di seconda generazione, formazione professionale, occupabilità e cittadinanza attiva* [*Young second generation immigrants, vocational training, employability and active citizens*] Rome: ISFOL (ISFOL Research Paper, 2014/12).

Daniele, L. (2015 a). *Gli allievi di origine straniera nella IeFP: percorsi, inclusione e occupabilità* [*Students with foreign background in Initial VET: pathways, inclusion and employability*] Rome: ISFOL (ISFOL Research Paper, 2015/23).

Daniele, L. (2015 b). *Gli allievi di origine straniera in percorsi di IeFP e l'accesso alla lingua* [*Pupils with foreign background in IVET and the access to Italian as second language*] Rome (ISFOL Research Paper, 2015/28).

EURYDICE (2004). *L'integrazione scolastica dei bambini immigrati in Europa*, Bruxelles: Eurydice.

Glick Schiller, N., Bach, L., & Szanton Blanc, C. (1992). *Towards a transnational perspective on migration. Race, class, ethnicity and nationalism reconsidered*. New York: New York Academy Series.

ISFOL (2015). *Occupati dalla formazione. Seconda indagine nazionale sugli esiti occupazionali dei qualificati nei percorsi di IeFP*. Roma: ISFOL.

Miur, Fondazione Ismu (2015). *Alunni con cittadinanza non italiana. Approfondimenti e analisi. Tra difficoltà e successi. Rapporto nazionale A.s. 2013/2014*, Quaderni ISMU.

Miur (2015). Direzione generale per gli studi, la statistica e per i sistemi informativi – Servizio statistico, *Gli alunni stranieri nel sistema scolastico italiano a.s. 2014/2015.*

INVALSI (2012). *OCSE – PISA, Rapporto nazionale.* Roma: INVALSI

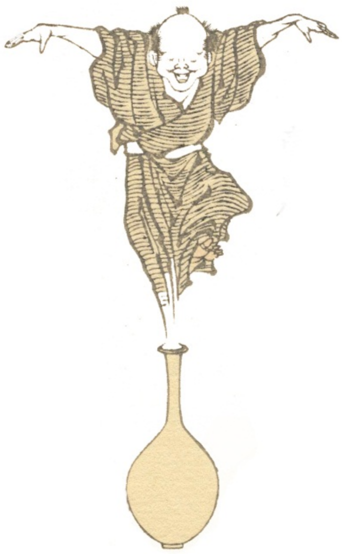
Portes, A. (2003). Theoretical convergencies and empirical evidence in the study of immigrant transnationalism. *International Migration Review, 37*(3), 874–892.

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants, *Annals of the American Academy of Political and Social Sciences, 530*(1). https://doi.org/10.1177/0002716293530001006

Rumbaut, R. (1997). *Assimilation and its discontest: Between rethoric and reality*. *International Migration Review, 31*(4), pp, 923–960.

Vertecchi, B. (2001). *La scuola italiana da Casati a Berlinguer*. Milano: Franco Angeli.

Corresponding author: Luisa Daniele
Email: luisa.daniele69@gmail.com



Empirical Validation of Indices for Consideration in the Revision of Recommended Senior School Financial Accounting Textbooks in Southwestern Nigeria

Oyebode Stephen Oyetoro & Oloyede Ezekiel Ojo
Obafemi Awolowo University, Nigeria

Abstract

The study determined a significant difference in teachers' overall evaluations of six recommended Financial Accounting Textbooks in Southwestern Nigeria. It also assessed the specific evaluation parameters that account for the difference. It adopted the survey research design. The multistage sampling technique was used to select a total of 80 teachers from 64 schools from the six states in Southwestern Nigeria. Results of data collected which were analysed using the Kruskal-Wallis (H) test depicted a significant difference in teachers' overall evaluations of the textbooks. Also, results revealed that the textbooks differ significantly on the parameters of mechanics, assessment, lesson design and instructional strategy and incorporation of technology into students' learning. The implications of these findings were discussed and the study concluded that financial accounting textbook writers and ministry of education officials at both national and state levels should give adequate consideration for these parameters in the revision of recommended financial accounting textbooks for improved effectiveness in the realization of curricular objectives in the subject.

Keywords: financial accounting; senior school; teachers and textbook evaluation.

Introduction

Without prejudice to the level of exit, the corpus of skills required of school graduates leaving the educational system for the world of work is on the increase. Such skills according to the International Labour Organisation (2013) include the broad categories of core employability skills, technical skills and personal/professional attributes. Further still, skills hitherto considered to belong to students of a particular stream/field of studies (Science and Mathematics, Technology, Humanities and Business Studies are now required of all graduates who enter the labour market either as entrepreneurs or employees in already established organisations (intrepreneurs) in the wake of globalisation. As an aftermath of this, recommendations have been made by scholars such as Ivowi (1992); Benavot (2006); Adeyemi (2011); Obanya (2014), (2016) and Oranu (n.d.) for functional, qualitative and diversified basic education (that spans nine years comprising six years of primary education and three years of junior secondary education) and post-basic (that continues after the basic education level to include three years of senior secondary education) education. The argument for these education levels by these scholars is that they are terminal formal education points for most school leavers.

Taking a clue from the conceptualisation of functional literacy as provided by UNESCO (1970) in Udagama (1978), functional education is all education operations oriented towards development, integrated in development and made a component part of a development project. In less subtle terms, functional education entails education that is practical, useful and purposeful for the students and for the society where they will function after exit from the school system. It is an education that emanates and seeks to solve problems in the environment of its recipients. Functional education lays emphasis on the acquisition of serviceable entrepreneurial skills such as marketing, communication, interpersonal relations and financial literacy; trade skills such as computer hardware and phone repairs, crop production and animal husbandry, hair dressing, dress-making, furniture making and so forth, and; desirable personal and professional attributes such as integrity, perseverance, resilience, honesty, and so on. The need for functionality of basic and post-basic education is a global concern as emphasised in reports published by the United Nations Educational, Scientific and Cultural Organisations (UNESCO) under the auspices of Jacques Delors and associates (1996), Barrett and associates (2008), among others. These scholars via these publications emphasise that objectives of school curricula offerings should reflect the four pillars of learning which are learning to know, learning to do, learning to live together and learning to be; and that education is a catalyst for sustainable development. Qualitative education on the other hand, implies quality education. Though the need for improved quality in education is replete in the literature, it however appears that defining quality education in unequivocal terms is evasive as “no general theory as to what determines the quality of education has been validated by empirical research” (UNESCO, 2005, p. 228). However, for the sake of this study, quality education is the education that gives “everyone in a society the chance to realize our (sic) full potential and enjoy better health, improved living standards, and fuller social and political participation in the society” (Tang in UNESCO, 2011).

The consideration of the need for functional, diversified and qualitative education could be conjectured to have led to the introduction of thirty-six trade and entrepreneurship subjects at the senior secondary school (SSS) level and the restructuring/re-invention of such subjects as business studies, information technology, civic education and cultural and creative arts at the junior secondary school (JSS) level in Nigeria. One of the skills that are being emphasised in the repository of skills expected of secondary school graduates is financial literacy or basic record keeping and accounting skills. From reviews of employability skills as perceived by employers which were presented in research reports by Lowden, Hall, Elliot and Lewin (2011), the Commonwealth of Australia (2007) and the Department of Education, Science and Training (2002); it could be inferred that financial literacy/basic record keeping and accounting skills may be embedded in skill/quality descriptors such as technical ability, business/organisation awareness, critical evaluation, review and reflection abilities, problem solving, communication and literacy, application of numeracy and application of information technology.

At the post-basic education level (also referred to as the senior secondary school level), one of the school subjects that teach financial literacy or basic record keeping and accounting skills is Financial Accounting. The exigency of the skill for Nigerian senior secondary school leavers could be reasonably posited to have led to the creation of book-keeping as a distinct entrepreneurship subject which is widely available to all students irrespective of field of study. Despite the relative importance given to financial literacy or basic record keeping and accounting skills, indices of performance in the West African Senior School Certificate Examinations (WASSCE) in Financial Accounting remain relatively poor and unstable. For instance, Oyetoro (2014) reported that the national trend of candidates' performance in the subject within a 9-year period that ranged between 2002 and 2010 revealed that less than 50% of the candidates passed with acceptable grades of A1 to C6 between 2002 and 2009 and that it reached a high of 52.2% only in 2010 in the period with least performance of 18.47% reported in 2006. The average percentage of students with non-acceptable passes of D7 and E8 was 30.13% during the period (The range of the percentages was between 16.07% and 35.21%). A similar trend was reported by Adetayo (2005) in a sample of students in Ijebu North local government area of Ogun State, Southwestern Nigeria where between 1999 and 2002, the percentage of students with A1-C6 ranged between 14.55% and 39.35%.

Several generic factors have been adduced as causative factors to these relatively poor performances which have in turn informed spirited attempts at identifying specific factors. Observably, some studies have been conducted on presage variables of students' personal characteristics that affect learning and achievement in the subject. Such research endeavours include that of Adetayo (2010), Gaffney, Ryan and Wurst (2010) and Phang, Johl and Cooper (2011). Also, relatively large research efforts pervade the literature on process variables of teaching strategies adopted in mediating and facilitating positive learning outcomes in the subject. Some of these latter efforts are typified in such research by Boyce (1999) on Computer Assisted Teaching and Learning; Raymond and Ogunbameru (2005) on the efficacy of Guided Discovery; Chang and Lee (2007) on Activity Based Teaching and Learning; Gaffney, Ryan and Wurst (2010) on Online Homework Systems; Chen, Jones and Moreland (2010) on the efficacy of groups in both online and traditional face-to-face courses; Azih and Nwosu (2011) on Instructional Scaffolding among others. However, little research endeavour exist concerning the pattern of textbooks usage and the suitability and relevancy of recommended textbooks in the subject area although inclinations on the centrality of textbooks in the subject could be gleaned from literature (see Ferguson, Collison, Power & Stevenson, 2008 and Davidson & Baldwin, 2005 in Chiang, Englebrecht, Phillips & Wang, 2008).

The concept of the textbook is rather elusive. As such, diverse definitions abound in the literature on the concept. One definition which is relatively comprehensive and overt was given by Fredericks (2005). This scholar defined a textbook as a collection of knowledge, concepts and principles of a selected topic or course usually written by one or more teachers, college professors or education experts who are authorities in a specific field and accompanied by teacher guides which provide one with supplemental teaching materials, ideas, and activities throughout the academic year. Traditionally, textbooks are only thought of as printed materials. Technology has however changed the substance of the traditionally printed textbooks with increasing sophistication in the layouts, diverse range of text types and integration of Internet links. Textbooks are even now available in electronic (*e*)-forms and as documents on laptops and phones. The benefits accruable to textbooks as important components of the teaching and learning process include: their definition of the main points of the aims, content, organisation and sequence of the curriculum and their influence on the determination of strategies by which certain topics are conceptualised and implemented; adaptability for independent study, tutorial endeavours and individualised instructions because they lend themselves to self-pacing; provision of a yardstick for the concrete measurement of students' progress and achievement among others (Litz, 2001; Moore & Quinn, 2004; Ehindero, 1986 in Oyetoro, 2014).

Despite the obvious merits of textbooks, they are not without deficiencies. Some of these include their lack of: enough flexibility to cater for the diverse and ever dynamic needs, interests and learning styles of learners; textual and communicative interactivity; multimedia power that take into cognisance the multisensory modalities by which learning takes place; the presence of coherent, current pedagogic principles depending on the capitalising interests and exploitations of the sponsoring agent; objectivity in the treatment of some culturally and socially sensitive issues such as ethnicity, tribalism, religion, women's right in relation to men and controversial issues; etc. (Litz, 2001; Moore & Quinn, 2004; Nwagbara, 1998). In order to maximise the advantages of textbooks while at the same time minimising their disadvantages, there is need for their evaluation for purposes of adoption or revision. Such evaluation should be continuous, free from political, administrative and individual biases and bottlenecks. This is because, according to Adeoye and Olaboye (2011), the choice of the wrong kinds of textbooks and students and teachers' considerable reliance on them can confound learning, waste class time, skew information, pauperize students (or even provide inadequate return on investment) and even sabotage instructional goals. Textbook evaluation in the words of Hrelovcik (2002), is the systematic analysis of a textbook with the aim of identifying the relative effectiveness of various aspects of textbook materials through a system of objective criteria (evaluative indicators).

Suffice it to state that several evaluative indicators have been developed for textbooks generally and specifically for textbooks within a field of discipline. A mix of these criteria become necessary, as the criteria are relatively extensive, depending on the purpose intended to be served by the evaluation. For the purpose of this study, the textbook evaluation indices used are: content; organisation; utility; mechanics; appropriateness; illustrations; physical make-up of the text; assessment; alignment with national curriculum, state standards, skills and assessments; learning design and instructional strategies; and incorporation of technology into students' learning. These indices accommodate items which to a large extent are keys and competences to be emphasised in vocational education as contained in Mayer's 2002 Committee Reports (as cited in Cornford, 2006). These competencies are collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in teams; using mathematical ideas and techniques and; solving problems and using technology. Also, these indices are characteristic of elements of change expected in the contents of vocational textbooks as explicitly listed by Gerard in European Centre for the Development of Vocational Training (CEDEFOP) (2010) which include the provision of:

1. situations/problems which are defined to help learners relate knowledge to familiar contexts;
2. a wide range of different materials and information types (texts, graphics, images, etc.) proposed to students to select the information needed to solve problems;
3. complex activities proposed to learners to solve problems and tasks which are meaningful and produce useful results;
4. grouped activities proposed to encourage social interaction;
5. activities that invite learners to reflect their own meaning and identify the resources and factors which were useful in solving a problem;
6. information that is synthesised and links are established between different themes, contexts or even disciplines to aid integration of different kinds of knowledge and transfer of knowledge and skills to new situations and contexts; and
7. contents aimed at making knowledge and social skills meaningful to learners by relating them to professional, social or personal contexts in which the learner might use these knowledge and skills.

There are insinuations that the presently used recommended financial accounting textbooks in southwestern Nigeria are grossly inappropriate for the realisation of curricular and instructional learning outcomes in the subject. The bases for these insinuations could be the vote-of-no-confidence placed by the majority on the textbook selection process and the abysmal trend of performance of students in the subject. Calls have thus been made for: the revision of these textbooks; adoption of newly published ones and/or commissioning of teams to write new textbooks from inception. It is imperative to state that the latter calls of adoption of newly published textbooks and commissioning of teams for writing new ones may be exercises in futility leading to the cycle of adoption of substandard textbooks if conscious efforts are not made to determine – from those who use the textbooks in teaching (teachers) – what in the nature of hitherto recommended and used textbooks need be strengthened for improved effectiveness in learning outcomes in the subject. This is the lacunae that this present study seeks to fill.

Empirical Review of Research on the Evaluation of Textbooks

Some of the researches on the evaluation of financial accounting textbooks have been reviewed in this section. The reviewed studies border on the readability of introductory and intermediate financial accounting textbooks and the evaluation of these textbooks on some pertinent indices. Flory, Phillips and Tassin (1992) examined seven intermediate accounting textbooks to determine if readability varies across the texts. The readability scores were derived from the Flesch Reading Ease Formula (Flesch, 1948) and Gunning's Fog Index (Gunning, 1952). The scores were analysed using the Kruskal-Wallis one-way analysis of variance followed by the Mann-Whitney U test for any differences initially discovered. Results show mostly insignificant differences across the textbooks. They explicated that the finding of their study differs from an earlier study that utilised the cloze procedure by Adelberg and Razek (1984), instead, similar to a study of textbooks written in the 1970s conducted by Razek, Hosch and Pearl (1982). They suggested that the two readability techniques presented and used in their study may assist accounting educators since they are both easy to use and are objective.

Davidson (2005) carried out a study to provide evidence on whether the writing styles used in accounting textbooks have changed in any systematic way over a 100-year period. The study was in response to the pervasive reporting on problems in public school education in the

United States which included the phenomenon of students graduating from high school with very poor reading and writing skills and the reduction (dumbing down) in the writing level of major school books, with no published study that has considered whether accounting textbooks have undergone the same reduction. The results revealed that the trends for all three levels of textbooks, namely: introductory, intermediate and advanced financial accounting textbooks consistently showed that the grammatical (sentence) complexity used has decreased steadily while the vocabulary (word) complexity has increased. As might be reasonably expected, the majority of the variables selected to measure the complexity of both grammar and vocabulary depicted that advanced accounting textbooks are the most complex, followed by intermediate, then introductory accounting texts. The limitations of the study as pointed out by Davidson himself include the non-consideration of other detailed measures asides from the Flesch-Kincaid readability formula. The implication of this is that since most of the readability formulas combine some aspect of word and sentence length; systematic changes in one of these two may be offset by opposite changes in the other measure. This produces reading levels that are relatively unchanged. Also, the study adopted the convenience sampling technique which may not have chosen the most representative or most commonly used textbooks. Last among the limitations is the limited statistical tests on which conclusions were based. While it is expected that subsequent work should improve the study by taking cognisance of the limitations pointed out, the use of rather excessive statistical tools should be approached with caution.

While a study of the trends in the readability of textbooks through several decades appealed to Davidson as reviewed above, Chiang, Englebetcht, Phillips and Wang (2008) were interested in the readability differences of leading financial accounting principles textbooks with a 2002 or later publishing date. Readability scores were obtained using four readability evaluation methods: Flesch Reading Ease, Flesch-Kincaid Grade Level Index, Gunning's FOG Index and the SMOG procedure. Three sets of comparisons were made in the study. They were overall readability comparisons, chapter comparisons and topic comparisons. The Kruskal-Wallis test was used for multiple test comparisons and where significant differences exist, the Wilcoxon Rank-Sum test with a Bonferroni adjustment for multiple comparisons was used in further comparisons. The results of the study indicated significant differences for all three sets of comparisons although the use of the conservative Bonferroni adjustment substantially reduced the number of differences that were shown in the study. Evidence from the study also suggested that readability among textbooks vary, but readability within the textbooks was generally consistent. The study has the obvious advantage, over other studies in the readability of accounting textbook series, of investigating further with the use of the Wilcoxon Rank-Sum test with a Bonferroni adjustment where significant differences existed. However, the choice of seven textbooks, which were not even randomly selected out of more than 30 financial accounting principles textbooks available in the market as pointed out by the authors, is a limitation to the generalisability of the study.

Plucinski, Olsavski and Hall (2009) in their study determined the readability of seven introductory financial and managerial accounting textbooks using the widely acclaimed Flesch-Kincaid Grade Level Formula. Sample writings which were selected from first half and second half of the textbooks were subjected to analysis using the independent t-test statistic with a view to determine if significant differences exist between the textbooks. The study finds that one text is clearly more readable than all of the others and another text is less readable than almost all of the other texts. A similar study, also involving seven (four full-length, "traditional" intermediate accounting texts, averaging 1,351 pages per text and three texts which are shorter, "abridged" texts, averaging 1,071 pages per text) intermediate accounting textbooks, was carried out by Plucinski in 2010. Comparisons of the textbooks by chapter and of the overall textbooks took place. Results of the comparison of the textbooks by chapter indicated that while some texts were more readable than others for select chapters, no one text is more readable (or less readable) than the other texts for all six chapters. Also, results from the overall comparison of the texts using independent t-test statistic also made this scholar conclude that in terms of readability, there appears to be no compelling evidence to prefer one text over another text in the same category.

Accounting textbooks have a major influence on the nature and type of learning activities in preparing students as new accounting professionals (Davidson & Baldwin, in Chiang 2005, Englebrecht, Phillips & Wang, 2008). As principles of financial accounting are the first major contact students have with accounting, textbooks selected for use in the teaching and learning of the subject must be written at the appropriate readability level. However, researchers such as Plucinski (2010) advised against using this criterion solely in the selection of financial accounting textbooks to the exclusion of other important variables such as a text's pedagogical approach, coverage of material, exhibits, and supplements. One of the methods of obtaining sufficient evidence on these other important criteria is a careful evaluator-analysis (content analysis) of a textbook in order to determine the sufficiency and adequacy of a particular variable of interest.

The content analysis method was employed in a relatively recent study by Phillips, Alford and Guina (2011). The study had as its objects the determination of the extent to which illustrations vary in four financial accounting textbooks widely used in the first financial accounting course in the United States of America. It also determined the extent to which two variations of illustrations, illustration function (decorational and organisational) and placement (earlier or later in relation to the corresponding text), interact to affect student learning. A total of 377 illustrations were examined. Across chapters, they reported little diversity in the total number of illustrations or their density per page but a substantial variability in the type, function and targeted learning level across the four books. More specifically, 33 (9%) of the illustrations were decorational, 121 (32%) were representational, 108 (28%) were organisational, 71 (19%) were interpretational, 6 (2%) were transformational and 38 (10%) were a blend of two or more functions. Inferences drawn from chi-square analyses and tests of standardised residuals conducted to verify the statistical significance of the apparent differences suggested that considerable variability existed in illustration characteristics. The analysis also revealed that illustrations in accounting textbooks were most commonly placed after the related text (37%); fewer illustrations were integrated within the text body (32%) and rarely were illustrations placed before the related text (6%). It was also more common for illustrations to appear on a different page (16%) or in a side bar (9%). Plausible explanations were provided for the prevalence of the illustrations and their placement in accounting books vis-à-vis topics in sciences and engineering texts. The second object of the study which was to determine the effects of illustration function and placement on students' learning showed that students learn more when decorational images precede rather than follow corresponding text and when organisational images follow rather than precede corresponding text.

Beside the use of content analysis as a means of textbook evaluation is the use of textbook evaluation checklists which are equally viable instruments. Textbook evaluation checklists have been employed and administered by teachers and students who are the real users of such textbooks and who are more often than not totally excluded or partially consulted in the textbook selection and adoption as well as the review processes most especially in the

Nigerian educational system. They have been used in the evaluation of essential school subjects' textbooks such as English (most especially in a Second language context) and Social Studies. The results of such studies could provide important feedback and input in the revision of the currently recommended textbooks with a view to improving students' learning as appropriate. This present study utilised a textbook evaluation checklist in order to make valid inferences on its objectives.

Methodology

Statement of the Problem

Textbooks have been recognised as core for the new sustainable development goal on education (UNESCO Global Education Monitoring Report, 2016). In specific terms, they are useful aids in the sharing, mediation and construction of Financial Accounting knowledge. There are many textbooks available for teachers and students' use in the teaching and learning of Financial Accounting. These textbooks complement teachers' efforts and also help students in their private studies. The inadequacy and the unsuitability of elements in these textbooks have been alluded to by reports as the cause of students' poor performance in the subject. Specific recommendations in the West African Examinations Council's (WAEC) executive summary of entries, results and chief examiners' reports on the WASSCE conducted between 2004 and 2006 which was released in 2006 included that: appropriate authorities in the education sector should address critical issues such as the learning environment, appropriate infrastructure, required teaching aids and equipment, and appropriate number and quality of teachers. It was also recommended that government should take necessary steps to make relevant books readily available and affordable for students' use.

Textbooks are integral component of the Financial Accounting learning environment. This assertion has been given credence by Ferguson, Collison, Power and Stevenson (2008) and Oyetoro (2014). However, such statements as "the government should take necessary steps to make relevant books readily available" (WAEC, 2006) would raise questions on the fidelity of the textbook recommendation and adoption process, most especially where the textbooks used in the secondary school system are recommended by the government through its agencies which include the Ministries of Education at the federal and state levels and the Nigerian Educational and Research Development Council (NERDC). Yet, if it could be established that due diligence and process was taken in the recommendation of these textbooks, then aspersions need not be cast on their recommendation and adoption processes but a shift in focus might be needed to what specific indices in them need be revisited and revised to make these textbooks relevant for the realisation of objectives in the subject area. Hence, in order to make recommended financial accounting textbooks relevant in the now for students and teachers' use as suggested by informed reports, the need for their assessment by teachers who are often neglected in the adoption process with a view to identify critical elements therein that may need to be revised is imminent.

The need for specificity in the elements of the textbooks that are needed to make them relevant comes to the fore as generic recommendations may not inform the desired positive change in the repertoire of expected learning outcomes in the subject. More so, the question of what exactly in the nature of Financial Accounting textbooks need be revised is yet to be answered, hence this study.

Theoretical Framework

This study adopted Daniel L. Stufflebeam's Context, Input, Process and Product (CIPP) Evaluation model. The concept of evaluation underlying the CIPP model is that evaluation should assess and report an entity's merit, worth, and significance and also present lessons learnt. The model's main theme is that evaluation's most important purpose is not to prove but to improve (Stufflebeam, 2002). Stufflebeam explained that a programme can be evaluated in a single dimension or in a few dimensions altogether (Stufflebeam, 1971 in Ghazali, 2016). Thus, a programme can be evaluated with a focus on only one of the dimensions of Context or Input or Process or Product or a combination of two or three of these dimensions or all of the dimensions.

Stufflebeam (1971) explained that context evaluation provides information about the strengths and weaknesses of a total system to assist in planning improvement-oriented objectives at each level of the system. Input evaluation provides information about the strengths and weaknesses of alternative strategies which might be chosen and structured for the achievement of given objectives. Process evaluation provides information about the strengths and weaknesses of a chosen strategy under the conditions of actual implementation, so that either the strategy or its implementation might be strengthened. Lastly, product evaluation provides information for determining whether objectives are being achieved and whether the change procedure which has been employed to achieve them should be continued, modified or terminated. He surmised that basically, the CIPP model has been developed to answer four basic questions, namely: What should we do? How should we do it? Are we doing it correctly? and Did it work? (Stufflebeam, 1971). Stufflebeam also explained that though the CIPP model is intended to facilitate educational improvement through a proactive approach, it also provides an adequate means for accountability through a retroactive approach.

Out of the quad dimensions, the process evaluation dimension of the CIPP model has been chosen to provide an adequate theoretical basis for the present study. This is because the intent of this study as guided by the stated hypotheses are to identify the indices where significant discrepancies exist among the recommended Financial Accounting textbooks (retroactive). The identified indices of discrepancies could then be relied upon as critical elements for revision in the presently recommended textbooks and the writing of new ones in the subject area (proactive). This dimension was appropriate as this study was on the evaluation of the recommended textbooks in a post-use textbook evaluation context. The evaluation was done with a view to establish how those textbooks that had already been used fared on important textbook evaluation indices. The indices of textbooks considered were Content, Organisation, Utility, Mechanics and Appropriateness. Others include: Illustrations, Physical Make-up of the text, Lesson design and instructional strategies, Incorporation of Technology into Students' Learning, Alignment with national curriculum, state standards and skills and Assessments. These indices, which have been used with a wide range of secondary school textbooks, are deemed pertinent for evaluation of textbooks in the subject area and are used in the present study.

Purpose of the Study

The general purpose of the study was to ascertain the critical indices that textbook writers, reviewers, publishers and other persons connected with the writing, recommendation, adoption and usage of financial accounting textbooks at the senior school level are to focus on in the subsequent revision of these textbooks. Specifically, the objectives of the study were to:

a. ascertain whether variation exists in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in Senior Secondary Schools in Southwestern Nigeria, and;
b. determine the specific index (ices) that may account for the variation in teachers' overall evaluations of the textbooks.

The results from this study are expected to provide information to all stakeholders in the financial accounting textbook production, writing, recommendation and adoption process on the index (ices) that need be the foci in the subsequent revision and adoption cycles of the textbooks. The results would thus have far-reaching implication for the identification of specific indices of financial accounting textbooks that need be revisited for the textbooks to be relevant for the attainment of curricular objectives in the subject rather than cast wide aspersions on the whole textbooks.

Hypotheses

The following null hypotheses were generated and tested at 0.05 level of significance:

1. There is no significant difference in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in Southwestern Nigeria;
2. There is no significant difference in teachers' evaluations of the textbooks on each of the evaluation index.

Methods

This study utilised the survey research design. The study population consisted of Financial Accounting teachers in public and private senior secondary schools in South West Nigeria. The multistage sampling technique was used to select a total of 80 teachers from 72 schools from the six states in South Western Nigeria. The first stage was the total enumeration of all the six states in South West Nigeria, namely: Lagos, Ogun, Ekiti, Osun, Ondo and Oyo. The second stage was the selection of two Local Government Areas (LGAs) from each of the states using the simple random sampling technique to give a total of 12 LGAs. Three privately owned and government owned secondary schools each were then selected from the LGAs also using the random sampling technique to give a total of 72 schools. The instrument was then administered on at least one financial accounting teacher in the schools who possessed and has been using at least one of the textbooks recommended by their respective state ministries of education in the teaching of the subject for a period not less than one academic session.

An instrument titled Financial Accounting Textbooks Formal Evaluation Questionnaire (FATFEQ) was used to collect data from the respondents. The items of the instrument were adapted from the textbook evaluation checklists developed by Moore and Quinn (1994), South Washington County Schools (2009) and two others: Textbook Evaluation Tool (n.d.) and Mathematics Textbook Evaluation Checklist (n.d.) (both retrieved online), taking cognisance of the nature of Financial Accounting. FATFEQ comprised 57 items with 11 subscales. The Subscales in FATFEQ include Appropriateness, Illustrations, Physical Make-up of the text, Lesson design and instructional strategies and Alignment with national curriculum, state standards and skills and Assessments. Each item in the teacher version has the following Likert type scale: "to the greatest extent", "to a large extent", "to some extent", "just barely" and "not at all" which were also assigned a rating of 4, 3, 2, 1 and 0 respectively. The Cronbach alpha coefficients of the subscales for FATFEQ were between 0.5 and 0.79 with a global scale index of 0.95. These values were considered suitable for conducting this study. The Kruskal-Wallis non-parametric inferential statistics was used to analyse the data.

Results

Hypothesis 1: There is no significant difference in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in Southwestern Nigeria.

In order to accept or refute this hypothesis, teachers' overall evaluation scores for each of the textbooks were subjected to the Kruskal-Wallis (H) statistics. The results obtained are as presented in Table 1.

Table 1: Analysis of Differences in Teacher's Overall Evaluations of Recommended Financial Accounting Textbooks

Evaluation Index	Mean rank						df	Test statistics (*H*)	*p*
Textbook Label[2]	A	B	C	D	E	F			
Overall Evaluation Index	40.70	47.38	38.20	54.71	13.63	19.30	5	13.68	0.018

Table 1 depicts that there is significant difference in teachers' overall evaluations of the recommended textbooks. The H value of the result (H=13.68; $p<0.05$) is significant at 0.05 level of significance. The null hypothesis was which stated that there will be no significant difference in teachers' overall evaluations of six mostly used recommended Financial Accounting Textbooks in South Western Nigeria was therefore rejected.

Hypothesis 2: There is no significant difference in teachers' evaluations of the textbooks on each of the evaluation indices.

In order to reach valid conclusion on whether to accept or reject this hypothesis, the score of each textbook on each of the identified indices was subjected to Kruskal-Wallis. The results obtained are as presented in Table 2.

Table 2: Analysis of Differences in Teacher's Evaluations of the Recommended Financial Accounting Textbooks on Each Evaluation Index

Textbook Labels ⇒ / Evaluation Index ⇓	Mean rank A	B	C	D	E	F	df	Test statistics (*H*)	*P*
Content	41.20	47.65	28.65	50.29	23.50	32.00	5	8.16	0.15
Organisation	41.86	38.38	42.55	51.00	13.00	30.40	5	8.63	0.13
Utility	38.60	48.81	28.40	58.36	25.63	37.30	5	11.03	0.51
Mechanics	40.94	52.23	45.15	36.07	22.88	9.60	5	15.68	0.008*
Appropriateness	36.83	39.19	41.00	49.00	57.00	39.30	5	4.20	0.52
Illustrations	40.64	38.46	38.60	52.43	30.38	32.00	5	3.57	0.61

Physical Make-up	40.20	40.81	48.50	41.64	14.13	37.70	5	6.67	0.25
Assessment	39.25	52.85	38.70	53.14	16.00	16.00	5	16.43	0.006*
Alignment with Curriculum	40.78	34.12	39.55	54.86	27.75	39.00	5	5.39	0.37
Lesson Design and Instructional Technology	39.93	48.81	37.50	51.79	18.63	23.30	5	10.13	0.014*
Incorporation of Technology into Students' Learning	40.96	46.96	35.05	57.50	18.25	18.10	5	10.13	0.014*

* Significant at 0.05 level of significance

Table 2 shows that there is no significant difference in the teachers' evaluations of the textbooks on seven indices of content (H=0.15, p>0.05), organisation (H=0.13, p>0.05), utility (H=0.51, p>0.05), appropriateness (H=0.52, p>0.05), illustrations (H=0.61, p>0.05), physical make-up (H=0.25, p>0.05) and alignment with curriculum (H=0.37, p>0.05). For each of these indices, the null hypothesis was accepted. On the other hand, the table reveals that significant difference exist on four indices of mechanics (H=0.008, p<0.05), assessment (H=0.06, p<0.05), lesson design and Instructional technology (H=0.014, p<0.05) and incorporation of technology into students' learning (H=0.014, p<0.05). For these latter indices, the null hypothesis was rejected.

Discussion

The results obtained are very indicative, showing that the significant difference was observed in teachers' evaluations of some indices of evaluation of the textbooks. This result is supported by several other studies such as Plucinski, Olsavski and Hall (2009), Plucinski (2010), Phillips, Alford and Guina (2011), that showed differences in the indices among financial accounting textbooks though the indices considered in such studies differ from those of the present. This finding is also not surprising as Stradling (2001) posited that what counts as being a good textbook in one place by a certain group people is likely to be perceived differently in another place by other people and that a definitive answer usually leads to little more than broad and rather platitudinous generalisations.

Results obtained from the analysis of teachers' evaluation to ascertain if there are differences in the means of the evaluation indices of the Financial Accounting textbooks reveals that the mean ranking of the textbooks are similar on the indices of content, organisation, utility, appropriateness, illustrations, physical make-up and alignment with national curriculum, state standards, skills and assessments. The similarity of the textbooks on these indices could be accounted for as they amend themselves to the classification by Mukudan, Hajimohammadi and Nimehchisalem (2011) as general attributes which could have been explicitly provided for by the criteria used by the state ministries of education and the Nigerian Educational and Research Development Council (NERDC). Hence, authors and publishers of these textbooks would have developed these textbooks taking cognisance of these indices in order to facilitate their recommendation.

The textbooks' means however differ on the mechanics, assessment, lesson design and instructional strategy and incorporation of technology into students' learning indices. Apparently, these criteria are distinctive features that also relate to the interactions that occur among the elements in the classroom teaching and learning process. They relate to the meaning that teachers could give to the teaching process and also to the meaning students are able to make from their interaction with the textbooks. These indices amend themselves to the constructivist principles of textbook design advocated by Cunningham, Duffy, and Knuth (2000) and Oloyede (2010).

Specifically, Cunningham, Duffy, and Knuth explicated that textbooks should conform to the goals of the constructivist learning environment which are: the provision of experience with the knowledge construction process, provision of experience in and appreciation of multiple perspectives, embedding of learning in realistic and relevant contexts, encouragement of ownership and voice in the learning process, the embedding of knowledge in social experience, encouragement of the use of multiple modes of presentation and encouragement of the self-awareness of the knowledge construction process. The items in the indices identified to differ significantly in this study are much related to these goals. The utilisation of hypermedia and other information systems with databases according to them would place emphasis on the provision of strategies or tools for navigating and customising those databases so that learners can explore and search out issues which are of interest to them within the subject and would thus avoid the linear mode of thinking associated with traditional textbooks.

Observably, these indices that differ across the textbooks are essential in ensuring that accounting skills and competencies are learned and acquired as appropriate. The disparities in the textbook with respect to these important textbook indices corroborates the assertion of Meurant (2010) that textbooks need to be compatible with blended learning, prepare students for a globalised world and foster autonomous learning.

Conclusion

The role of textbooks in the realisation of curricular and instructional objectives in Financial Accounting has been recognised in the literature. Also, the need to improve the quality of existing recommended Financial Accounting textbooks so that they could help maximise gains in students' achievement in the subject has been suggested by scholars. Yet, few studies point to specific indices of quality that need to be the foci in the process of revising or improving these textbooks. In order to bridge the gap in knowledge for informed decision in this identified area, this study determined if significant difference exists among the textbooks and if any significant difference exists, what indices account for such differences. The areas where significant differences are highlighted could then be inferred to be the areas where these textbooks need to be improved on.

The results have shown that the indices of mechanics, assessment, lesson design and instructional technology and incorporation of technology into students' learning account for differences in the textbooks. Remarkably, these indices are least focused on in textbook evaluation checklists and are at the crux of the meaning students could make from the textbooks when they interact with them. These indices also conform to the recent advocacy for textbooks design according to constructivist principles. The conclusion that could be reached from this study is that significant and desirable improvement in learning outcomes in Financial Accounting via effective textbook usage may only be realised if cognisance is taken of the constructivist-related indices of mechanics, assessment, lesson design and instructional technology and incorporation of technology into students' learning by textbook writers, editors, reviewers and users.

References

Adetayo, J. O. (2005). Trends in students' academic performance at the senior secondary school certificate examination in financial accounting. *Studies in Curriculum*, *4*(September), 58–67.

Adetayo, J. O. (2010). Predicting students' achievement in financial accounting using study habit and attitude scores. *Journal of Social Science and Public Policy, 2*(December), 78–85.

Adeoye, B. F. & Olabiyi, O. S. (2011). Basic technology textbooks in Nigerian secondary schools. *Journal of International Cooperation in Education, 14*(2)*,* 153–168.

Adeyemi, T. O. (2011). A comparative study of students' academic performance in public examinations in secondary schools in Ondo and Ekiti States. *Current Research Journal of Economic Theory, 3*(2), 36–46.

Azih, N., & Nwosu, B. O. (2011). Effects of instructional scaffolding on male and female academic performance in financial accounting in secondary schools in Abakaliki urban of Ebonyi state, Nigeria. *Current Research Journal of Social Sciences, 3*(2), 66–70.

Barrett, A., Ali, S., Clegg, J., Hinostroza, J. E., Lowe, J., Nikel, J., Novelli, M., …Yu, G. (2008). *Initiatives to improve the quality of teaching and learning: A review of recent literature.* Paper commissioned for the EFA Global Monitoring Report 2008, Education for All by 2015: will we make it?

Benavot, A. (2006, November). *The diversification of secondary education: School curricula in comparative perspective.* IBE Working Papers on Curriculum Issues No 6. Geneva, Switzerland: United Nations Educational, Scientific and Cultural Organisation/International Bureau of Education.

Boyce, G. (1999). Computer-assisted teaching and learning in accounting: pedagogy or product? *Journal of Accounting Education, 17*(2&3), 191–220. https://doi.org/10.1016/S0748-5751(99)00016-0

Chang, C. B. & Lee, L. (2007). Developing an activity based teaching and learning accounting. Retrieved April 30, 2012 from http://www.swdsi.org/swdsi07/2007_proceedings/papers/11.pdf

Chen, C.C., Jones, K. T., Moreland, K. (2010). Virtual groups in a cost accounting course: Group dynamics, outcomes and participant satisfaction. *Advances in Accounting Education: Teaching and Curriculum Innovations, 2*, 153–170.

Chiang, W., Englebrecht, T. D., Phillips, T. J., and Wang, Y. (2008). Readability of financial accounting textbooks. *The Accounting Educators' Journal, 28,* 47–80.

Commonwealth of Australia (2007). *Graduate employability skills*. Retrieved from http://www.dest.gov.au/highered/bihecc on 28th July, 2016.

Cornford, I. R. (2006, November). Making generic skills more than a mantra in vocational educational policy. A refereed paper presented at the Australian Association for Research in education Conference, Adelaide. Retrieved from http://www.aare.au/06pap/cor06433.pdf

Cunningham, D. J., Duffy, T. M., & Knuth, R. A. (2000). The textbook of the future. *CRTL Technical Report No. 14-00*. Centre for Research on Learning and Technology, Indiana

University, Bloomington. Retrieved July 27, 2011, from http://Crit-indiana.edu/publications/journals/tr14_00.pdf

Davidson, R.A. (2005). Analysis of the complexity of writing used in accounting textbooks over the past 100 years. *Accounting Education: An International Journal, 14* (1), 53-74. https://doi.org/10.1080/0963928041000169524l

Delors, J. (1996). *Learning: The treasure within*. Paris: UNESCO.

Department of Education, Science and Training (2002). *Employability skills for the future.* A report by the Australian Chamber of Commerce and Industry and Business Council of Australia for the Department of Education, Science and Training, Canberra.

European Centre for the Development of Vocational Training (CEDEFOP)(2010). *Learning outcomes approaches in VET curricula: A comparative analysis of nine European countries (Research Paper 6)*. Luxemborg: Publications Office for the European Union.

Ferguson, J., Collison, D., Power, D., & Stevenson, L. (2008). *An analysis of the role of the textbook in the construction of accounting knowledge*. Edinburg, Scotland: The Institute of Chartered Accountants of Scotland. Retrieved July 29, 2011, from http://www.strathprints.strath.ac.uk/159999/1/strathprints015999.pdf

Flory, S.M., Phillips Jr., T. J., & Tassin, M. F. (1992). Measuring readability: A comparison of accounting textbooks. *Journal of Accounting Education, 10*(1), 151–161. http://dx.doi.org/10.1016/0748-5751(92)90022-W

Fredericks, A.D. (2005). T*he complete idiot's guide to success as a teacher.* USA: Alpha Books.

Gaffney, M., Ryan, D., & Wurst, C. (2010). Do online homework systems improve student performance? *Advances in Accounting Education: Teaching and Curriculum Innovations, 2*, 49–68.

Ghazali, N. H. (2016). The implementation of school-based assessment system in Malaysia: A study of teacher perceptions. *Geographia Online Malaysian Journal of Society and Space, 12*(9), 104–117.

Hrelovcik, T. (2002). Foreign language textbook evaluation-methodological considerations. *Sera Filologiczna Studia Anglica Resoviensia, 6*, 217–230.

International Labour Organisation (2013). *Enhancing youth employability: The importance of core work skills.* Skills for Employment Policy Brief. Switzerland, Geneva: Author.

Ivowi, U. M. O. (1992). Philosophical consideration of school curricula in Nigeria. *National School Curriculum Review Conference Proceedings held in Kaduna State, 2nd – 6th September, 1991.* Lagos: Macmillan Publishers/Federal Ministry of Education.

Litz, D.R.A. (2001). Textbook evaluation and ELT management: A South-Korean case study. Retrieved November 10, 2017 from http://www.asian-efl-journal.com/Litz_thesis.pdf

Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). *Employers' perceptions of the employability skills of new graduates.* Glasgow, England: Edge Foundation.

Mathematics textbook evaluation checklist. (2011). Retrieved August 3, 2011, from http://www.ehow.com/info_7824556_mathematics-textbook-evaluation-checklist.html

Mathematics Textbook Evaluation Checklist (n.d.). Retrieved May 4, 2012, from http://mcz.nmsu.edu/mathnm/texts/texteval.pdf

Meurant, R.C. (2010). *EFL/ESL Textbook Selection in Korea and East Asia-Relevant issues and literature review*. Retrieved June 21, 2011, from http://www. Springerlink.com/content/G886174166144T22/primary

Moore, K. D. & Quinn, C. (1994). *Secondary instructional methods*. USA: McGraw-Hill.

Mukudan, J., Hajimohammadi, R., & Nimehchisalem, V. (2011). Developing an English language textbook evaluation checklist. *Contemporary Issues in Education Research, 4*(6), 21–28.

Nigerian Educational Research and Development Council (2013). *National policy on education*. Abuja: Author.

Obanya, P. (2014). *Repositioning Nigerian education on the world map: The role of NECO.* Ibadan, Nigeria: Stirling-Horden Publishers Ltd.

Obanya, P. (2016). *Education as learning a living.* In C. O. O. Kolawole, A. A. Bagudo, A. O. Akinkuotu, S. A. Babarinde, I. M. Ojedokun & S. I. Meroyi (Eds.), *Education in Nigeria: Looking beyond the 21st century (A book of reading)*, pp.1–81. Ibadan, Nigeria: Department of Teacher Education, Faculty of Education, University of Ibadan.

Oloyede, E. O. (2010). Curriculum content. In O. J. Ehindero, O. O. Dibu-Ojerinde & Y. A. Ajibade (Eds.), *Curriculum and the teaching process,* pp10–23. Accra, Ghana: Damas Educational Services Ltd.

Oranu, R. N. (n.d). *Vocational and technical education in Nigeria.* Retrieved from http:// www.ibe.unesco.org/curriculum/AfricaPdf/lag2ora.pdf

Oyetoro, O. S. (2014). *Evaluation of recommended financial accounting textbooks in secondary schools in Southwestern Nigeria*. Unpublished master's thesis, Obafemi Awolowo University, Ile-Ife, Osun State.

Phang, M. M. S, Johl, S., and Cooper, B. (2011, July). *A comparison of domestic and international accounting students' academic performance using the goal efficacy framework.* Paper presented at the AFAANZ Conference, Darwin, Australia.

Phillips, F., Alford, S. & Guina, S. (2011, December). *Illustrations in financial accounting textbooks: function and placement interact to affect student learning.* Paper presented at the CAAA Conference. Retrieved June 11, 2012, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=19762348

Plucinski, K. J., Olsavski, J. & Hall, L. (2009). Readability of financial and managerial accounting textbooks. *Academy of Educational Leadership Journal 13* (4), 119-127. Retrieved June 11, 2012, from http://www.alliedacademics.org/Publications/Papers/AELJ vol 13 No 4 2009 p119-127.pdf

Plucinski, K. J. (2010). Readability of intermediate accounting textbooks. *Academy of Educational Leadership Journal 14* (2). Retrieved June 11, 2012, from http://www.freepatentsonline.com/article/Academy-Educational-Leadership-Journal/235631630.htm

Raymond, U., & Ogunbameru, M. T. (2005). A comparative analysis of two methods of teaching financial accounting at senior secondary school. Retrieved April 19, 2012 from http://www.ltdl.org/journal/nov_05/article03.htm

Stradling, R. (2001). *Teaching 20th Century European history.* Strasbourg: Council of Europe Publishing.

Stufflebeam, D. L. (1971). The relevance of the CIPP evaluation model for educational accountability. *Paper presented at the Annual meeting of the American Association of School Administrators held on February 24, 1971 at Atlantic City, New Jersey*.

Stufflebeam, D. L. (2002). CIPP evaluation model checklist: A tool for applying the fifth installment of the CIPP model to assess long-term enterprises. Retrieved September, 14, 2017 from www.wmich.edu/evalctr/checklists.

Textbook Evaluation Tool (n.d.). Retrieved April 25, 2012 from http://www.state.nj.us/education/njpep/classroom/text_eval/textbook_evaluation_tool.html

Udagama, P. (1978). *Basic functional education: concepts and approaches.* Occasional papers No 1, May 1978 of the Asian Programme of Educational Innovation for Development. Bangkok, Thailand: The Regional Office for Education in Asia and Oceania.

United Nations Educational Scientific and Cultural Organisation (2016). *Every child should have a textbook.* Global Education Monitoring Report Policy Paper 23. Paris: Author.

United Nations Educational Scientific and Cultural Organisation (2014). *Sustainable development begins with education.* Paris: Author.

United Nations Educational Scientific and Cultural Organisation (2011). *UNESCO and education. Everyone has the right to education.* Paris: Author.

West African Examination Council (2006). *Executive summary of entries, results and chief examiners' reports on the West African Senior School Certificate Examination (WASSCE) conducted in Nigeria in 2006.* Lagos, Nigeria: Author.

Endnotes

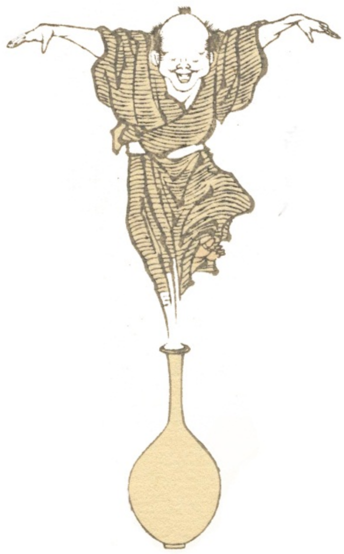
1. This categorisation is as stated in the 6th edition of Nigeria's National Policy on Education (NPE) (Nigerian Educational Research and Development Council, 2013) as distinct from the former of Science, Arts and Business Studies (Commercial).

2. Letters of the alphabets have been used to represent the recommended textbooks-in-use as depicted below. Evaluation results are reported for six out of the thirteen textbooks. This was due to the nature of the questionnaire used as the respondents were requested to evaluate only the textbook that they use most frequently. Also, the numbers of respondents who evaluated each textbook is shown.

Textbook label	Textbook Title	Teachers (n)
A	Essential Financial Accounting for Senior Secondary Schools by Longe, O.A and Kazeem, R.A	40
B	Business Accounting 1 (West African Edition) by Wood, F and J.O. Omuya	13
C	Simplified and Amplified Financial by Longe, O.A.	10
D	Business Accounting 1 by Wood, F and Sangster, A	7

E	Comprehensive Financial Accounting for Senior Secondary Schools S.Lola Akintelure and Oguobi, J.I.	4
F	Financial Accounting Made Simple (Vol 1) by Igben, R.O.	5

Corresponding author: Oyetoro Oyebode Stephen
Email: oyebode_oyetoro@hotmail.com



The Impact of Pecha Kucha Presentations in the Assessment of a Translation Studies Unit at The University of Western Australia

Anna Gadd Colombi
University of Western Australia, Australia

Abstract

Results of a case study on the implementation of Pecha Kucha presentations undertaken at The University of Western Australia in 2015 are presented and discussed here. Pecha Kucha, a fast-paced presentation format consisting of 20 slides set to proceed automatically every 20 seconds, was used in the assessment of the unit "Translation Localisation" for two reasons: it is a time-effective method to assess a large number of students in a short time, and it has the potential to teach students whilst also assessing them, thus killing two birds with one stone. Recent studies show that the Pecha Kucha style can improve presenting skills and English speaking skills in general. This has particular relevance when teaching large numbers of international students, such as in "Translation Localisation", where 84% of students spoke English as their second language. The paper ultimately shows how the use of Pecha Kucha presentations in the assessment of a unit carries important pedagogical implications for students of English for Academic Purposes.

Keywords: Pecha Kucha presentations; English for academic purposes; English as a Second Language; translation studies; localisation.

Introduction

Pecha Kucha presentations originated in the context of architecture and design due to the need to shorten and enliven standard 20-minute presentations. Klein and Dytham of "Klein Dytham Architecture" are credited with the invention of Pecha Kucha in 2003. Apparently, "if you give an architect a microphone [. . .], they'll go on forever" (PechaKucha.org/faq). Hence, a time restriction was introduced in Pecha Kuchas as a measure to achieve brevity and conciseness. The presentation style caught on, initially only in architecture and design, and Pecha Kucha Nights are now organized all over the world.

Pecha Kucha, which is an onomatopoeic word in Japanese, equivalent to 'chit chat' in English, entails 20 slides that appear on the screen for 20 seconds each, for a total of 6.40 minutes. The presenter has no control over the slides, which have been previously timed, and needs to continue speaking as each new slide appears on the screen. Compared to traditional 20-minute PowerPoint presentations, which feature a higher text to image ratio, Pecha Kuchas use more images, such as photos, pictures or graphics. Text is usually not involved (Glendall, 2007, pp. 66–69), or is even avoided altogether, due to time constrictions.

Literature Review

Since 2003 the Pecha Kucha format has been used in large conferences to allow for more speakers to present. In recent years a small number of teachers and researchers has answered the question raised by Klentzin et al (2010, p. 160) – "Could Pecha Kucha be effectively used as a teaching tool in higher education?" Pecha Kucha has been integrated in the classroom, especially in Business schools and within the teaching of English as a Second Language (ESL) and English for Academic Purposes, studying the effects on both presenters and audiences and both from the point of view of the teacher (who is assessing such presentations) and the student (who is giving the Pecha Kucha).

According to Miller Beyer (2011, p. 125), who studied the use of the format in a Psychology course, Pecha Kucha "improves some aspects of student presentation quality as compared to traditional PowerPoint". Due to the fact that the slides in a Pecha Kucha are automated, the presenter must be "organized to capture the message of each slide in the time permitted" (Miller Beyer, 2011, p. 122). There is also no reading from the slides permitted, so the presenter has to be more engaged in their presentation and engaging to their audience. Miller Beyer also notes how Pecha Kucha "may move presenters away from common weaknesses found with traditional Power Point, [. . .] [forcing] students to be more focused on their message because the time per frame is limited" (Miller Beyer, 2011, p. 122). Robinson agrees, claiming that the popular student strategy to read detailed notes while presenting can ultimately be distracting and lead to a presentation which focuses on content exclusively, giving little consideration to timing and pace (Robinson, 2015, p. 347).

Researchers do not seem to agree on the preparation times required for Pecha Kucha presentations as opposed to standard PowerPoint presentations: Klentzin and colleagues admit that "substantial preparation is essential for successful Pecha Kucha style presentation" (Klentzin, Paladino, Johnson, Devine, 2010, p. 161); Robinson warns us not to "underestimate the time to prepare the visuals and then to practice" (Robinson, 2015, p. 350); while Miller Beyer, who conducted three experiments comparing the two styles, claims that even though Pecha Kucha was novel to the students, it did not require more preparation time compared to 20-minute presentations (Miller Beyer, 2011, p. 125).

Anderson and Williams (2012, p. 1) emphasise the importance of communication skills as the most highly sought among employers of Business students. Translator scouting puts just as much importance on communication skills, because these are often arguably seen as a portrayal of a translator's proficiency in other languages. Translators, thus, need to display outstanding proficiency in the languages they work with. This is one of the various reasons behind my decision to implement Pecha Kucha presentations in the assessment of a unit of Translation Studies – Translation Localisation – within the Master of Translation Studies at The University of Western Australia. To my knowledge, this is the first report showing results of adapting Pecha Kucha to the Translation Studies classroom.

Case Study

The University of Western Australia (UWA) is one of the "Group of Eight" universities in Australia, the eight most prestigious universities in the country, and a research-intensive university. While the focus of the university is on research, excellence in teaching is also expected. Teaching is structured around two 13-week semesters and the option of summer intensive courses.

This case study analyses the implementation of Pecha Kucha presentations in the unit "Translation Localisation", a first-year unit of the Master of Translation Studies at UWA.

In Semester 2, 2015, 19 students enrolled in Translation Localisation. 16 of these students studied translation from and into Chinese; 2 from and into Italian and 1 from and into French[3].

The author is aware that 19 students is a particularly small sample size, which limits generalisation to larger groups or other demographics or classroom topics of study. However, this article should be seen as a description of the author's first experience implementing Pecha Kucha in a small student cohort, and as an invitation for other unit coordinators to attempt using this type of presentation in their assessment.

There are a range of reasons which influenced the choice to use Pecha Kucha presentations in this unit. First and foremost, since 84.2% of the students of Translation Localisation were non-native speakers of English, with different levels of proficiency and, mostly, displaying difficulties with aural skills, it was ideal to find a type of assessment which could also enhance the students' oral skills, which would improve their presentations as well as provide a useful tool for assessment. Results from existing studies on students of English as a Second Language (ESL) and English for Academic Purposes (EAP) show how Pecha Kucha can enhance the quality of students' presentations (Robinson, 2015, p. 347). One of my expectations before conducting the case study was to improve the speaking and presentation skills by using Pecha Kucha in class. In a way, I aimed to kill two birds with one stone by assessing my students using a method which would ultimately better their presentations.

Time constraints were also at the basis of the decision to use Pecha Kucha in the assessment of this unit: the aim was for the students to be able to present over a short period of time, in order not to take too much time away from teaching. The Pecha Kuchas were planned for the last two lectures of semester, thus across the last two weeks of teaching. In my experience as a tutor, I have witnessed how students' presentations can occupy more than half a semester,

[3] One student did not complete the unit: they did not present a Pecha Kucha, nor did they take part in the peer assessment and Qualtrics survey run at the end of semester.

and in these cases students not presenting can easily get distracted either working on their own presentations or working on other assignments. My aim was to find a presentation style which would hopefully involve the entirety of the classroom. Burke and James (2008, pp. 288–290) discuss the decline of standard PowerPoint presentations in the classroom, and Klentzin and colleagues (2010, p. 160) suggest Pecha Kucha as a novelty that could keep students interested. This was another reason for me to implement Pecha Kucha in Translation Localisation: my purpose was to captivate the viewers with a brand-new presentation technique and also hopefully stem more curiosity than a standard 20-minute PowerPoint presentation. Because of their brevity, Pecha Kucha presentations have the potential to originate more interest and, as a consequence, more questions from the audience.

Finally, I wanted to test the Pecha Kucha method against a different cohort to the ones available to researchers (Business, ESL, EAP). My expectation before running the case study was that the benefits of Pecha Kucha could be extended to other fields of higher education, including the teaching of Translation Studies and, more precisely, Localisation. I aimed to answer the research question whether Pecha Kucha could be used in the assessment of unit Translation Localisation. I set out to consider both pedagogical and practical aspects of Pecha Kucha presentations.

Methodology

The Pecha Kucha presentations were given a set title – "Translating with SDL Trados" – and were aimed at assessing students' knowledge of the functioning of SDL Trados, a localisation software. Students were encouraged to critically reflect on the use of Computer-Assisted Translation (CAT) tools in the practice of translation.

During the semester students were given plenty of information on Pecha Kucha presentations, and shown numerous Pecha Kuchas and how-to videos. This was done early in the semester to allow students ample time to familiarise themselves with the format. More information was uploaded on the unit's Learning Management System (LMS), together with an information sheet describing the assessment type in detail. A successful presentation would have been one that showed the presenter could operate SDL Trados effectively and confidently. The following excerpt is taken from the information sheet distributed to the students:

> Ideally, you should take the viewer through the process of translating a document with SDL Trados. You can choose a text of your choice. This text should be in English and you should show how you would go about translating into your LOTE using SDL Trados.
>
> You are allowed to include some theoretical concepts from the course, just remember to cite correctly. You can choose to have a final bibliography page or you can include citations in small font in the corner of the relative slide.
>
> You are allowed to reflect on your practice. How is SDL Trados useful in your practice as a translator? What are its limitations, if there are any?

Unlike traditional Pecha Kucha presentations, students were given the opportunity to use slightly more text in their slides, in order to allow for critical reflection on CAT tools. However, students were warned about the risks of having lengthy text slides: being on the screen for only 20 seconds, it was highly likely that not all the text could have been analysed in such a short time.

In the information sheet, I also outlined that students needed to include at least three screenshots of a translation made on SDL Trados, to show that they had been using the software to translate various types of documents. In week seven, I presented a Pecha Kucha on the topic of translating using localising software in order to give my students an idea of what their final presentations should have aimed for.

The final Pecha Kucha presentations were planned for weeks 12 and 13. The Pecha Kucha would be assessed both by the tutor and by the peers. The weighting was divided as follows: 30% instructor assessment and 10% peer assessment. The assessment was worth a total of 40% of the students' final mark. The other 60% was divided between essays (40%) and reading notes (20%). Both instructor and peer assessment followed the criteria listed by Miller Beyer (2011, p. 123): content, organisation, eye contact and voice quality, visual. Each skill was worth 25 points for a total of 100 points. Students were not allowed to mark their own presentations. Even though students were given the possibility to ask questions to presenters at the end of each Pecha Kucha, not many questions were asked. We can hypothesise that students of Translation Localisation did not engage in numerous post-presentation questions for reasons of anxiety and/or sympathy for their peers. In order to stimulate more questions, future Pecha Kucha assessments could implement compulsory questions from the students. These could even substitute the 10% peer review, which, as we shall see in the data analysis section of this article, were unrealistically generous. Due to the fact that the audience will compulsorily have to ask questions about their peers' presentations, audience attention should be retained.

At the end of the semester, a non-compulsory anonymous Qualtrics survey was conducted to ascertain students' opinions on this first Pecha Kucha experience at the Master of Translation Studies at UWA. 88.8% of the student cohort took the survey.

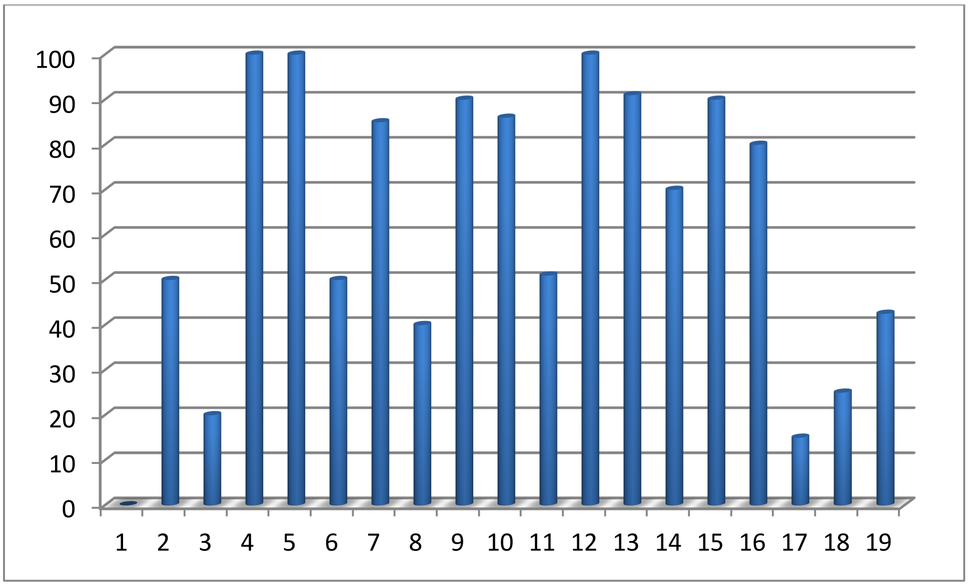
Results and Discussion

The Pecha Kucha presentations were extremely satisfactory: 72.2% of the students who participated passed. A large number of these students presented their Pecha Kucha with enthusiasm and engaged with the audience. This first quantitative data demonstrates how students of Translation Localisation were able to succeed despite the limitations of Pecha Kucha (total time constraint; 20-second per slide constraint; higher image to text ratio compared to standard 20-minute presentations) using their own enthusiasm and creativity. While Pecha Kucha does inevitably limit a presenter, it also allows the expression of creativity, which is used as a means to overcome such limitations successfully.

A small percentage of students (27.8%) failed to succeed in the presentations, mostly because of poor presenting skills (reading their notes during their presentations), poor visuals, and limited research.

Stress and anxiety should be considered as a likely product of the Pecha Kucha presentations requirement. Compared to a standard 20-minute presentation, Pecha Kucha has the potential of making the students more anxious, due to time constraints. This may have contributed in the failure of the above 27.8% of the student cohort. Stress and anxiety may also be the reason behind the lack of questions at the end of each Pecha Kucha. In future implementations of Pecha Kucha questions could be formally integrated in the assessment in order to counteract this aspect. Below is a chart of the instructor's marks, worth 30% of the final mark:

Table 1: Instructor's marks.



The graph shows marks out of 100 (which were converted to 30% of the final mark). We can observe that 8 students out of 19 scored high distinctions. While I recognise this is an unusually high number of HDs, it must be noted that these marks do reflect the exceptionally high level of commitment on behalf of the students of the Master of Translation Studies. These students showed an outstanding involvement with the subject and the audience, good visuals, did not read from their notes, and the content of their presentations was far more than satisfactory. A small number of students scored from 79% to 50%, mostly presenting problems with two or even three of the criteria in the assessment grid.

One student, for instance, had too many animation effects and it was not possible to read all the text in their slides. As a consequence, they scored very poorly in the visuals criteria. They also scored poorly in the content criteria as their presentation was basic and did not show any critical engagement with the topic. A small part of the class did not pass the Pecha Kucha presentations: these students presented problems in all the criteria described above. Student no. 1 did not take part in the Pecha Kucha presenting a medical certificate and then withdrawing from the unit. Overall, the Pecha Kucha presentations went quite well: the average instructor's score was 62.3%.

Table 2: Peers' marks.

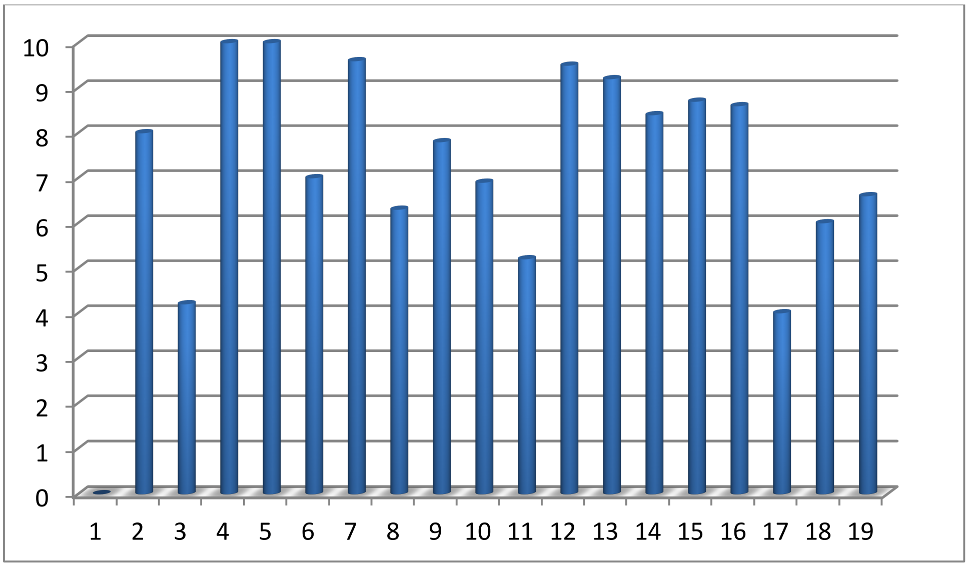


Table 2 shows peers' marks already converted into 10%. Peers' marks are more generous than instructor's marks:[4] the average mark was 7.15, hence 71.5%, a higher score compared to the average instructor mark (62.3%). According to their peers, an outstanding 88.8% of the class deserved to pass the test, while only two students failed (11.1%).

Some interesting data emerges from the comparison of instructor marks and peer marks: students no. 6 and 2, who scored 50% according to the instructor, scored respectively 70% and 80% according to their peers. Some students who failed according to the instructor, passed according to their peers: student no. 18 scored 25% according to the instructor and 60% according to their peers; student no. 19 scored 42.5% according to the instructor and 66% according to their peers.

The above data may raise questions about the validity of peer assessment training. Were the students sufficiently trained to undertake this task? Were they able to understand the assessment grid they were provided with? This seems to be an important issue and one that needs to be further addressed in future implementations of Pecha Kucha. More interesting data was collected via the Qualtrics survey conducted in week 13, immediately after the end of semester. 16 students kindly agreed to take the anonymous survey and they were asked the following 9 questions:

1. Did you enjoy the Pecha Kucha presentations?
2. Was Pecha Kucha properly explained and discussed in class?
3. What aspect of the Pecha Kucha presentations did you enjoy most?
4. Do you think that presenting a Pecha Kucha improved your English-speaking skills?
5. Do you think that presenting a Pecha Kucha improved your presenting skills?
6. What did the Pecha Kucha experience teach you?
7. Do you think Pecha Kucha presentations are a good assessment method for this unit?
8. Would you recommend Pecha Kucha to be used in other units? Why?
9. Are there any other comments you would like to make on the Pecha Kucha experience?

[4] Other studies show that the average quality ratings from the student raters were more generous than ratings from the instructor. (Miller Beyer 2011, p. 124)

Students were also provided ample space to leave any further comments to questions 3, 6, 7, 8. Finally, question 9 provided students the possibility to leave any further insights and/or suggestions for future implementations of Pecha Kucha presentations. Open-ended questions, such as the ones included here have been referred to as ventilation questions because they allow students to ventilate their feelings about the topic. The ventilation questions permitted me to collect qualitative data and gain further insights into the relevance of the Pecha Kucha presentations. They also gave students the chance to mention issues that perhaps were missed in the questions and might be taken on in future Pecha Kucha implementations. Following is an analysis of the students' response to the most salient questions in the survey.

Table 3: Qualtrics survey question 1.

1. Did you enjoy the Pecha Kucha end of semester presentations?

#	Answer		Response	%
3	No		0	0%
2	Somewhat		4	25%
1	Yes		12	75%
	Total		16	100%

The first question in the survey was aimed at gathering the students' general opinions on the Pecha Kucha experience. As Table 3 shows, Pecha Kucha was enjoyed by the entirety of the student cohort. No student answered "no" to the question: a result which exceeded my expectations.

Table 4: Qualtrics survey question 2.

2. Was Pecha Kucha properly explained and discussed in class?

#	Answer		Response	%
1	Yes, definitely		15	94%
2	Yes, somewhat		1	6%
3	No		0	0%
	Total		16	100%

Another extremely positive result was found in the question regarding the in-class explanation and discussion of Pecha Kucha, vital in the case of such an unknown technique among students. 94% of the student cohort thought it was definitely explained and discussed in class and 6% of them thought it was somewhat explained and discussed in class. No student answered "no" to this question either.

Table 5: Qualtrics survey question 3.

3. What aspect of the Pecha Kucha presentations did you enjoy most?

#	Answer	Response	%
1	Brevity	7	44%
2	Conciseness	6	38%
3	Use of images	3	19%
4	Being able to convey high amounts of information in a short time	7	44%
5	Delivering fun presentations without boring the audience	3	19%
8	All of the above	1	6%

The purpose of question 3 was to establish which aspects of Pecha Kucha presentations students enjoyed most. Students were given the possibility to choose more than one of the options listed or, alternatively, to click on “all of the above”. “Brevity” (44%), “being able to convey high amounts of information in a short time” (44%), and “conciseness” (38%) are the criteria with the highest percentages. These results were predictable, since it is well known that students are not particularly fond of oral presentations in the first place. It looks as though students of Translation Localisation appreciated presenting for 6.40 minutes compared to the usual 20 minutes.

From an instructor’s point of view, I found that 6.40 minutes were more than enough to assess students’ understanding of and critical engagement with the translational software used during the course. The tendency towards information overload, that often characterises 20-minute presentations, (Robinson, 348) was almost completely absent from Translation Localisation’s Pecha Kuchas, in which students, due to the time limit and the urgency to compress their message, could not afford to hesitate. Pecha Kucha forces presenters “to quickly and clearly communicate the essence of the subject without digression”. (Klentzin et al, 160) Students of Translation Localisation comprehended this, hence the high percentages of “brevity”, “being able to convey high amounts of information in a short time”, and “conciseness”.

“Use of images” only scored 19%. We can hypothesise that most of the students realised that, in such a fast-paced presentation, they could not use many transitions and animation effects, or at least not as many as they would in a standard 20-minute presentation. Following our hypothesis, most students saw this as a limitation of the Pecha Kucha style of presentation, hence the unpopularity of “use of images”. What is interesting is that, while most students’ presentations did use images in a powerful manner, they failed to recognise this as one of Pecha Kucha’s assets; on the contrary, they interpreted it as a limitation. In other words, students perceived the absence of transitions and animations as an obstacle and did not realise that, in class, they had indeed found their way around these supposed limitations, through their creativity and through the use of high-impact images. Translation Localisation students’ presentations indeed turned Pecha Kucha’s supposed image limitation into its true asset.

Some students perceived the entertaining component of these presentations (“delivering fun presentations without boring the audience” 19%), adding the comments: “Great experience. Helped me improve my skill for presentation. Great fun too!”; “We were able to see various perspectives in a short period of time which was wonderful and exciting”. Finally, 6% of the students enjoyed the Pecha Kucha for all the criteria listed in the question.

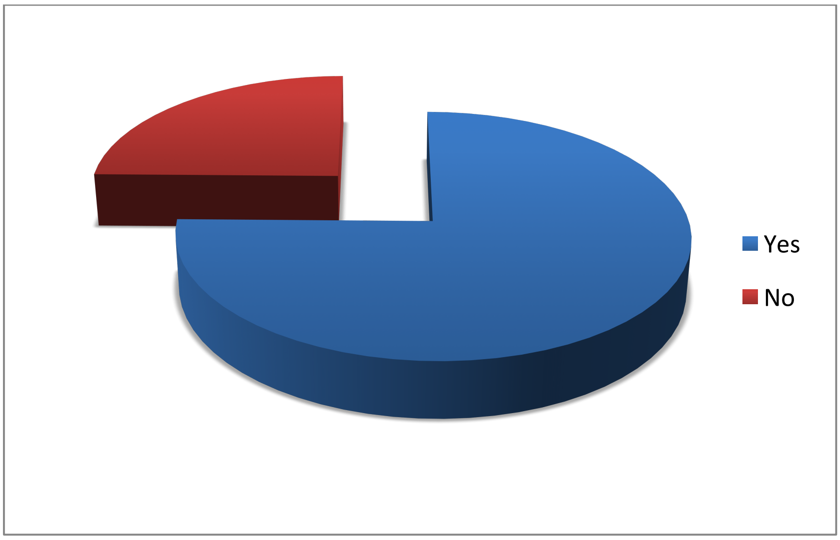


Figure 1: Qualtrics survey question 4. “Do you think that presenting a Pecha Kucha improved your English speaking skills?”

Two questions in the survey had the purpose of investigating the connection between preparing and presenting a Pecha Kucha and an overall improvement in students’ presentations, particularly in regards to speaking and presenting skills. The first question was aimed at students who spoke English as a foreign language, while the second was aimed at all students, including Anglophones. Due to the variety of levels of English proficiency present in the class, all students were asked to answer both questions. When asked, “do you think that presenting a Pecha Kucha improved your English-speaking skills?” 75% of the students responded “yes”. Hence, students felt that preparing for and presenting a Pecha Kucha helped improve their speaking skills. This 75% are likely to be speakers of English as a foreign language. It is probable that the added stress of the automated slides instilled in these students the idea that more preparation, or rather, better preparation, was necessary to be successful in this assessment. Since they had to prepare better, they felt that this presentation technique ultimately bettered their speaking skills altogether. The remaining number (25%) is likely to be represented by students whose English was first language or whose English-speaking skills were already strong. Finally, we cannot exclude the possibility that some students felt the presenting technique did not help improving their speaking skills.

The above data is interesting when compared to the data gathered in the following question: “do you think that presenting a Pecha Kucha improved your presenting skills?” Results are shown below.

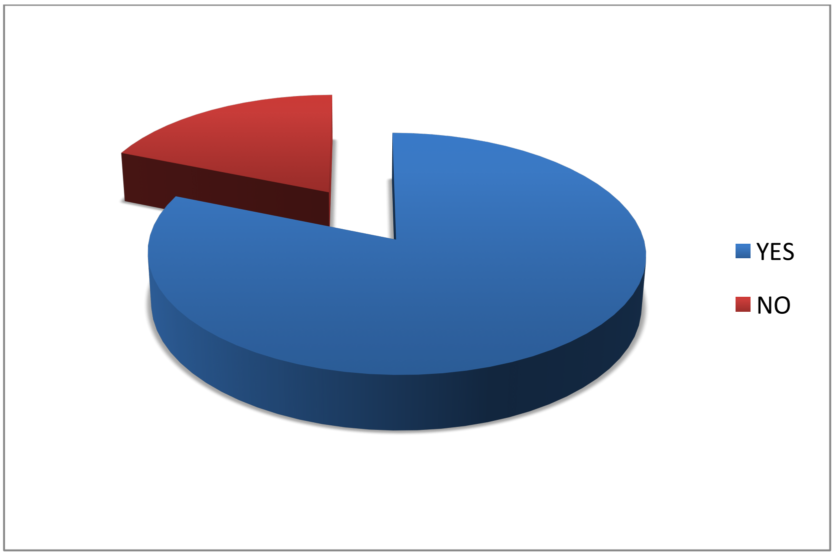


Figure 2: Qualtrics survey question 5. "Do you think that presenting a Pecha Kucha improved your presenting skills?"

While, on the one hand, 75% of the student cohort thought that Pecha Kucha helped improving their speaking skills, 81% said it helped with their presenting skills in general. Only 19%, hence 3 students in the class, responded that the Pecha Kucha did not improve their presenting skills.

The data gathered in both questions seems to be in accordance with recent research by Robinson and Miller Beyer who claim that having to prepare for a presentation with automated slides every 20 seconds has proven to increase the quality of students' preparation, and ultimately, their presentations. This is especially relevant when the presentations are given in a foreign language, a case in which Pecha Kucha can be used to build confidence and raise awareness of the importance of timing, delivery and visual aids when giving a presentation. (Robinson, 2015, p. 347)

Having shown an impact on both presenting and speaking skills, I can claim that Pecha Kucha may be an extremely useful tool in the English for Academic Purposes classroom, as also already shown by the above cited studies. The scope of Pecha Kucha expands when we consider the high numbers of international students who, speaking English as a second language, enrol in Australian universities in undergraduate and postgraduate degrees[5].

Providing fast assessment of large numbers of students, Pecha Kucha could easily be implemented in the assessment and pedagogy of EAP courses at Australian universities and overseas.

In this light Pecha Kucha presentations could be a wonderful gift we give our students while marking them effectively.

[5] In 2015, 4695 international students were enrolled in an undergraduate or postgraduate degree at The University of Western Australia. Data retrieved on 12 May 2015 from: https://eis.uwa.edu.au

Table 8: Qualtrics survey question 7.

7. Do you think Pecha Kucha presentations are a good assessment method for this unit?

#	Answer		Response	%
1	Yes		11	69%
2	Somewhat		5	31%
3	No		0	0%
	Total		16	100%

Yes	Somewhat	No
A challenge of course but fun as well.	Limits time. But limits creativity in presentation mode.	
Only for explaining the process of using SDL	I think the Pecha Kucha presentations might have been more suited to the theoretical part. As part of the assessment was to demonstrate knowledge of using SDL Trados, it became a bit repetitive to see the same information pop up in each presentation.	
	Good for improving presentation skills but too stressful because presenter it depends on drawing lots.	

The following question in the survey asked whether Pecha Kucha presentations were a good assessment method for this unit. All students agreed that they indeed represented a good method to assess their knowledge on and use of SDL Trados. Among these, 69% clicked on "yes" and 31% showed some reservations. No students clicked on "No", a result that exceeded my expectations.

The comments show some interesting considerations for the future. One student emphasised the challenging component of Pecha Kuchas, as well as the fun element. Another thought Pecha Kuchas are only a good assessment method for explaining the process of using SDL, which was the very purpose of the assessment. This comment is in contrast with another one stating that these presentations would have been more suited to the theoretical part of the semester.[6] The same comment also lists the problem of repetition, which recurs in the survey and which will be analysed below. Among the students who chose "somewhat", one claimed that Pecha Kucha limits both time and creativity, while another states it is good for improving presentation skills but too stressful. Stress was a calculated consequence of these speedy presentations, and one that is, in any case, not completely absent from regular 20-minute presentations. In fact, I expected for "stress" to be mentioned in the survey much more than what actually occurred[7]. All things considered, according to the results of this survey, stress is not to be seen as an impediment to the implementation of Pecha Kuchas in this unit or other units.

[6] In the first half of the semester, localisation was contextualized and presented from a theoretical point of view. The second half of semester more was more practical and hands-on: it provided students with proficiency in the main functions of SDL Trados. The UWA's Multimedia Centre provided assistance during the semester and Mr Mitchell Chiappalone held a seminar introducing SDL Trados.

[7] There are only two occurrences of the words 'stress' and 'stressful' in the entire survey.

Table 9: Qualtrics survey question 8.

8. Would you recommend Pecha Kucha to be used in other units? Why?

#	Answer		Response	%
1	Yes		11	69%
2	No		5	31%
	Total		16	100%

Table 10: Negative responses to question 8.

No
Unsure if they are relevant to unit's aims.
Difficult !!! Too intense!!!! Let's do it normally, shall we plz?😂
Not good for technical details. Ok for sharing big ideas and concepts.
While having a time limit is always a good thing, I found that the constraint of having 20 seconds a slide was a bit too limiting.
Too stressful because it weighs too much for the course and student can't really present properly because they don't know when it's their turn

Table 11: Positive responses to question 8.

Yes
Better than a long long essay.
As is proved in this unit, Pecha Kucha is a better form to present and deliver large amount of information in short time. It boosts not only efficiency but also interest. So it should be used in other units too.
They encourage you to give a presentation that's straight to the point, interesting and on topic all in a short amount of time.
saves time
Students will learn how to be concise, focus and comment on selected aspects of the unit and improve their presentating skills
It can help us to improve our speaking skills and organisation skills
It's fun

More comments were left by the students in the Qualtrics survey, the following is an analysis of those.

Leaving a comment was, of course, not compulsory but rather at the student's discretion. 11 students out of the 16 who took the survey left a comment; some of the comments were extensive, others short. Qualitatively, there were more positive than negative comments (7 to 3) and some of the negative comments contained positive elements. Finally, 2 comments did not contain a negative evaluation of the experience, but rather only suggestions and improvements for the future.

Among the negative comments, one student claimed that Pecha Kucha "makes you practice more". Another emphasised how repetitive it can be when all the class is asked to present on the same topic, a suggestion I have seriously considered for future implementations of Pecha Kucha, in which students will be able to choose among different titles and aspects of CAT tools translation and among different types of translation software. Another comment reads: "Pecha Kucha itself is a good way of shortening things, but for some theoretical stuff or personal opinion, normal presentation suits me more". This student did not explain in what way a normal presentation is better for the exposition of theoretical concepts and opinions and continued by mentioning that they "don't like being nervous", thus implying that a speedy presentation causes more nervousness than a standard 20-minute one.

The seven positive comments showed that students comprehended the teaching and learning potential of the Pecha Kucha presentations: "Great experience. Helped me improve my skill for presentation. Great fun too!"; "A lot was learned in the process of creating a Pecha Kucha. [. . .] This was a great way to continue the learning process as the presentation was being made. Something different, innovative, fun and would definitely recommend it for anything it can be adapted to, absolutely any topic or theme. One of the most enjoyable assessment methods I have ever come across!" One comment focused on the preparation aspect, stating, "I enjoyed the whole preparation process more than when I was preparing for other kind of presentation". Time-saving quality and efficacy are mentioned among the qualities of speedy presentations. In the same comment, the suggestion of providing many topics to choose from is made ("but I would love to present one of many topics given by the teacher instead of the same one with all the other students") with the reservation that "some of the students had tried to make some differences".

The repetition issue is also raised by another student of the Translation Localisation Pecha Kuchas: "Maybe more freedom on the choice of topic is better, because many people talked about the same thing." This suggestion, though, seems to be in contrast with a comment on the variety of presentations despite the same topic: "We were able to see various perspectives in a short period of time which was wonderful and exciting".

Another perfectly valid suggestion was to "encourage [students] to ask questions after each presentation", which will be taken in consideration for next year's Pecha Kucha integration. The peer marking component of the experience, particularly appreciated by one of the students ("I would like to add that the peer marking of the presentations in class also plays an important part. It gets everyone involved and helps develop a critical attitude") may also be part of next year's Pecha Kucha integrated unit.

Conclusions

Including Pecha Kucha presentations in the assessment of unit Translation Localisation in the Master of Translation Studies at The University of Western Australia provided several advantages. Presentation times were drastically reduced in comparison with traditional 20-minute presentations, allowing for all presentations to be carried out in only four hours at the end of semester. Students' attention levels were extremely high during their peers' presentations. Two factors contributed to this: the brevity and conciseness of Pecha Kuchas, and the implementation of peer assessment alongside tutor assessment. As far as peer assessment is concerned, asking the Qualtrics survey respondents whether or not they felt that they had sufficient training and/or understanding of the presentation assessment criteria given could shed some light on the issue of the validity of peer assessment and, ultimately, improve future implementations.

Preparing and presenting for a Pecha Kucha helped students achieve brevity, conciseness and made them able to deliver large amounts of information in a short time. The vast majority of students, and in particular those whose English is a second language, felt that the Pecha Kucha experience helped improving their overall speaking and presenting skills. The entire student cohort enjoyed the experience and left numerous positive comments and a small number of negative comments and suggestions in the Qualtrics survey. The author thoroughly enjoyed the Pecha Kucha assessments: while the 6:40-minute presentations were brief, they provided the author with plenty of time to assess the students.

Overall, the results obtained in the case study (both the students' scores in the presentations and their opinions in the survey) are extremely satisfying and justify the integration of Pecha Kucha presentations in the unit Translation Localisation. The positive results also justify a possible implementation of the Pecha Kucha assessment experience in other units of the Master of Translation Studies in the future, perhaps extending the experience to larger student cohorts and implementing the suggestion made by the students on supplying a variety of topics for presentation, in order to avoid repetition.

The results obtained in this case study suggest fruitful avenues for additional exploration. A possible improvement of the Pecha Kucha assessment experience consists in making questions from the audience compulsory. As previously stated, because of the questions, students will have to listen carefully to their peers' presentations and will not be likely to use this time to prepare for their own presentation or getting distracted. Switching the extremely generous peer assessment with compulsory questions might result in interesting data for comparison with the current case study, while at the same time guarantee students' attention to peers' presentations.

It would be helpful to repeat the study with another class in order to ensure results are consistent and support preliminary findings. A pilot study on the comparison of Pecha Kucha and 20-minute PowerPoint presentations, similar to Miller Beyer's, could also be considered. When running a pilot study, it would be interesting to delve into the issue of preparation time, especially because of the different opinions available in the literature. Extra questions on this issue would be added to the Qualtrics survey to check on students' perceptions and an exciting video-diary on their preparation could also be part of the assessment.

Ultimately, results from research in the implementation of Pecha Kucha presentations in Translation Studies units could be of value in other disciplines, particularly, but not exclusively, in English for Academic Purposes and in all disciplines which face high numbers of international students with varying degrees of proficiency in the English language. Being able to kill two birds with one stone – teaching and assessing at the same time – and providing quick assessment compared to standard 20-minute presentations, Pecha Kucha presentations can indeed be a useful tool for the teacher and the learner alike.

References

Anderson, J. S. & Williams, S. K. (2012). Pecha Kucha for lean and sticky presentations in business classes. *Working Paper Series*, *12*(3), 1–9.

Burke, L. & James, K. (2008). PowerPoint-based lectures in business education: An empirical investigation of student-perceived novelty and effectiveness. *Business Communication Quarterly*, *71*(3), 277–296. https://doi.org/10.1177/1080569908317151

Evans, S. (2013). Just wanna give you guys a bit of an update: Insider perspectives on business presentations in Hong Kong. *English for Specific Purposes*, *32*(4), 195–207. https://doi.org/10.1016/j.esp.2013.05.003

Glendal, J. (2007). 20 presentations. 20 slides. 20 seconds. *Architecture*, 66-69. Retrieved from http://www.architecturemagazine.com

Johnson, D. A. & Christensen, J. (2011). A comparison of simplified-visually rich and traditional presentation styles. *Teaching of Psychology, 38*(4), 293–297. https://doi.org/10.1177/0098628311421333

Klentzin, J.C., Paladino, E. B, Johnson, B, Devine C. (2010). Pecha Kucha: Using "lightning talk" in university instruction. *Computers & Education*, *35*(3), 175–187.

McDonald R. E. & Derby, J. M. (2015). Active learning to improve presentation skills: The use of Pecha Kucha in undergraduate sales management classes. *Marketing Education Review*, *25*(1), 21–25. https://doi.org/10.1080/10528008.2015.999593

Miller Beyer, A. (2011). Improving student presentations: Pecha Kucha and just plain PowerPoint'. *Teaching of Psychology, 38*(2), 122–126.

Robinson, R. (2015). Pecha Kucha: How to improve students' presentation skills'. *The European Conference on Language Learning 2015 Official Conference Proceedings*, 347–351.

Smith, K. (2013). Pecha Kucha or creatively crafting chit chat presentations with concision and precision. *Compass: Journal of Learning and Teaching at the University of Greenwich*, *7*, 1–2.

Corresponding author: Anna Gadd Colombi
Email: anna.gadd@uwa.edu.au

Appendices

Appendix A

TRNS 5004 TRANSLATION LOCALISATION

END OF SEMESTER PRESENTATION – INFORMATION SHEET.

Your end of semester presentation can be in the following format:

‘Pecha Kucha’ PowerPoint Presentation

Your presentation should:

- Consist of 20 slides shown for 20 seconds, for a total of 6 minutes 40 seconds.
- You can find information on how to set the timer on PowerPoint at the following links:
  https://www.youtube.com/watch?v=l9zxNTpNMLo
  https://www.youtube.com/watch?v=YGVCKCn6jBc
  https://www.youtube.com/watch?v=32WEzM3LFhw
- General information on how to make a Pecha Kucha presentation can also be found at this link: http://avoision.com/pechakucha
- I will also upload a Pecha Kucha to LMS and show it in class so you can use it as an example! ☺
- Your presentation topic is **“Translating with SDL Trados”:** you should show to the class that you know how to use the software effectively and confidently.
- You should include **at least 3 screenshots from SDL Trados**, to show that you have been using it to translate.
- Ideally, you should take the viewer through the process of translating a document with SDL Trados. You can **choose a text of your choice**. This text should be in **English** and you should show how you would go about translating into your LOTE using SDL Trados.
- You are allowed to include some **theoretical concepts** from the course, just remember to cite correctly. You can choose to have a final bibliography page or you can include citations in small font in the corner of the relative slide.
- **You are allowed to reflect on your practice**. How is SDL Trados **useful** in your practice as a translator? What are its **limitations**, if there are any?
- As for the assessment, the end of semester presentations will be **peer assessed in class**, so you all need to be present to everybody’s presentations. Failure to do so will be reflected in your participation mark.
- The best presentations will be uploaded to LMS.
- Should you have any questions, you can email me at anna.gadd@uwa.edu.au

Appendix B

TRANSLATION LOCALISATION TRNS 5004

PEER ASSESSMENT OF PECHA KUCHA PRESENTATIONS

Rate your peer's Pecha Kucha presentation using the following criteria. Please don't forget to write the presenter's name and last name. Do not write your own name and last name. Then insert scores next to each skill and add up the overall score. This type of assessment is anonymous and will make up 10% of your Pecha Kucha presentation mark.

Presenter's name and last name:

CONTENT /25

ORGANISATION /25

PRESENTATION (VOICE QUALITY AND EYE CONTACT) /25

VISUAL /25

OVERALL /100

Scale:

0/5 poor

6/10 below average

11/15average

16/20 good

21/25 excellent

Elements of Motivational Structure for Studying Mechanical Engineering

Nikša Dubreta, University of Zagreb, Croatia
Damir Miloš, Catholic University of Croatia, Croatia

Abstract

The article presents the findings on students' reasons for studying mechanical engineering. These reasons were covered in terms of extrinsic and intrinsic motivation additionally related to selected independent variables of the sample – students' secondary school Grade Point Average, their gender and the socio-economic status. The research was conducted with the first year students of the Faculty of Mechanical Engineering at the University of Zagreb, Croatia. The sample consisted of 282 students (228 males and 54 females) and comprised students of all majors. According to descriptive character of the questionnaire type survey characteristics of the sample are presented. Composite variables of extrinsic and intrinsic motivation were dichotomized to present different levels of the students' overall motivational structure. Results indicate a students' interest in the field of science and technology as the most important element of intrinsic motivation, with no significant relation to any of independent variables. By contrast, extrinsic motivation has manifested as significantly related to the variables of Grade Point Average and to parents' education as one component of the socio-economic status. However, a significant level of indecisive respondents regarding the both intrinsic and extrinsic motivation suggests that the choice of the study programme is not always a consistent and an unambiguous process.

Keywords: motivation; engineering; education; freshmen.

Introduction

Research of the most important factors affecting the choice of engineering study programmes has intensified worldwide over the past two decades triggered by reports of the declining interest of young people in studying engineering. In its report on student interest in science and technology studies, the Organisation for Economic Co-operation and Development (OECD) considered the subject of engineering along with physical sciences, mathematics, life sciences and computer science. It was found that interest in engineering in general is relatively stable in comparison to a decline regarding other fields of science and technology, but this finding was relativized by significant differences in the national trends in the numbers of engineering graduates (OECD, 2008). However, some years later, the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2010) indicated enrolment problems in engineering studies in particular: "One of the most serious internal issues and challenges facing engineering is the decline of interest and enrolment of young people, especially women, in engineering in most countries around the world" (UNESCO, 2010, p. 308).

This trend had been anticipated earlier, mostly through analyses in (post)industrial countries of the major changes taking place at the societal level. It was found that engineering programmes were not part of the primary academic orientation for young people. Moreover, other corresponding analyses of dominant features of engineering education in general indicated discouraging characteristics of engineering studies, mostly combined with inertia and unattractiveness.

At the societal level in the industrialised world, it should be noted that socio-economic changes, which reflected unstable career paths for engineers, had been indicated in the 1990s. Thus, Sennett's elaboration and detailed portrayal of unsuccessful harmonization of work-life balance among engineers demonstrated a clear relationship between deindustrialisation, the precarious nature of employment, and the corresponding uncertainty in terms of the individual's professional career and biography (Sennett, 1998). Similarly, Barley & Orr (1997) pointed out that regardless of the trend of massification and diversification of academic studies, engineering could be viewed in terms of relative uncertainty in regard to social status and salaries in the respective professions. Although these warnings were presented in the 1990s, they were to be echoed in the OECD report a decade later where it explicitly stated that the traditional attractions of science careers had been eroded by changes in the economy at large: "With rising unemployment or precarious contracts, young people may be prone to operate a shift towards profession oriented studies" (OECD, 2008, p. 47). Finally, as it can be seen in the UNESCO report (2010), despite the relatively stable demand in the labour market, engineering was considered to be an area that was perhaps most affected by the decline of study interest.

The analyses of internal discouraging factors point out a problematic character of the predominantly narrow disciplinary focus of the study programmes in engineering. The main objections relate to the excessive abstraction of the studies and difficulties in understanding engineering as a social enterprise (Beder, 1999; Bucciarelli, 2008). In her analysis of the historical reasons of the overly technical focus in engineering studies, Beder stated the declining social image and status of engineers in which they were viewed mainly as socially insensitive and politically naive men who were subjected to the influence of capital. Beder indicated that such an image was, to a large extent, the outcome of the traditional approach to engineering in schools in which "selection criteria and course content is of a field of endeavour that is overwhelmingly concerned with numbers, science, and mathematical analysis" (Beder, 1999, p. 14). Such approach, according to Beder, resulted not only in creating inappropriate assumptions about the students of engineering, but also in stereotyped images of the career in engineering itself. It is stated that, devoid of any social content, career in engineering remained appealing to the narrow circle of young people who are willing to forsake professional involvement with people, public affairs, and a wider set of social concerns (Beder, 1999).

Similar considerations can be found in other studies (Seymour & Hewitt, 1997; Shulman, 2005; Pawley, 2009; Riley & Claris, 2009; Trevelyan, 2010). More recently, Wadowski & Zaród (2015) pointed out deeply rooted lack of recognition of the social context in which engineering operates. According to the authors, this overly reductionist educational framework in engineering seems to be transformed in time by the gradual introduction of social sciences and humanities. In sum, a trend of declining interest for studies in engineering, along with other problems is covered in most of these articles. Correspondingly, in most of these studies it is supposed this trend should be reversed by a radical internal curricular and pedagogical reform.

Objectives and Relevance of the Study

If opportunities for engineering careers at the societal level are ambiguous, simultaneously unpromising and insecure, while study programs are relatively unattractive, then our primary research objective was to see what motivates young people to enrol in academic engineering study programs. More precisely, the main objective of the present research was to explore freshmen's reasoning to study mechanical engineering at the University of Zagreb in terms of intrinsic and extrinsic motivation which were considered as two conceptually different basic components of motivational structure for students when entering the first semester of engineering undergraduate study. The intention was to determine whether there were significant differences between these two basic components of motivation.

In addition, the present research examines whether it is possible to determine differences in the motivational structure of mechanical engineering students by the number of their educational, socio-demographic and socio-economic characteristics. The educational variable is considered through the Grade Point Average (GPA) since it provides a well-rounded view of a student's performance in high school and often represents the key norm for enrolment in academia worldwide (Bowles & Gintis, 1977; Ferjan, Jereb & Šušterčič, 2007; Balfanz et al., 2016). Likewise, the gendered nature of enrolment in engineering represents one of the well-studied elements in contemporary research efforts to transform the engineering sector as it is currently still male dominated area of education (Kolmos, Mejlgaard, Haase & Holgaard, 2013). Finally, the importance of the socio-economic status (SES) represents the third students' characteristic since its validity in terms of family income, parental education and parental occupation, has been verified in a number of educational studies (Bowles & Gintis, 1977; Sirin, 2005; Ma, 2009; Svoboda et al., 2016).

Extrinsic and Intrinsic Motivation in Education

Generally, a good deal of research has been conducted dealing with the issue of motivation in engineering education. It has been explored in terms of choice and persistence in studying engineering (Matusovich, Streveler, & Miller, 2010); gendered nature of academic choices (Jugović, 2010; Kolmos, Mejlgaard, Haase, & Holgaard, 2013) among others. In addition, some studies have tried to identify the most important influencing factors in choosing to study engineering such as socialisers' influence, interest in the study and working autonomy, security, wages and social position (Reed & Case, 2003; Dias, 2011; Shumba & Naong, 2012). Overall, it turned out that results vary depending on a particular's socio-cultural context.

In this regard, extrinsic and intrinsic motivations are an integral part of numerous models in the field of education and they are examined from a variety of theoretical perspectives: for example, expectancy theory, the theory of value assignment, and motivation theory associated with cognition and volition (Eccles & Wigfield, 2009). However, as Brown, McCord, Matushovich, & Kajfez (2014) point out, these two concepts appear as more inconsistent than a nuanced construct in the research of engineering educational process. Considering this observation, in the present research we relied on the theoretical approach of Deci, Vallerand, Pelletier, & Ryan (1991).

Deci et al. (1991) took into account a more complex perspective on the relationship between extrinsic and intrinsic motivation. Elements of personal choice regarding an activity were elaborated as a part of regulatory process of behaviour. This enabled the authors to outline the extrinsic and intrinsic motivations in terms of a continuum in which each variant indicates a different level of transformation from external contingencies into agency regulated by internal processes. Ultimately, the model has resulted mostly in extrinsic motivation being elaborated through a number of variants which differ from each other in nuances, gradually approaching intrinsic motivation. Thus, the most sophisticated type of extrinsic motivation – integrated motivation – comes close to intrinsic motivation for the differences among the two although sometimes not clear at first sight (Deci et al 1991). Since the initial introduction, this approach has often been employed as a valid concept in educational research (Sansone, & Harackiewicz, 2000; Rijavec, Brdar, & Miljković, 2008) along with research in engineering education in particular (Gero & Abraham, 2016).

However, regardless of the mild differences among variants in continuum, Deci et al. (1991) specified general differences between these two kinds of activity. Intrinsically motivated individuals would engage with an activity for their sheer interest and corresponding sense of enjoyment. They do so "freely, with a full sense of volition and without the necessity of material rewards or constraints" (Deci et al., 1991, p. 328). In contrast, extrinsically motivated activity would be determined primarily by external and utilitarian goals, be it attainment, reward or success. In essence, extrinsic motivation indicates behaviour which is assumed to be "instrumental for some separable consequence". Therefore, we consider intrinsic and extrinsic motivation as two general orientations, although the former is conceptualized almost in its ideal-type form, and the latter involves a number of variations (Dubreta & Bulian, 2017).

Literature Review

Brown et al. (2014) listed more than 70 scientific articles dealing with motivation as a research subject in engineering education. Many of these articles are concerned with possibilities to consider a particular aspect of students' engagement in the learning process be it laboratory work, project learning or mathematics. The number of articles dealing with motivation in enrolment in engineering study is relatively small. Their findings are based on qualitative or quantitative research and the issue of motivation appears to be considered in a view of the applied theoretical construct.

Thus, for example, the application of expectancy-value theory (Matusovich, Streveler, & Miller, 2010) has shown that the choice of the study programmes in engineering cannot be separated from elements of personal identity and students' sense of self but is associated with types of values and perceptions of the personal importance of engineering. The theory showed that values as well as the connection between the personal and the engineering identity are crucial not only for the choice of study programmes in engineering but also as motivational factors in terms of perseverance in the course of studying.

On the other hand, while combining qualitative and quantitative research Savage & Birch (2008) observed how extrinsically and intrinsically motivated students reflect on different pedagogical approaches. Their results imply possibility of a parallel, though differently expressed importance of both types of motivation for study programmes in engineering. Therefore, the need for more detailed consideration of appropriate pedagogical approaches is suggested which would, in practice, allow for convergence of students and teachers expectations of the study programme. Another related research study (Reed & Case, 2003) also emphasises the concurrent importance of extrinsic and intrinsic motivation in choosing the study programmes in engineering. It points out that there are a series of contextual factors that may have an intervening effect; be it the appropriate elements of socialization, the interpretation of past personal experiences, aspirations in terms of career, self-images, beliefs about their own abilities, along with other factors. Finally, Dias's research (2011) showed that in considering students' motives for choosing a study programmes in engineering, we should take into account the combined effects of motivational factors such as social status, intelligence, gender, values and interests. Since the choice of study is of highly contingent character, these factors are reflected in the shapes of extrinsic and intrinsic motivation for study programmes in engineering.

Given the relevance of the topic, there are relatively few studies of motivation regarding the study programmes in engineering in Croatia. In those studies the question of motivation for enrolling into engineering study programmes is considered in different terms and the research process varies depending on whether they are using qualitative or quantitative procedures. The first study in Croatia of this type was conducted by Kesic & Previsic (1998) and it compared the motives for enrolling into faculties of economics and electrical engineering. The study relied on elements of the two-factor motivational structures which somewhat corresponded to a simplified matrix of extrinsic and intrinsic motivation. The matrix is expressed in different but nevertheless corresponding terms of hedonistic motives as well as the motives of utility. As it turns out, hedonistic motives (complacency with the programme course) are significantly more dominant among students who study electrical engineering, while the motives of utility (job and salary) dominate among students who study economics. The results also suggest that these motives play a crucial role in students' decision-making processes in terms of what they want to become and what their future profession will be.

A decade later, Potočnik (2008) researched the motives for enrolling at the University of Zagreb. By combining qualitative and quantitative approaches she determined that the majority of students, including those studying technical sciences, had a prevailing interest in the studies and independent variables such as gender, age and years of study did not represent relevant factors. Certain differences were shown in the interpretations of the market situation in terms of finding future employment, whereby the position of the certain profession and the political context in Croatia was perceived as a considerably greater potential barrier to the employment of students who study social sciences and humanities (SS&H) than for those who study technical sciences.

Using the model of expectations and values, Jugović (2010) investigated the factor structure of motivation in the field of physics. She specifically concentrated on gender differences in motivation and stereotypes in the interpretation of individual choice of study programmes in which physics is important. Relevant findings indicate that there are no differences between boys and girls when it comes to personal importance and the assessment of their own abilities in this area of science. However, the author herself questions the finding since other findings indicated significant educational aspirations in the selection of future study programmes with respect to the gender. As it turns out, a significantly higher number of boys intend to enrol into some of the technical faculty and this allowed the author to consider the category of gender stereotypes as an important factor in educational and occupational gender segregation in Croatia.

Finally, Miloš & Čiček (2014) presented the results of the quantitative research conducted at the Faculty of Mechanical Engineering and Naval Architecture. By aggregating claims which can be taken as indicators of extrinsic and intrinsic motivation and by testing their differences, the dominance of extrinsic motivation in the choice of study programme was determined. The article relied on studies that have already been mentioned (Reed & Case, 2003) where the focus was shifted from the set of factors (cultural, social, previous experience) to the specified reasons for enrolling into a faculty and in the aspirations for a career in engineering in the context of extrinsic and intrinsic motivation.

The Method and the Research Sample

The research was conducted with first year students of the Faculty of Mechanical Engineering at the University of Zagreb. A questionnaire type survey was conducted among 282 students in October 2013. Non probabilistic purposive sampling was used. The reasons for this kind of sampling procedure stems from the fact that the research was limited to newly enrolled students in the mechanical engineering study programme and in a corresponding attempt to relate their motivational structure for enrolment with their SES, gender and educational characteristics. In proportion with the number of students enrolled (425), the questionnaire comprised students of all majors. Figure 1 shows the socio-demographic characteristics of the sample.

We used descriptive statistical methods for describing the sample and the independent variables (Figure 1). Besides that, inferential statistical methods were used in accordance with the aims of the research. Therefore, two logistical regressions were conducted in order to determine the relevance of the model for the predicament of the level of extrinsic and intrinsic motivation for a career in engineering. That model was comprised of the variables of socio-economic status, gender and the GPA achieved in high school. Dichotomization of extrinsic and intrinsic motivation by their (low/high) level provided us with the opportunity to get a more distinct insight in SES, gender and educational effects on the motivation. Additionally, counties of students' origin were introduced as possible supplementary SES component. As regards SES, counties here refer to Croatia's highly centralized administrative character in which the city of Zagreb represents the wealthiest and most populated centre, with the biggest university and with the significant share of students from other, less developed parts of country.

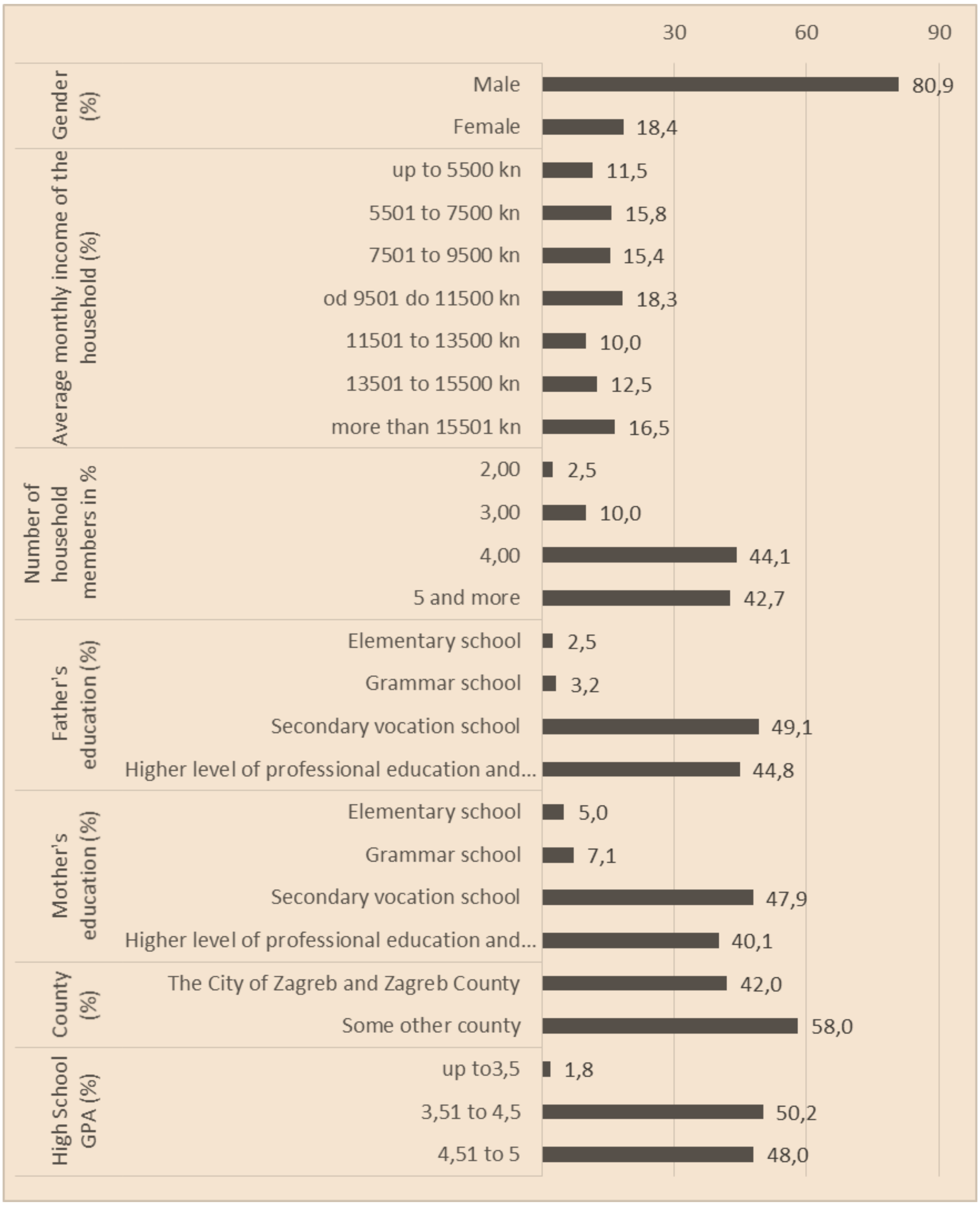


Figure 1: Socio-demographic features of the sample.

In accordance with what has been written about the intrinsic motivation as a type of "internal" motive for an activity per se, or the voluntary and conscious effort in a certain direction without expectation of extrinsic rewards, it was necessary to adjust this term to the context of intrinsic motivation for a specific professional career. The underlying theme for the development of a model is very similar to previous work in this field (Miloš & Čiček, 2014), with minor modifications. In fact, this time we used the model that had resulted by the factor analysis with slightly altered components.

Thus, the respondents had to express the degree of disagreement with a particular statement on a scale from 1 to 5 (1 – strongly disagree, 2 – disagree), indecision with respect to compliance (3 – I'm not sure) and the degree of agreement with the statement (4 – agree, 5 – strongly agree). The components that were later added together in the composite variable of the intrinsic motivation were: "I enjoy in acquiring a new knowledge and skills", "I find the studies in engineering exciting and challenging", "I enrolled in this faculty because I am primarily interested in the field of science and technology", "I like to solve complex, but concrete problems", "This study corresponds to my personal traits“. For a composite variable that later represents the extrinsic motivation in the choice of the study programme the following statements were summed up (also represented numerically 1–5 with the degrees of influence): "Good/above average salary", "Quick employment", "Quick career advancement", "The reputation (of the profession) in the society“, "Possibilities of decision-making and influence on the society“.

Results

Values obtained by aforementioned procedure for composite variable of intrinsic motivation are r = 3.90, SD = .54 (Cronbach α = 0.66). On the other side, values of composite extrinsic motivation are r = 3.57, SD = 0.70 (Cronbach α = 0.83). The resulting composite variables were dichotomised in the following way: on a scale of extrinsic/intrinsic motivation (absence of the occurrence), scale figures 1 and 2 signify low motivation, while the scale figures 4 and 5 signify high E/I motivation. The results thus indicate that the absence of the intrinsic motivation is expressed in 5.3% of all cases, and the absence of the extrinsic motivation in 17% of all cases. In contrast, high intrinsic motivation is expressed in 50.9% of all cases, and a high extrinsic in 28.6% of all cases (Table 1).

Table 1: Dichotomized variables overview.

	Dichotomized variable of the intrinsic motivation			Dichotomized variable of the extrinsic motivation		
	Frequency	Percentage	Cumulative percentage	Frequency	Percentage	Cumulative percentage
Low motivation	15	5,3	5,3	48	17	17
High motivation	144	50,9	56,2	81	28,6	45,6
Undecided	124	43,8	100	154	54,4	100,0
Total	283	100		283	100	

By this procedure (Figures 2 and 3) we obtained a high percentage of cases (43.8% for intrinsic, and 54.4% for extrinsic motivation) where the respondents expressed indecision (3 – I'm not sure) in terms of agreement or disagreement with the statement; a rather small number of cases presented in the low range of motivation and a much larger number of cases represented in the higher range of motivation. Thus, the situation is much clearer, that is, the cases of low and high motivation are consistently isolated and it is evident that in general, scale results lean towards higher E/I motivations.

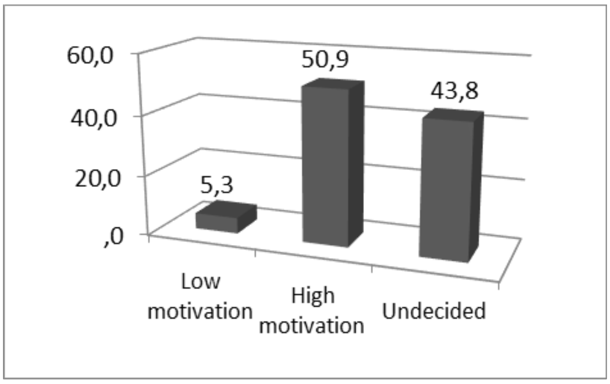


Figure 2: Dichotomized variable of the intrinsic motivation (%).

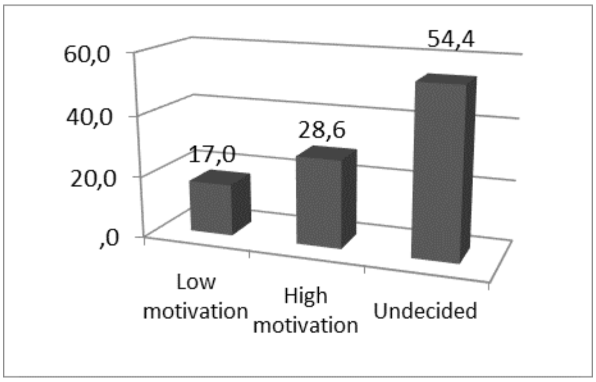


Figure 3: Dichotomized variable of the extrinsic motivation (%).

The model for the prediction of E/I motivations contains two categorical variables – gender and counties from which the students come (counties were dichotomised into two categories: the first one consisting of the respondents of both City of Zagreb and Zagreb County and the second one consisting from all other counties of Croatia). Besides these, four discontinuous variables were used in the model: monthly household income, number of family members, father's educational level and mother's educational level. Finally, high school GPA is the only continuous variable in the model.

In order to determine the impact of such factors on the likelihood of the respondents being more extrinsically or intrinsically motivated, two logistic regressions were performed. The abovementioned independent variables constitute a common model for predicting both types of motivation. A model for intrinsic motivation is not statistically significant c^2 (7, N = 153) = 11,79, p > 0,05 (p = 0,1), which indicates that the model in general does not distinguish students who are poorly and highly intrinsically motivated for a career in engineering, that is, our independent variables do not contribute to the explanation of the dependent variable. However, Table 2 shows that only one independent variable brings a statistically significant contribution to the model, i.e. the only predictor of high intrinsic motivation is the county from which the students come (B = 1,461; p < 0,05), and its quotient probability is 4,31. If the model was significant this would tell us that students who do not come from the city of Zagreb and Zagreb County showed more than four times "stronger" intrinsic motivation (with all other factors in the model unchanged). But considering the fact that the model is not significant it can be noticed that we cannot relate SES to intrinsic motivation in this case.

Table 2: Predicting the probability of high intrinsic motivation.

	B	Stand. error	Wald	df	Sig.	Exp(B)	95% confidence interval for Exp(B)	
							Lower Limit	The upper limit
Gender	1,569	1,088	2,079	1	,149	4,804	,569	40,556
High school GPA	-,032	,768	,002	1	,967	,968	,215	4,362
Average household income	,121	,163	,546	1	,460	1,128	,819	1,554
Number of household members	-,721	,442	2,662	1	,103	,486	,204	1,156
County	1,461	,651	5,035	1	,025	4,312	1,203	15,455
Mother `s education	-,269	,428	,395	1	,529	,764	,330	1,769
Father`s education	-,354	,502	,497	1	,481	,702	,262	1,878
Constant	6,162	4,483	1,889	1	,169	474,325		

On the other hand, the model is statistically significant c² (7,122) = 18,82, $p < 0,01$ in the case of extrinsic motivation, which means that the model differentiates between poorly and highly extrinsically motivated subjects, i.e. independent variables contribute to the explanation of the dependent variable. The model interprets between 14.3% and 19.5% of the variance of extrinsic motivation and accurately classifies 73% of all cases. In Table 3 we can see that the two independent variables provide statistically significant contribution to the model (average high school GPA and mother`s educational level). The strongest predictor of high extrinsic motivation is the high school GPA ($B = 1.360$; $p < 0.01$) with the quotient of probability of 3,898. This means that an increase of GPA for one unit of value (simply put, the grade) means almost four times higher probability for high extrinsic motivation, with all other factors in the model remaining the same. Furthermore, mother's education as a predictor ($B = 0,680$; $p < 0,05$) has a coefficient of probability 1,975 which points out that with each increase in level of mothers education, the probability for high extrinsic motivation doubles (with all the other factors in the model remaining the same).

Table 3: Predicting the probability of high extrinsic motivation.

	B	Stand. Error	Wald	df	Sig.	Exp(B)	95% confidence interval for Exp(B)	
							Lower limit	The upper limit
Gender	-,153	,555	,076	1	,782	,858	,289	2,547
High school GPA	1,360	,496	7,509	1	,006	3,898	1,473	10,314
Average household income	,071	,122	,337	1	,562	1,074	,845	1,364
Number of household members	,390	,270	2,089	1	,148	1,476	,870	2,504
Mother`s education	,680	,311	4,777	1	,029	1,975	1,073	3,635
Father`s education	-,420	,370	1,289	1	,256	,657	,318	1,357
County	-,587	,434	1,831	1	,176	,556	,237	1,301
Constant	-7,62	2,886	6,974	1	,008	,000		

Discussion and Conclusion

The first objective of this research was to determine students' components of intrinsic and extrinsic motivation for enrolment into the engineering study programme. On the one hand, the obtained results indicate that the interests to study engineering in half of all respondents are encouraged by motives of predominantly intrinsic character. About 50% of respondents expressed their agreement with statements that primarily refer to the interest in the subject area. The responses of one quarter of all respondents (28.6%) suggest that motives are affected by continuum of extrinsic motivation suggested by Deci et al. (1991). To some extent, the results correspond to those found in similar studies (Reed & Case, 2003; Kesić &, Previšić, 1998; Potočnik, 2008). Therefore we are not surprised by the dominantly expressed importance of intrinsic motivation which suggests that students are encouraged by the very content of the study programme.

Although the county is a significant predictor in the model of intrinsic motivation which is cast aside, one should bear in mind the consequences of the way in which counties were dichotomised in our model. Variable named County (Tables 2 and 3) consisted of two parts: the first one is the City of Zagreb and Zagreb County and the second one refers to all the other counties. The latter includes the remaining 19 Croatian counties and a significant number of them are underrepresented in the sample. In this sense, one cannot say the evidence of predictability of the intrinsic motivation in terms of the county from which the student comes is particularly indicative. The important is that the model is not significant in this case and new researches are welcomed in this regard.

With regard to extrinsic motivation, it turns out that the GPA is the most important factor and can be considered as an indicator of competitiveness and conformism. The previously mentioned research (Bowles & Gintis, 1977; Ferjan, Jereb & Šušterčič, 2007; Balfanz et al., 2016) has already indicated that "GPA hunting" offers proof that the education system works as divisional as well as a stratificational factor in society. Because students cannot influence the form and the content of the educational process, their motivation is based on extrinsic factors and it is also one of the ways in which they can conform and prepare for the next step – a job. In the context of our study this would indicate "a job well-done" at the previous level of education as well as the fertile ground that was created for primarily extrinsically motivated students who will become future employees.

On the other hand, it is important to take notice of a large number of indecisive respondents both in terms of intrinsic (43.8%) and in terms of extrinsic (54.4%) motivation. They indicate that the choice of the study programme is not always a consistent and an unambiguous process. This finding is important since it allows us to pose the following question: to what extent does the choice of study programme correspond with any kind of motivation and how much does it stem from the nature of the educational system, still relatively closed to students of vocational schools and open predominantly to students coming from (mainly general) gymnasiums in which the transition to the next educational, i.e., the academic level is almost the only reasonable option. Furthermore, the results allow us to question the importance of the motivational matrix indicated in the E/I terms. In a way, it seems reasonable that at the time of the enrolment, students are not confident of their choices, that is, some of the motives that were outlined and contrasted here can be developed or challenged “along the way” in the course of the study programme (Renninger, 2000).

Such an assumption would allow sequencing of an examination of human choices and actions in the wake of the research which showed that motivation is often yet to come for the initial choice (in this case by entering a specific study programme) and is important in later sequences when it can arise as an important factor in terms of maintaining this initial choice (Renninger, 2000).

The second objective of this study aimed at reassessing the hypothesis that socio-economic status is a relevant factor in choosing a study programme and future career. Socio-economic status is often studied and interpreted differently, especially when it comes to predicting the future academic achievement in the matrix of social stratification (White, 1982). Our results showed that, in this particular case, the elements in the utilised model of socio-economic status are irrelevant for predicting intrinsic motivation. This is not the case with the extrinsic motivation because one of the elements has clearly crystallized itself in the defined components of the socio-economic status – mother`s education. It is possible to assume that in traditional and patriarchal social structures, such as is Croatian (Galić, 2004), mothers are more active parents and they are more directly involved in the school activities of their children from the very beginning of their education. The correspondent results were offered by Burušić, Babarović & Marković (2010) stating that a mother's education has a greater impact on academic achievement than the father's. In the assumed continuity of aspiration of Croatian students, the results of our research are consistent because they indicate that students who have educated mothers strive towards external awards for their achievement. In this sense, one could argue that a mother's education influences the level of the obtained grades that were also proved to be a factor in the expressed levels of extrinsic motivation.

However, predominantly expressed importance of intrinsic motivation and a large number of indecisive respondents are the most important results of this study. A high percentage of reported intrinsic motivation shows that students enroll into engineering study programmes because it best suits their interests in the subject area. Thus, it is a choice that is not conditioned by widely conceptualised external reasons and it is not derived from components of their socio-economic status.

A high percentage of indecisive responses in terms of motivation implies the need for continuous efforts to shape and promote the engineering study programmes that will encourage hesitant freshmen. This corresponds with the research mentioned in the introduction, which indicated that the lack of attractiveness of engineering academic programs is one of the important "internal" factors for the decline of interest in technical studies in general.

References

Balfanz, R., DePaoli, J. L., Ingram, E. S., Bridgeland, J. M. & Fox, J. H. (2016). *Closing the college gap a roadmap to postsecondary readiness and attainment*. Washington: Civic Enterprises.

Barley, S., & Orr, J. E. (1997). *Between craft and science: Technical work in U.S. settings*. Cornell University Press.

Beder, S. (1999). Beyond technicalities: Expanding engineer thinking. *Journal of Professional Issues in Engineering Education and Practice*, *125*(1), 12–18. https://doi.org/10.1061/(ASCE)1052-3928(1999)125:1(12)

Bowles, S. & Gintis, H. (1977). *Schooling in capitalist America: Educational reform and the contradictions of economic life*. New York: Basic Books.

Brown, P. R., McCord, R. E., Matushovich, H. M. & Kajfez, R. L. (2014). The use of motivation theory in engineering education research: A systematic review of literature. *European Journal of Engineering Education*, *40*(2), 186–205. https://doi.org/10.1080/03043797.2014.941339

Bucciarelli, L. (2008). Ethics and engineering education. *European Journal of Engineering Education*, 33(2), 139–147. https://doi.org/10.1080/03043790801979856

Burušić, J., Babarović, T., & Marković, N. (2010). Koliko daleko padaju jabuke od stabla? Odnos obrazovnih postignuća djece i obrazovne razine njihovih roditelja [How Far Does the Apple Fall from the Tree? The Relationship between Childrens Educational Achievement and the Educational Level of their Parents]. *Društvena istraživanja* [*Social Research*], *19*(4–5), 709–730. [In Croatian]

Deci, L. E., Vallerand, R. J., Pelletier, L. G. & Ryan, R. M. (1991). Motivation and Education: The Self-Determination Perspective. *Educational Psychologist*, *26*(3–4), 325–346. https://doi.org/10.1080/00461520.1991.9653137

Dias, D. (2011). Reasons and motivations for the option of an engineering career in Portugal. *European Journal of Engineering Education*, 36(4), 367–376. https://doi.org/10.1080/03043797.2011.593096

Dubreta, N & Bulian, L. (2017). Longitudinal research of motivation for mechanical engineering study at the University of Zagreb. *World Transactions on Engineering and Technology Education*, *15*(3), 217–222.

Eccles, L. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109–132. https://doi.org/10.1146/annurev.psych.53.100901.135153

Ferjan, M., Jereb, E & Šušteršič, O. (2008). Social Class Position as a Determinant of Educational Achievement, *Social Research*, *17*(4–5), 869–886.

Galić, B. (2004). Seksistički diskurs rodnog identiteta [Sexist Discourse of Generic Identity]. *Socijalna ekologija* [*Social Ecology*], *13*(3–4), 305–324. [In Croatian]

Gero, A. & Abraham, G. (2016). Motivational factors for studying science and engineering in beginning students: the case of academic preparatory programmes. *Global Journal of Engineering Education*, *18*(2), 72–76.

Jugović, I. (2010) Uloga motivacije i rodnih stereotipa u objašnjenju namjere odabira studija u stereotipno muškom području [The role of motivation and gender stereotypes in the choice of study in a stereotypically male domain]. *Sociologija i prostor* [*Sociology and Space*], 48(1), 77–98. [In Croatian]

Kesić, T. & Previšić, J. (1998). Motivi upisa i zadovoljstvo nastavnim programom studenata ekonomskih i elektrotehničkih fakulteta u Hrvatskoj [Students' motives for enrollment in and satisfaction with the curricula of faculties of economics and electrical engineering in croatia]. *Društvena istraživanja* [*Social Research*], *7*(4–5), 731–746. [In Croatian]

Kolmos, A., Mejlgaard, N., Haase S. & Holgaard, J. E. (2013). Motivational factors, gender and engineering education. *European Journal of Engineering Education*, *38*(3), 340–358. https://doi.org/10.1080/03043797.2013.794198

Kostyszak, M., Wadowski, J. & Zaród M. (2015). Engineering education in Slavic language countries. In: S. H. Christensen, C. Didier, A. Jamison, M. Meganck, M. Mitcham, B. Newberry, (Eds). *International perspectives on engineering education. Engineering Education and Practice in Context, Volume 1*. Springer.

Ma, Y. (2009). Family Socioeconomic Status, Parental Involvement, and College Major Choices – Gender, Race/Ethnic, and Nativity Patterns. *Sociological Perspectives*, *52*(2), 211–234.

Matusovich, H. M., Streveler, R. A., & Miller, R. L. (2010). Why do students choose engineering? A qualitative, longitudinal investigation of students' motivational values. *Journal of Engineering Education*, *99*(4), 279–294. https://doi.org/10.1002/j.2168-9830.2010.tb01064.x

Miloš, D. & Čiček, F. (2014). Findings on motivation and the environmental awareness and practice of future engineers in zagreb. *Interdisciplinary Description of Complex Systems*, *12*(2), 119–136. https://doi.org/10.7906/indecs.12.2.2

OECD (2008). Encouraging student interest in science and technology studies. OECD Publishing /online/. Retrieved on 14th April 2011 from http://www.sourceoecd.org/scienceIT/9789264040694

Pawley, A. L. (2009). Universalized narratives: Patterns in how faculty members define "engineering", *Journal of Engineering Education*, *98*(4), 309–319. https://doi.org/10.1002/j.2168-9830.2009.tb01029.x

Potočnik, D. (2008) Izbor studija: motivacijska struktura upisa i očekivani uspjeh u pronalasku željenoga posla [Going to university: Motivation structure and expectations for finding a desired job]. *Sociologija i prostor* [*Sociology and Space*], *46*(3–4), 265–284. [In Croatian]

Reed, B. & Case, J. (2003). Factors influencing learners' choice of mechanical engineering as a career. *African Journal of Research in Mathematics, Science and Technology Education*, *7*(1), 73–83. https://doi.org/10.1080/10288457.2003.10740550

Renninger, R. A. (2000). Individual interest and its implications for understanding intrinsic motivation. In: C. Sansone, J. M. Harackiewicz, (Eds.) *Motivation. The search for optimal motivation and performance*. London, San Diego: Academic Press.

Rijavec, M., Brdar, I. & Miljković, D. (2008). Aspirations and well-being: Extrinsic vs. intrinsic life goals. *Social Research*, *20*(3), 693–710.

Riley D. & Claris L. (2009). From persistence to resistance: Pedagogies of liberation for inclusive science and engineering. *International Journal of Gender, Science and Technology*, *l*(1), 36–60.

Sansone, C. & Harackiewicz, J. M., (eds) (2000). *Intrinsic and extrinsic motivation: The Search for optimal motivation and performance*. San Diego: Academic Press.

Savage, N. & Birch R. (2008). An evaluation of motivation in engineering students. Employing self-determination theory. *Proceedings of the International Conference on Innovation, Good Practice and Research in Engineering Education* 2008, pp. 1–10 /online/ Retrieved on 27th May 2011 from https://www.heacademy.ac.uk/sites/default/files/p012-savage_1.pdf

Sennett, R. (1998). *The corrosion of character: The personal consequences of work in the new capitalism.* W. W. Norton & Company.

Seymour, E., & Hewitt, N. M. (1997). *Talking about leaving: Why undergraduates leave the sciences*. Boulder, Colorado, Westview Press.

Shumba, A. & Naong, M. (2012). Factors influencing students' career choice and aspirations in South Africa. *Journal for Social Sciences*, *33*(2), 169–178. Retrieved on 7th June 2013 from http://www.krepublishers.com/02-Journals/JSS/JSS-33-0-000-12-Web/JSS-33-2-000-12-Abst-PDF/JSS-33-2-169-12-1397-Shumba-A/JSS-33-2-169-178-12-1397-Shumba-A-Tx[4].pdf

Shulman, L. S. (2005). If not now, when? The timeliness of scholarship of the education of engineers. *Journal of Engineering Education*, *94*(1), 11–12.

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, *75*(3), 417–453. https://doi.org/10.3102/00346543075003417

Svoboda, R. C., Rozek, C. S., Hyde, J. S., Harackiewicz J, M., Destin, M. (2016). Understanding the relationship between parental education and STEM course taking through identity-based and expectancy-value theories of motivation. *AERA Open*, *2*(3), 1–13.

Trevelyan, J. (2010). Reconstructing engineering from practice. *Engineering Studies*, 2(3), 175–195. https://doi.org/10.1080/19378629.2010.52013

UNESCO Report (2010). *Engineering :Issues, challenges and opportunities for development*. UNESCO Publishing.

White, K. (1982). The relation between socioeconomic status and academic achievement. *Psychological Bulletin, 91*, 461–481. https://doi.org/10.1037/0033-2909.91.3.461

Corresponding author: Nikša Dubreta
Contact email: niksa.dubreta@fsb.hr

Cognitive Strategies Use in Reading Comprehension and its Contributions to Students' Achievement

Imam Suyitno, Universitas Negeri Malang, Indonesia

Abstract

The study outlined in this article describes the use of cognitive strategies designed to aid the comprehension of Indonesian texts. It also examines the contributions of such strategies to students' comprehension scores. The participants were 97 students who had completed and passed the reading course. In collecting the research data, the researcher used a reading comprehension test instrument in the form of a cloze test, as well as a Likert scale questionnaire. The cloze test was used to measure the students' ability to understand the texts, while the questionnaire was used to obtain information about cognitive strategies used by students in comprehension of the texts. Data collection of the comprehension test results and understanding strategy data are performed sequentially over the same day. Research data are described and analyzed by product moment correlation technique. The research found that students' scores in cloze tests ranged from A to D. This score indicates that students have varying abilities in reading comprehension. The research findings also showed that students used various cognitive strategies in understanding text reading. The results of the correlation analysis showed that the use of cognitive strategy has a positive or negative contribution to the results of reading comprehension depending on the accuracy of the selection strategy in accordance with the text he read.

Keywords: cognitive strategy; text comprehension; contribution; reading score.

Introduction

Reading ability is a main vehicle for the development of learning experiences and improved learning success. Hazzard (2016) states that reading makes a significant contribution to the success of the learner in completing their studies. Through the reading process, the learner can obtain the information required to fulfill the needs of their study assignments. In fact, the ability to read is crucial, thus the process of learning to read well plays an important role in achieving success in both study and in life.

People who read a lot can gain considerable useful information and knowledge in their lives. Anderson, Hiebert, Scott, and Wilkinson (1985) explain that reading is an activity needed by a person to gain useful knowledge in their life, both in school and outside school. In reality, we can see that people who read more are able to solve problems more easily than those who do not. The differences are seen more clearly in the learning activities, namely, those students who read more have different academic behaviors than those of students who rarely read. From these conditions, it can be said that interest in reading significantly influences the score of students' reading ability (Gambrell, 2011).

Reading comprehension is the mental process the reader goes through in an effort to understand the content of a reading text. OECD, as cited by Kendeou (2014), states that "reading comprehension is a process to understand, use, reflect on, and engage written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society". Otto (1979, p. 147) explains that in comprehension of a reading, the reader not only pronounces written symbols, but also seeks to understand and interpret the information contained in the text. Tinker (1975, p. 7) reveals that the ability to read is basically the ability to understand the information conveyed by the author in the reading text. further, Smith and Robinson (1980, p. 205) describe reading as a process of interaction, involving a reader engaging with the information submitted by the author through the text. Through this process, the reader seeks to understand, evaluate, and utilize the information and ideas being presented.

In reading comprehension, to understand the text, the reader needs to apply a comprehension strategy appropriate to the text they read (Smith and Robinson, 1980, p. 205). These strategies include selecting, predicting, confirming, and validating the results of the understanding. The use of these strategies has an effect on the reader's success in comprehending the content of the text (Cohen, 1986, p. 133). This means that the use of the right strategy can optimize the results of comprehension while the use of inappropriate strategies can be a barrier to the success of comprehension.

In the learning process of reading, teachers should introduce and train students to utilize appropriate strategies in the comprehension of reading texts. In traditional teaching methods of reading, teachers generally only apply the principle of task, work, and evaluation. Through this principle, teacher-student interaction is achieved only by assigning tasks or questions to students; students working on and answering teacher questions; then teachers assessing student answers (Porath, 2014, p. 627). Such learning interaction does not provide a meaningful experience for students because students do not play an active role in building their learning experience.

In teaching reading comprehension, teachers need to direct student activities in order to get to know and use the correct reading strategy. The results of Francois's research (2016) show that in the process of learning reading, teachers can be models in reading comprehension strategies. Teacher can give examples various reading comprehension strategies, for instance, including predicting, activating prior knowledge, making connections, setting purpose for reading, and making inferences. Francois (2016) thus states that “by doing so, internal comprehension processes are made explicit and students gain metacognitive knowledge of how and how to implement particular strategies to aid in their understanding of texts”.

In reading comprehension, readers use different strategies. The difference in strategy is due to differences in attitudes and cognitive styles that the reader has in responding to the information in the reading text. This fact is in accordance with the findings of research conducted by Pfister (cited in Sadeghi, 2012), which shows that students who have an open nature and a free field learning style have a high score in understanding the reading text. Brown (2007) explains that learning strategies have a close relationship with learning styles and self-factors or personalities of those learning. Therefore, Hazzard (2016) explains that if the learning strategy is not in accordance with the learning style, students cannot learn the language well. According to Brown (2007), language learning strategies can be grouped into three kinds: cognitive strategies, metacognitive strategies, and socio-affective strategies. The three kinds of strategies have variants in their use in language learning. This depends on the cognitive style and the learner's understanding of the strategy he or she occupies. In line with the diversity of these strategies, this article focuses its discussion on cognitive strategies in reading comprehension.

Gagne (1977, p. 167) explains that cognitive strategy is an internal process known as the learning process of control. Furthermore, Gagne explains that as an internal process, cognitive strategy serves as a way to modify and regulate the learning process. In his explanation, Gagne argues that strategy gives or becomes the basic structure for learning. With this strategy, students try to overcome difficulties or problems faced. The cognitive strategy of the learner always evolves in line with their success in learning. These developments are the development of ways to improve the regularity of the internal processes associated with learning.

Cognitive strategy deals with how to learn, how to remember, and how to convey ideas reflexively and analytically. If the learner masters the internal process well, they will be able to self-learn (self-instruction) and can learn independently. They will be able to solve problems and convey ideas well. Gagne and Briggs (1979, p. 71) explain that cognitive strategy is an internally organized skill that affects the intellectual process of the learner, which includes the process of understanding problems, learning, remembering, and thinking. The statement implies that cognitive strategies are internal processes that can be utilized for various activities requiring cognitive involvement, including (1) cognitive strategies in reading comprehension, (2) cognitive strategies in learning, (3) cognitive strategies in recall, and (4) cognitive strategies in thinking or solving problems.

The results of Rothkopf and Bisbicos’ research cited by Gagne (1977) show that by utilizing cognitive strategies, readers are able to control their attention in understanding a text. Furthermore, Block (1986) explains that in understanding a text, cognitive strategy refers to how the reader seeks to understand what they read, how to make the reading meaningful, and what to do if they encounter difficulties or problems. This strategy in practice can support or assist the reader in understanding the texts they read, may also impede or undermine the understanding of the text (Cohen 1986, p. 133).

The study discussed here aims to describe the cognitive strategies used by students in understanding Indonesian texts and explain the contribution of these strategies to the students' comprehension outcomes. This information is important and needs to be understood by the teacher in teaching reading. Block (1986, p. 463) states that understanding the internal process is very important. Such understanding can assist teachers in designing learning reading comprehension based on reality. In addition, this information also provides an overview of the appropriate form of approach used in implementing teaching reading. Therefore, the study of reading comprehension strategies contributes significantly to the learning process, especially as a reference in determining the form of teaching and learning strategies, organizing lesson materials, developing assessment instruments in reading teaching, particularly with regard to reading comprehension.

Research Methods

Research Design

This research was designed by using quantitative descriptive methods. The study described two variables, namely the accuracy of the use of cognitive strategies in understanding Indonesian texts and the comprehension of the text. To know the relationship between the use of cognitive strategy of understanding the text and the achievement of their understanding, the two variables were correlated. Furthermore, to know the contribution of cognitive strategy to the achievement of understanding, the two variables were analyzed by using regression.

Participants

The participants were 97 students of the Indonesian Language and Literature Department, State University of Malang. All of them had passed the reading course.

Research Instruments

The instruments used in this study were a questionnaire and a reading comprehension test. The questionnaire instrument was used to collect data on the use of cognitive strategies in understanding Indonesian texts, while instruments in the form of reading comprehension tests were used to collect data on reading achievement.

Research Data

There were two kinds of research data, namely scores of students in reading comprehension and cognitive strategies of Indonesian text comprehension.

Data Collection

Data was collected using a cloze test technique and a retrospective verbal report. The cloze test technique is used to collect data about the cognitive strategies of reading comprehension and data about the score of the text understanding. After completing the cloze test, the student is asked to give a report of the things they have done in understanding the text he reads. This verbal report is done by filling in a list of questions in the form of Linkert scale.

Data Analysis Technique

Analysis of data on the use of cognitive strategies in understanding Indonesian text with the achievement of understanding the text is done by using statistical techniques. Because the data about the use of cognitive strategy of understanding the Indonesian text and data about the achievement of reading is addressed as interval data, the statistical technique used to test the relationship between the two variables is the Product Moment correlation technique. This correlation technique is used to test the relationship between the uses of each strategy with the achievement of comprehension.

Research Findings and Discussions

Student Ability in Understanding Indonesian Text

In measuring the ability of students in understanding the text of reading, the research used a cloze test instrument. By using these instruments, students' ability to understand reading texts can be grouped as follows in Table 1.

Table 1: Student Ability in Understanding Indonesian Text.

No.	Score	Categories	Samples	Percentage
1.	85—100	A	12	12,37%
2.	75—84	B	16	16,50%
3.	60—74	C	59	60,82%
4.	50—59	D	10	10,31%
5.	<50	E	0	0%
Total			97	100%

As can be seen from the table, 12 students score A (12.37%), 16 score B (16.50%), 59 score C (60.82%), and those scoring D total 10 (10.31%).

The diversity and value differences obtained by the students illustrate that students' characteristics and competencies are different in understanding the text. These characteristics and competencies have an important role in reading comprehension. Coiro and Dobler (2007) reveal that readers who have had a lot of reading experience will use a set of strategies in reading comprehension. These strategies include previewing the text, setting goals, making predictions, monitoring understanding, questioning, and interpreting text (Duke & Pearson, 2002; Pressley, 2000). Readers skilled in reading comprehension try to improve their understanding by utilizing and linking points of reading content with the experience they have.

Wolff (1987, p. 309) explains that understanding is a cognitive process for obtaining information. The information obtained by the reader is encoded in its own way, which is then further processed at the cognitive level. Thus, the cognitive process of understanding is related to two things: (1) the process of perception, namely the selection and encoding of the perceived stimulus, and (2) the process of conception and proportionalization, namely the understanding of concepts and propositions contained in the text.

In addition to the reader's self-factor, success in reading comprehension is also determined by the variety of texts being read. Various expository texts have different structures and meanings compared with various narrative texts. These differences require that the reader applies different processes and strategies in understanding them. The results of a study conducted by Biancarosa and Snow (2004) shows that children and adults understand narrative texts more easily than expository texts. In understanding expository text, the reader is required to define a specific task, search for information, select the resources themselves, and synthesize the intertextually important content of multiple sources (Dreher, 2002).

Another aspect that may affect the understanding of outcomes while reading text is the test instrument factor that is used. In this study, students' reading comprehension skills were measured using a cloze test. Assessment of students' ability is more emphasized on the ability to produce and or understand information naturally because the cloze test is a form of pragmatic test (Oller, 1979, p. 39 and Djiwandono, 1986, p. 30). Pragmatic tests have a similarity with communicative tests, both of which emphasize the ability of students to communicate with the language in certain situations (Valette, 1977, p. 12).

In the cloze technique, the blank spaces are deliberately provided in a text by removing certain parts. The student's job in the test is to fill in the empty space with the right words. To be able to fill the vacant place the students are required to master the grammatical system of language and text content read in an integrated manner.

Cohen (1980, p. 96) explains that cloze tests can be used to test the ability to read comprehension globally. In doing this cloze test, the reader is engaging in a constructive process (Nurgiyantoro, 1988, p. 170). The cloze test has a high accuracy rate in measuring the ability to read for comprehension. This is evidenced by the results of the Bensousan study (cited by Djiwandono 1986, pp. 67–68), which suggests that cloze tests have a higher average power difference and appear to be an effective alternative in reading comprehension test. In line with that opinion, Almeida (cited by Chall, 1984, p. 239) explains that the accuracy of 40% of cloze test values is proportional to the accuracy of 75% of reading scores on the comprehension of multiple-choice forms.

The reliability and validity of the cloze test here in English has been widely studied. Ginting (1990, p. 44) cites the results of a Bachman study, which show that the cloze test has a high reliability coefficient. From some of the studies put forward by Bachman it proves that the cloze reliability coefficient ranges from 0.608 to 0.880. In addition, Bachman examined the correlation of cloze tests with standard English tests to check the validity. The correlation results show that the cloze test has a high correlation coefficient with the standard English text. The coefficients obtained from the operation are 0.848 and 0.830 with the TOEFL Total, 0.818 and 0.803 with TOEFL Reading, and 0.820 and 0.812 with TOEFL Structure.

Based on the discussion of the above research findings, it can be concluded that the students' reading comprehension score is determined by several factors. These factors include student self-factor, variation of text read, and test instrument factors used. Student self-factors include background knowledge, learning styles, and understanding strategies used in reading. The variation factor of the text is the level of language difficulty and the text content read, while the test instrument factor is related to the accuracy of the tool in measuring the competence that should be measured.

Students' understanding of reading text can be improved. In the process of reading learning, teachers need to select reading materials that are liked by students. Ibrahim (2016) suggests that in order to develop students' reading skills, teachers need to provide reading material favored by students. In addition to the choice of reading material, to improve students' understanding, teachers can apply multi modal in learning.

Cognitive Strategy Applied Student in Understanding Indonesian Text

From the results of data analysis, it can be seen that students have different strategies in understanding reading text. Of the 97 participants, 13.4% of students implemented a technical-aid moves strategy in understanding the text. This strategy is applied by using keyword help, rereading the text portion of the text, highlighting the important words, skipping the difficult part, reading through the text, numbering the propositions or statements that are important, and making notes. Students who apply the coherence-detecting strategy in understanding the text number 52.6%. With this, the strategies used include integrating information in the text, anticipating text content, imagining text content, recognizing text structure, and interpreting textual content. 34% of students apply a simplification and clarification moves strategy in understanding text. This is done by using an association technique, with paraphrasing, word decoding, taking an overview, and questioning.

The results of this study are in line with the findings of research conducted by Block (1986), which is research on understanding strategies used by readers in a second language. The results show that readers use a variety of strategies to understand the text. In line with the results of the study, Cohen’s (1986) study shows that readers use various strategies in understanding the text, especially in answering the comprehension questions about reading content. On the other hand, there are studies that try to link ESL students’ perceptions of the cognitive strategies they use in understanding the text with the understanding achievement of the text (Padron and Waxman, 1988). The results of this study indicate that students’ perceptions of the strategies used vary widely. From the diversity of perceptions there are those who have a positive relationship; others have a negative relationship with the achievement of understanding achieved by the students.

The cognitive strategies used by the reader in understanding the text vary. Block (1986), citing the explanation of Hosenfeld, divides the strategy into two: the strategy of understanding the basic meaning of the line (main meaning line) and word-solving strategies (word-solving strategies). Meanwhile, Olshavsky shares an understanding strategy in clause related and related words. Based on his research findings, Block classifies the strategy in two broad categories: general strategies and local strategies. General strategies include anticipating content, recognizing text structure, interpreting the text, using general knowledge and association to (a) explain, extend, and reinforce content understanding, (b) evaluate the accuracy of the content, and (c) respond to content, comment on behavior or process, monitor comprehension, correct behavior, and react to the text. Local strategies include paraphrasing, rereading, questioning meaning of clause or sentence, questioning meaning of a word, solving vocabulary problems.

Padron and Waxman (1988) divide the cognitive strategy of textual understanding into 14 kinds. The strategy has a positive or negative relationship with student reading achievement. Strategies that have a positive relationship with student achievement are (1) making a written summary, (2) highlighting important parts, (3) raising questions to oneself, (4) checking understanding through text, (5) asking questions – the problems that exist in the text that he does not know, (6) making notes, and (7) describing the text's content in the mind. Conversely, strategies that have a negative relationship with student reading achievement are (1) thinking about other things while reading, (2) writing every word read, (3) skipping parts of the text that are not understood, (4) reading text as soon as possible, (5) saying or pronouncing every word repeatedly, (6) looking for difficult words into the dictionary, and (7) repeating the main idea.

Based on the results of Padron and Waxman's research, from a number of cognitive strategies studied, it turns out that strategies that are often or mostly used by readers are strategy (a) asking for parts of text that are not understood, (b) checking understanding through text, (c) describing the content of the text in the mind, and (d) searching for difficult words in the dictionary. Less frequent or less used strategies are strategies (a) reading as quickly as possible, (b) reading while thinking of other things, (c) writing every word, and (d) skipping over unknown portions of words. In addition, the standard deviation for each strategy item is very high. This suggests that the responses given by the reader to each of these strategies also vary greatly.

From the results of regression analysis, Padron and Waxman (1988) find that the reader's perception of the strategy used has a contribution to the achievements in the understanding of the text. The two strategies of the seven strategies are thought to be negatively correlated, as evidenced by the results of the study. Strategies of thinking other things while reading and saying key ideas repeatedly make a negative contribution to the comprehension of the text. That is, if both strategies are increasingly used, then the results will be lower.

In addition to the strategies outlined above, there are still a number of other strategies proposed by Sarig cited by Cohen (1986, pp. 134–135). Sarig organizes cognitive strategies in reading comprehension into four types, namely; (1) technical-aid moves, (2) simplification and clarification moves strategies, (3) coherence-detecting moves, and (4) monitoring strategies (monitoring moves). Included in the strategy of using auxiliary techniques is any means or techniques that can be taken to assist the reader in understanding the text he reads. For example, marking the key elements, using dictionaries, skipping over difficult passages, using notes, numbering each proposition, and so on. A simplification and clarification moves strategy is a simplification and explanation strategy, with the intention of making it easier to understand the content of the text being read. These include solving word difficulties using synonyms, simplifying redundant syntax levels, creating paraphrases, and so on.

Including strategies for detecting coherence is a strategy of identifying text frameworks in general, identifying key information strategies, production strategies, development ideas, and so forth. The monitoring strategy is a strategy to monitor weaknesses and strengths in relation to textual understanding. Included in this latter strategy are strategies for identifying misconceptions about reading material, deliberate change of performance strategies, error-justifying strategies, and so on. Sarig identifies this strategy based on his research results of 10 people reading English as a foreign language text.

Nevo, as cited by Cohen (1986), lists 16 kinds of strategies used by readers in understanding the text, especially in answering the questions of reading content in the form of multiple choice. The strategies are to use a background of knowledge, guessing, rereading the text, using chronological order, utilizing key sections in the text, stopping at the right choice, using the elimination process, choosing exceptions, using short-length options, localizing, using general words, utilizing key words, choosing answers to existing questions of words contained in questions, associating, viewing statements and matching with text, and other strategies.

Contribution of Cognitive Strategies to Indonesian Text Comprehension

Hypothesis 1

The first hypothesis of this study is: “There is a significant correlation between the use of technical-aid moves strategies in Indonesian text comprehension with student scores in textual comprehension”. The results of research that can be used as a basis to reject or accept the hypothesis can be seen from the statistical analysis results in Table 2.

Table 2: First hypothesis.

The correlation coefficient (r_{xy})	- 0,660
Trust Confidence level	0,05
Degree of freedom (d.f.)	97
Critical value (r_k)	0,195
Conclusion	Negative relationship

From the table, it can be seen that between the use of technical-aid moves strategies in understanding the text (variable y) correlation coefficient of -0.660 was obtained. In degrees of freedom or sample number 97 with a level of 5% confidence obtained critic value (rk) of 0.195. So it can be concluded that the null hypothesis is rejected or the alternative hypothesis is accepted. This means that there is a negative contribution of the use of technical-aid moves strategies in comprehension of Indonesian text to the result of the text comprehension.

Hypothesis 2

The second hypothesis of this study is: “There is a significant relationship between the use of coherence-detecting moves strategy in comprehension of Indonesian text with student scores in text comprehension”. The results of research that can be used as a basis to reject and accept this hypothesis can be seen from the statistical analysis results in Table 3.

Table 3: Second hypothesis.

The correlation coefficient (r_{xy})	0,094
Confidence level	0,05
Degree of freedom (d.f.)	97
Critical value (r_k)	0,195
Conclusion	Positive relationship

From the table above, it can be concluded that the relationship between the use of coherence-detecting moves strategy in understanding the text (variable x) with the achievement of understanding Indonesian text (variable y) found correlation coefficient of 0.094. In degrees of freedom (d.f.) 97 and 5% confidence level the critical value (rk) of 0.195 was obtained. So it can be concluded that the hypothesis is accepted. This means that the use of coherence-detecting moves strategy in comprehension of Indonesian text has contribution to the achievement of comprehension of Indonesian text.

Hypothesis 3

The third hypothesis of this study is: "There is a significant relationship between the use of simplification and clarification moves strategies in comprehension of the Indonesian text with the score of students in comprehension of a text they read". The results of research that can be used as a basis to reject and accept this hypothesis can be seen from the statistical analysis results in Table 4.
Table 4: Third hypothesis.

The correlation coefficient (r_{xy})	- 0,620
Confidence level	0,05
Degree of freedom (d.f.)	97
Critical value (r_k)	0,195
Conclusion	Negative relationship

From the table above, it can be seen that the relationship between the use of simplification and clarification moves strategy in understanding the text (variable x) with the achievement of understanding Indonesian text (variable y) was obtained by the correlation coefficient of -0.620. In degrees of freedom (d.f.) 97 and 5% confidence level critical value (rk) was 0.195. So it can be concluded that the hypothesis is rejected. This means that between the use of simplification and clarification moves strategies in comprehension of the Indonesian text with the achievement of understanding Indonesian text has a negative relationship.

Based on the results of data analysis, it can be concluded that the use of technical-aid moves strategies and strategies of simplicity and clarification have a negative contribution to text comprehension scores. This is theoretically explained by Coiro and Dobler's (2007) statement, who contend that the text factor is an important factor to consider in reading comprehension because it determines the strategy that the reader must undertake in reaching comprehension. The reader in choosing a text comprehension strategy should consider the purpose of reading and the textual nature of the text they are reading. The choice of inappropriate strategies may impede the comprehension of the text (Cohen, 1986). From the explanation, it can be concluded that the selection of the technical-aid moves strategy and the simplification and clarification moves strategy is not appropriate to understand Indonesian text formatted in the form of cloze test. The choice of strategy does not match the purpose of reading and the characteristics of the text being read.

Technical strategies are very useful for those who are learning to read or for unskilled readers. In addition, these strategies are better suited to assist in understanding the text with a very high degree of difficulty. However, for advanced readers, those strategies will inhibit comprehension. If the difficulty level is not high, the use of these strategies will be less efficient. With such strategies, these readers spend much of their time focusing on comprehension of the information in the text.

The strategy of simplification and clarification moves uses general knowledge and association. This strategy can improve the reader's comprehension if the information conveyed in the text matches the general knowledge of the reader. However, if such general knowledge is inconsistent with the reading information, the use of such general knowledge may lead to the misinterpretation of the content of the reading. In reading, a reader needs to draw upon the same background knowledge as the information expressed in the text. The background of the reader's knowledge of the contents of the text is called schemata.

Rumelhart (1977) explains that readers use schemata to find the meaning of the text they read. Schemata is a structure of knowledge that represents concepts in the mind of the reader and is used to understand the text they read. From here it can be concluded that to understand the text, readers require schemata about the text.

In light of the negative contribution of the findings of this study, we need to pay attention to the explanation of Paris et al. (cited by Coiro & Dobler, 2007), which states that in the context of reading comprehension, metacognition involves awareness and the use of self-evaluation and regulatory strategies. A good self-evaluation and regulatory strategy can improve text understanding, while poor evaluation and regulation lead to a low understanding of the text. From these statements, it can be concluded that the negative contribution of the use of comprehension strategies and comprehension results may be due to low awareness and self-regulation in applying appropriate text understanding strategies resulting in low comprehension results.

In understanding the text, the skilled reader will attempt to adopt and use other alternative strategies to understand the text they have read. This is done when the reader faces problems in finding and utilizing the information in the text. However, less skilled readers cannot naturally monitor the use of effective strategies and cannot choose other alternative strategies when faced with difficulty in reading comprehension (Paris et al., 1983). Based on these statements, it can be concluded that the negative contribution of understanding strategies to the results of understanding indicates that the strategy used by the reader is not an appropriate strategy choice for understanding the text as measured by using the cloze test.

The use of coherence-detecting moves strategies has a positive contribution to textual comprehension. The coherence-detecting moves strategy includes (1) integrating the information contained in the text, (2) anticipating the text content, (3) describing the text content in the mind, (4) recognizing the text structure, and (5) interpreting the text content. Such strategies in the comprehension of texts are necessary. In reading, the reader is required to be able to combine the information contained in the text, so as to obtain complete information from the text. In addition, to gain a comprehension of the text content, the reader should be able to anticipate the contents or parts of text that will be read. By anticipating these or parts of the text, the reader will gain clearer information about the content of the text they read.

Conclusion

The results of this study conclude that in comprehension of the Indonesian text, students use various cognitive strategies. The diversity of the use of such strategies is due to the self-factor and student experiences in reading, and the characteristics of the text being read. As readers who have a lot of experience, students are able to choose strategies that match the characteristics of the text she/he reads. However, students who are less skilled and less experienced in reading have difficulty in choosing strategies that match the variety of texts they read. This is what causes the diversity of achievements of varying comprehension results. Skilled students who are able to choose the right comprehension strategy get a high comprehension score, while those who are less skilled get a low comprehension score. Therefore, the results of statistical analysis show that the contribution of the use of textual comprehension strategy there is a positive correlation and some are negatively correlated to the scores achieved by students in understanding the text.

The findings of this study have important benefits for language teaching, especially for reading comprehension learning. The findings of research in the form of variations of strategies used by students in comprehension of an Indonesian text can be used as a basis and reference for language teachers to trace these strategies in understanding the text. In addition, in teaching of reading comprehension skills, reading text factors that are used as reading material need to be selected that match the self and condition of the learner because these factors have a significant contribution in improving the comprehension of the reader.

The findings of this study also have important benefits for future researchers, namely as a source of reference in assessing similar topics. To reinforce the findings of this study, researchers can further study research on the same topic, but use different types of reading texts, such as narrative text or persuasion texts. In addition, to complement the range of strategies in language learning, the next researcher can research topics on metacognitive strategies or socio-affective strategies in textual comprehension. With the study of similar topics, theoretical-empirical findings about Indonesian language learning strategies, especially Indonesian language text comprehension strategies can be accumulated more fully.

References:

Anderson, R. C., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. (1985). *Becoming a nation of readers: The report of the commission on reading.* Champaign-Urbana: U.S. Department of Education.

Biancarosa, G., & Snow, C. E. (2004). *Reading next—A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York* (2nd ed.). Washington, DC: Alliance for Excellent Education. Retrieved October 15, 2005, from www.all4ed.org/publications/ReadingNext/ReadingNext.pdf

Block, E. (1986). The comprehension of second language readers. *Tesol Quarterly*, *20*(3). https://doi.org/10.2307/3586295

Brown, D. H. (2007). *Principles of language learning and teaching*. Pearson: Longman.

Chall, J.S. (1984). Readability and prose comprehension: Continuities and discontinuites. Flood, J. (Ed.). *Understanding reading comprehension*. Dalawer: International Reading Association.

Cohen, A. D. (1986). Mentalistic measures in reading strategy research: Some recent Findings. *English for Specific Purposes, 5*(2). https://doi.org/10.1016/0889-4906(86)90019-0

Cohran, G. W. (1977). *Sampling techniques*. New York: St. Barbara-Jong Willey & Sons.

Coiro, J. & Dobler, E. (2007). Exploring the online reading comprehension strategies used by sixth-grade skilled readers to search for and locate information on the Internet. *Reading Research Quarterly, 42*(2), pp. 214–257. https://doi.org/10.1598/RRQ.42.2.2

Diwandono, M. S. (1986). *Kemampuan Berbahasa dan Penilaiannya dalam Pengajaran Bahasa*. Malang: FPBS IKIP Malang.

Dreher, M. J. (2002). Children searching and using information text: A critical part of comprehension. In C. C. Block & M. Pressley (Eds.), *Comprehension instruction: Research-based best practices* (pp. 289–304). New York: Guilford. https://doi.org/10.1207/s15548430jlr3801_2

Duke, N.K., & Pearson, P.D. (2002). Effective practices for developing reading comprehension. In A. E. Farstrup & S. J. Samuels (Eds.), *What research has to say about reading instruction* (3rd ed., pp. 205–242). Newark, DE: International Reading Association. Retrieved April 15, 2017 from http://www.learner.org/workshops/teachreading35/pdf/Dev_Reading_Comprehension.pdf

Francois, J. (2016). The impact of teacher prompting and questioning on third grade students' comprehension. *Honors Program Theses*. 216. Retreved on April 12, 2017 from http://scholarworks.uni.edu/hpt/216

Gagne, R. M. & Briggs, L. J. (1979): *Principles of Instructional Design*. New York: Holt, Rinehart, and Winston.

Gagne, R. M. (1977). *The Condition of Learning.* New York: Holt, Rinehart, and Winston.

Gambrell, L. B. (2011). Seven rules of engagement. *The Reading Teacher*, 172–178.

Ginting, S. (1990). *Kajian tentang Metode Uji Keterbacaan sebagai Penentu Keefektifan Materi Bacaan*. Malang: Pascasarjana IKIP Malang. https://doi.org/10.1002/TRTR.01024

Hazzard, K. (2016). The Effects of read alouds on student comprehension. *Education Masters. 351*. Retrieved on February 10, 2017 from http://fisherpub.sjfc.edu/education_ETD_masters/351

Ibrahim, M. H., & Abd. R. (2016). The effectiveness of the logic of English approach on the improvement of reading skills of Saudi EFL learners. *Education and Linguistics Research, 2*(1). https://doi.org/10.5296/elr.v2i1.8640

Kendeou, P. (2014). A cognitive view of reading comprehension: Implications for reading difficulties. *Learning Disabilities Research & Practice, 29*(1)*,* pp. 10–16. https://doi.org/10.1111/ldrp.12025

Nurgiyantoro, B. (1988). *Peniliaian dalam Pengajaran Bahasa dan Sastra*. Yogyakarta: BPFE.

Oller, Jr. John W. (1979). *Language test at school*. London: Longman.

Otto, W., Rude, R., & Spiegel D. L. (1979). *How to teach reading.* Addison – Wesley Publishing Company.

Padron, Y. N. & Waxman, H. C. (1988). The effect of ESL student's perception of their cognitive strategies on reading achievement. *Tesol Quarterly, 22*(1). https://doi.org/10.2307/3587068

Paris, S. G., Lipson, M. Y., & Wixson, K. K. (1983). Becoming a strategic reader. C*ontemporary Educational Psychology*, *8*, pp. 293–316. https://doi.org/10.1016/0361-476X(83)90018-8

Porath, S. (2014). Talk less, listen more: Conferring in the reader's workshop. *The ReadingTeacher, 67*(8*),* pp. 627–635. https://doi.org/10.1002/trtr.1266

Pressley, M.P., & Hilden, K. (2004). Verbal protocols of reading. in Duke N.K. & Mallette M.H. (Eds.), *Literacy research methodologies* pp. 308–321. New York: Guilford.

Rumelhart, D. E. & Ortony, A. (1977). The Representation of Knowledge in Memory. *Schooling and the Acquisition of Knowledge*. Lawrence Erlbaum, New York, pp. 99 – 136.

Sadeghi, N., Kasim, Z. M., Tan, H. B., & Abdullah, S. A. (2010). Learning Styles, Personality Types and Reading Comprehension Performance. *English Language Teaching, 5*(4), 116-123. https://doi.org/10.5539/elt.v5n4p116

Smith, N. B. & Robinson, H. A. (1980). *Reading instructions for today's hildren*. Prentice – Hall, Inc.

Tinker, M. A. (1975). *Teaching elementary reading.* New jersey: Prentice – Hall.

Valette, R. M. (1977). *Modern language testing*. San Diego: Harcourt Brace Jovanovich, Inc.

Wolff, D. (1987). Some Assumptions about Second Language Text Comprehension. *SSLA, 9*(3), pp. 307 – 326. https://doi.org/10.1017/S0272263100006707

Corresponding Author: Imam Suyitno
Contact Email: imam.suyitno.fs@um.ac.id

Effects of Geographic Information System on the Learning of Environmental Education Concepts in Basic Computer-Mediated Classrooms in Nigeria

Ayobami Gideon Adeleke, Obafemi Awolowo University, Nigeria

Abstract

This research paper specifically examined the impact of Geographic Information System (GIS) integration in a learning method and on the performance and retention of Environmental Education (EE) concepts in basic social studies. Non-equivalent experimental research design was employed. 126 pupils in four intact, computer-mediated classrooms were sampled. Instruments included Envi-Geo Info System (EGIS) package and Environmental Information Achievement Test (EAT). The study found no significant effect of treatment on performances of participants in EGIS integrated treatment groups. No significant effect was found across the groups on pupils retention even though, treatment groups retention mean was higher than contemporaries. The study concluded that, adaptation of EGIS into sorted EE concepts will improve learning and might boost retention even in computer-mediated social studies classroom provided the use of GIS is made feasible in Nigeria and adopted into teaching-learning process. It recommended that stakeholders in Nigerian education system should foster workable strategies to improve teaching and learning and that, the use of GIS locally must be placed in the national education objectives. It is in the best interest of the people to learn the rudiments of personal safety, spatial development, incidental natural alerts, as well as preventions and solutions.

Keywords: computer-mediated classroom; geographic information system; environmental education; transversality.

Introduction

The yawn for conducive natural world - clean protected water, air, plants, and wildlife; each respectably placed within the ecosystem as against resource depletion, loss of species, and climate change which has threatened the sustainability of planet earth remain a mirage in spite of the many efforts over the decades, the world over and more specifically in Nigeria. A fundamental shift in approach toward instilling a sense of care and responsibility for the well-being of communities and the planet Earth as an abode for man and his neighbors - centripetal or centrifugal - is inexcusable. The need to immunize the Nigerian society against nature deficit disorder and eco-phobia are overt. Louv (2005) characterized modern children's isolation from nature as the foundation for disgust for science learning in elementary schools, less discovery of scientific truths, developing disaffection for nature within children and terse sense of conservation. Lorsbach and Jinks (2013) suggested teaching and learning process as turning points.

Environmental Education (EE) according to the Working Group on Environmental Education (2007) is education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experience in, and an appreciation for the dynamic interactions of the:

• The Earth's physical and biological systems;
• the dependency of our social and economic systems on these natural systems;
• scientific and human dimensions of environmental issues;
• positive and negative consequences, both intended and unintended, of the interactions between human-created and natural systems.

The social studies subject as a child of circumstance can encompass EE. Historically, social studies was born to resolve contemporary societal problems within the humanities. It has its parentage from the social sciences and concerned disciplines to address particular problems in the United States hence, a continuous bid on social studies subject at resolving fundamental societal issues is never out of place. The subject was introduced into Nigeria educational system in 1963. Therefore, the modern-day environmental challenges of global warming, resource depletion, loss of plant and animal species, climate change and such issues threatening the human race and his host planet become central concerns of the social studies subject as an amalgamative, multi-disciplinary school discipline. This is especially important in the view of non-existence of environmental education as a school subject in the basic and middle schools in Nigeria.

This study, therefore, examined the effect on the performance of pupils exposed to Geographic Information System (GIS) integrated with environmental education concepts in basic computer-mediated classrooms with social studies as the teaching subject. It also determined the effect of the intervention on pupils' retention. These are with a view to tout on the best strategy for the teaching and learning of the diffused environmental education concepts in social studies subject in Nigeria.

Literature Review

Literature provides a few studies on varieties of strategies explored in the teaching and learning of environmental education both in formal and non-formal education settings. Experiential learning advocated by Water Monitoring Youth Portal (WMYP, 2016) in

Canada to entrench the awareness, knowledge, attitude, skills and participation in affective and cognitive experiences with their biophysical or social environment. Adult environmental literacy had been experimented and found good earlier in Europe by Mancl, Carr & Morrone (1999). The public of Ohio, United States overwhelmingly supports EE in public schools (Environmental Education Council of Ohio (EECO, 2000). Environmental education takes place in all types of settings with all types of learners. It is only paramount that educators consider the developmental stages and the motivations of their intended learners and the educational setting when developing EE programs. Yet, the leading voices in EE clearly affirm that good EE does not impose prescribed views or courses of action onto learners (NAAEE, 2000). Rather, good EE helps people learn how to evaluate information and points of view for themselves in order to make informed decisions. Despite this commitment to objectivity, very few works however related these to learners' performance or underscore the very essence of retention of learnt concepts.

Senemoglu (2003) lauded the use of computer-mediated instructions as engendering motivating force, immediate feedback and reinforcement capabilities which enable learners to progress at their own pace and accordingly provides them with appropriate alternative ways of learning by individualizing the learning process. Computer-mediated classroom instruction (CMI) is an offshoot of Information and communication technology which has lifted education off from borderlines in terms of time and place. Even in the developing nations of the world including Nigeria, Adeleke (2016) and Adeleke, Jegede & Iroegbu (2017) have utilized CMI in institutions to expose learners to the whole scope and varieties of learning in numeracy, literacy and enculturation with plausible effect on performance and retention. It is especially needful in EE to enable learners to self-evaluate and reflect on the learning process. In Social Studies, the dart of access to spatial data collection, an electronic representation of earth's natural features as well as man-made environments are consistent challenges that require solution.

The Kansas State Teacher's College (1954) exhibited a concern with nature study and related science for children similar to what the researcher has today. Several projects which incorporated pupils from the primary level through the eighth grade were fostered with a view to help teachers to choose the most suitable instructional material and textbooks for their own teaching situations and as well help learners in the specific grades.

The framework for this study is rooted in the concept of transversality which according to Greenblatt (2015), referred to a description of objects intersection. It is rooted in generic and stable Thom's Transversality Theorem (1954). The adaptability of this concept in this study is premised on its emphasis on transversal teaching process presence in the social studies subject, a "guardian" of interdisciplinarity. UNESCO-UNEP (1978) recommended avoidance of environmental education becoming just another discipline added to those already existing but be introduced as a transversal theme in school curricula. This infusion of EE into Social Studies in the basic computer mediated classroom was the conceptual application of transversality theorem. Like Pujol and Bonil (2003) who saw the greening of today's curriculum as a complex and dynamic process constructed on three essential bases: a new collective ethic, a new style of thinking, and a new form of transformational action; the researcher adapted EE teaching within the social studies subject with the application of GIS as vehicle for instruction.

In spite of the paucity of research on performance and retention of environmental education concepts in the best interests of the learners' rudiments of personal safety, spatial development, incidental natural alerts, preventions and solutions; this study would add to the existing body of knowledge, expand teachers and curriculum designers' choices of meaningful learning experiences and instructional strategies.

Methodology and Methods

The study adopted non-randomized pretest, posttest experimental research design to examine the impact of Envi-Geo Info System (EGIS) package on the learning and retention of environmental education concepts in basic social studies. The entire basic school pupils in Nigeria make up the population. Four junior secondary schools operating computer-mediated classrooms were purposively selected in south-west Nigeria. Four intact classes, one from each school were sampled into the study. A total of 126 pupils, of the four intact, computer-mediated classrooms were participants.

Instrumentation included Envi-Geo Info System (EGIS) package, having environmental education induced concepts in social studies subject, was principally used as a computer-mediated instructional package. The Environmental Information Achievement Test (EAT) was used as pretest, posttest and retention tests to assess the impact of the intervention. The posttest assessment was done on school basis (four schools) while the retention assessment was grouped into the two categories of research participants (experimental EGIS and control CM). The research instruments – Envi-Geo Info System (EGIS) package was self-developed using a taxonomy based on Blooms' principles as revised by Anderson and Krathwohl (2001) in Wilson (2013). It was trial-tested and Cronbach alpha value of 0.765; correlation values at r = 0.744 which (Berg, Wood-Dauphinee & Williams, 1995) asserted high enough to justify the reliability of instruments. The Environmental Information Achievement Test (EAT) used as pretest, posttest and retention tests were also validated by test experts prior use. The research hypotheses were analyzed for an answer using one-way ANOVA and T-test.

Results and Discussion

The first null hypothesis assumed that there is no significant effect of treatment on performances of participants in EGIS integrated treatment groups. To establish the assumption, analysis of the performance test results was undertaken. Descriptively, Table 1 showed the marginal scores in groups (25 and 60) and the actual mean score of each of the groups. It also exhibited the non-equivalent structure of the study groups.

Table 1: Analysis of Groups Performance in Environmental Information Achievement Test.

Groups	**N**	**Mean**	**Std. Dev.**	**Min**	**Max**
CM-EGIS 1	31	43.69	7.84	28.00	56.00
CM-EGIS 2	36	44.48	6.82	25.00	54.00
CM-1	25	39.00	7.23	39.00	58.00
CM-2	34	41.17	10.66	25.00	53.00
Total	**126**	**44.28**	**7.02**	**25.00**	**58.00**

Field Data (2017)

The table revealed mean scores of CM-EGIS 2 as the highest mean score (44.48), CM-EGIS 1 (43.69), CM-2 (41.17) and CM-1 score the lowest (39.00). However, the groups mean average of 44.28 did not negate score from any of the groups. Further analysis was undertaken to predict the significance of result and a One-way analysis of variance was employed as shown in Table 2.

Table 2: Analysis of Variance - Groups Performance in Achievement Test.

ANOVA: Groups Performance in Environmental Information Achievement Test					
Variable	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	126.43	3	45.51	0.92	>0.05
Within Groups	13594.07	122	49.32		
Total	13730.62	125			

According to Table 2, the result showed mean squares between groups and within groups as 45.51 and 49.32 respectively. It yielded F-ration of 0.92 which is not significant at the 0.05 level. The implication of this result is that the EGIS integration in computer-mediated basic social studies teaching of EE concept has no significance.

Findings predicted that the EGIS integration in computer-mediated basic teaching of EE concept has no significance ($F = 0.92$, $p>0.05$). This finding negated Conde and Sánchez (2010) postulation of environmental education (EE) as a lifelong process. The prominent objective of imparting EE are to inculcate environmental awareness, ecological knowledge, attitudes, values, commitments for actions, and ethical responsibilities for the rational use of resources and for sound and sustainable development. The significance of these has been emphasized through several seminars, summits, conferences and workshops locally and internationally. Achievements in advancing the course included the integration of EE into school curricula at basic, secondary, tertiary and graduate studies levels. Additionally, the result was in tandem with Bednarz (2004) opinion that, the many assumptions underpinning the initial period of enthusiasm for the GIS technology must be ascertained. Bednarz also reiterated that barriers to successful dissemination need be identified in order to help shape and inform phases of GIS implementation. It can be deduced that there is a need for developing an improved pedagogical foundation for GIS if it is to be explored as a strategy for teaching EE concepts.

Literature, educators and researchers affirmed that GIS is useful in the learning-teaching process (Aladağ, 2007; Alibrandi, 2003, Alibrandi & Sarnoff 2006; Beishuizen, 2006; Demirci, 2007; Siegmund, Viehrig & Volz, 2007). Pang (2006) however opined that GIS use in education will develop students' information and media literacy, preparing them well for the digital age. One of the main strengths of using GIS in education according to Pang (2006) is that, they engage students in 'scientific visualization' through the use maps and their databases, the process of interaction, manipulation and expression of information by the learners. These enrich and immerse understanding of the concepts related to the data being explored. It also instill the skills of organization and communicating information in our data-rich environment. More importantly, a "culture" that allows for an active research process, so that teachers can develop new ways of using GIS in their lessons (Jenner, 2006) is created by integrating GIS into school programs. When students navigate the range of visualization methods to constructively explore, discover and hypothesize on various scientific theories and concepts, they move from being passive recipients of information to active discoverers and constructors of knowledge.

The second null hypothesis stated that there is no significant effect of CM-EGIS intervention on pupils' retention. Study population was re-categorized into two namely, Computer Mediated-EGIS (CM-EGIS) and Comparison Method (CM). The retention ability test administered three weeks after the posttest; the scores of the two groups were subjected to t-test analysis with results presented in Table 3.

Table 3: Retention Ability Test on CM-EGIS Interventions.

Group	**N**	**Mean (x)**	**SD**	**df**	**T**	**p-value**	**Remark**
CM-EGIS	67	88.17	19.0249	60	-0.316	0.782	Not Significant
CM	59	84.38	17.8897				

The analysis indicated that there was no significant effect of CM-EGIS on pupils' retention of EE concepts in basic social studies classrooms across the study sampled population ($t = -0.316$, $p<0.05$). The hypothesis 2 not being rejected implied that no better retention ability was enhanced with the application of EGIS in teaching environmental education concepts. This contrasted with the literature supporting the use of virtual laboratory in various study subjects as potent at enhancing retention (Lux (2002), Kara (2008), Tuysuz (2010), Murniza (2010), Gambari, Falode, Fagbemi, & Idris (2012). There is scarcity of literature on the test of retention using EGIS in social studies education in Nigeria. However, the exploration of this field of research towards imparting environmental awareness, ecological knowledge, attitudes, values, commitments for actions, and ethical responsibilities for the rational use of scarce, natural resources and for sound and sustainable development is on the continuum.

Conclusion

Information and communication technology (ICT) has been found an ally in the effort to improve teaching and learning. Geographic Information System (GIS), as adopted in this study is a modern brand of ICT. The adaptation of EGIS into sorted EE concepts is a powerful strategy via which educational improvement in learners' performance and retention - even in computer-mediated classroom – might be enhanced. The study however concluded that, while EGIS seems not feasible for adoption into teaching-learning process in Nigeria momentarily, subsequent researches in various geo-political zones of the nation overtime might reiterate the needfulness for implementations.

It is hereby recommended that stakeholders in Nigerian education system – students, teachers, parents, school management, policy makers, politicians, entrepreneurs, government and non-governmental agencies should foster and awaken workable strategies that can improve teaching and learning of environmental education across disciplines, given its importance in the modern world to sustainable development. Additionally, the crux of working with GIS within the local environment must be considered for placement in the national education objectives. Nigeria needs to join the technology-driven crusade using GIS in the best interests of her populations' personal, social, educational, spatial development and incidental alerts, prevention and solutions.

Appendix

Envi-Geo Info System (EGIS) Package Codes using C-Sharp

```
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;
using System.Media;
//using System.Timers;
namespace EGIS {public partial class frmTest : Form
{int TrialNo = 2;
int nxt = 0;
int prv = 0;
int last = 300;
int score = 0;
int totQ = 0;
//int first = 1;
string qList = "";
int inc = -1;
int queN = 1;
string answr = "";
bool cor = false;
bool tr = false;
int s1 = 0; int s2 = 0; int s3 = 0; int s4 = 0; int s5 = 0; int s6 = 0; int s7 = 0; int s8 = 0; int s9 = 0; int
s10 = 0;
int s11 = 0; int s12 = 0; int s13 = 0; int s14 = 0; int s15 = 0; int s16 = 0; int s17 = 0; int s18 = 0; int s19
= 0; int s20 = 0;
int s21 = 0; int s22 = 0; int s23 = 0; int s24 = 0; int s25 =
string c1 = ""; string c2 = ""; string c3 = ""; string c4 = ""; string c5 = ""; string c6 = ""; string c7 = "";
string c8 = ""; string c9 = ""; string c10 = "";
string c11 = ""; string c12 = ""; string c13 = ""; string c14 = ""; string c15 = ""; string c16 = ""; string
c17 = ""; string c18 = ""; string c19 = ""; string c20 = "";
string c21 = ""; string c22 = ""; string c23 = ""; string c24 = ""; string c25 = "";
//System.Timers.Timer myTimer = new System.Timers.Timer(5 * 60);
Timer timer = new Timer() { Interval = 1000 };
public frmTest()
{ InitializeComponent();
txtTime.Text = TimeSpan.FromMinutes(0).ToString();
lblNam.Text = ClspassVal.name;
lblStandby();
}
//SoundPlayer My_Correct = new
SoundPlayer(Resource1.correct);@"C:\Users\Adsonet\Documents\correct.wav");//Application.Startup
Path + @"\correct.wav");
SoundPlayer My_Wrong = new SoundPlayer(Resource1.Crowd_Boo);
SoundPlayer My_Applause = new SoundPlayer(Resource1.applause);
void lblStandby()
int val = 0; int val1 = 0; int val2 = 0; int val3 = 0;
```

Acknowledgements

There was no research funding or grant to support this study, yet, the researcher found it imperative acknowledging the assistance, support and encouraging experiences gathered working with the four engaged schools and school personnel who assisted in the study, the school managements were headed by Mr Adeniji, M. A; Rev. Sister Carmen-Mary; Mrs Soyooye; and Mr Akindipe, the eighth-grade pupils of Anthony Udofia Model School; St. Franciscan; Damico Group of Schools and Obafemi Awolowo University Staff School, all in Osun, Nigeria.

References:

Adeleke, A. G. (2016) A survey of Internet usage for learning in Nigerian secondary schools. *Journal of Media Educational Technology and Communications*, *3*(1), 102–106.

Adeleke, A. G., Jegede, P. O. and Iroegbu, V. I. (2017). Advancing retention in numeracy concepts with ICT-integrated learning strategies among lower primary school pupils in Nigeria. Paper presented at IMRF'S 48th International Conference on Mathematics & Computer Science; Jyoti Nivas College, Karnataka, India. Feb 16 - 18, 2017.

Aladağ, E. (2007). Coğrafi Bilgi Sistemleri kullanımının ilköğretim 7. sınıf öğrencilerinin sosyal bilgiler dersine karşı tutumlarına etkisi. *Türkiye Sosyal Araştırmalar Dergisi*, *11*(2), 43-63.

Alibrandi, M. (2003). *GIS in the Classroom: Using geographic ınformation systems in social studies and environmental sciences*. Portsmouth, NH: Heinemann.

Alibrandi, M., & Sarnoff, H. (2006). Using GIS to answer the 'whys' of 'where' in social studies. *Social Education. 70*(3), 138–143.

Anderson, L. W. and Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. Pearson Education Group, Allyn and Bacon. Boston, MA.

Bednarz, S. W. (2004). Geographic information systems: A tool to support geography and environmental education? *GeoJournal* 60. *Netherlands Kluwer Academic Publishers.* 191–199.

Beishuizen, J. J. (2006). GIS in secondary education, *Netherlands organisation for scientific research (NWO),* http://www.nwo.nl/nwohome.nsf/pages/NWOA_6NEBV2 adresinden 10 Haziran 2008 Tari Hinde edinilmiştir.

Berg, K., Wood-Dauphinee, S., & Williams, J. I. (1995). The Balance scale: Reliability assessment with elderly residents and patients with an acute stroke. *Scandinavian Journal of Rehabilitation Medicine*, *27*(1), 27-36.

Conde, María del Carmen, & Sánchez, J. S. (2010). The school curriculum and environmental education: A school environmental audit experience. *International Journal of Environmental & Science Education*, *3*(3), 477–494.

Demirci, A. (2007). Coğrafi bilgi sistemlerinin ilk ve ortaöğretim coğrafya derslerinde bir öğretim aracı olarak kullanılması: Önem, ilke ve metotlar. *Marmara Üniversitesi Sosyal Bilimler Enstitüsü Öneri Dergisi*, *28*(7), 377–388.

Environmental Education Council of Ohio (2000). Best practices for environmental education: Guidelines for euccess. U. S. Environmental Protection Agency and the George Gund Foundation. Available at http://www.epa.state.oh.us/other/oeef/oeemain.html

Gambari, A. I., Falode, O. C., Fagbemi, P. O., & Idris, B. (2012). Effect of virtual laboratory strategy on the achievement of secondary school students in Nigeria. Proceedings 33rd Annual Convention and National Conference of Nigeria Association for Educational Media and Technology (NAEMT) held at Emmanuel Alayande College of Education, Oyo, Oyo State. Oct.8-13, 2012.

Greenblatt, C. (2015). An introduction to transversality. Accessed online at http://schapos.people.uic.edu/MATH549_Fall2015_files (p.1).

Jenner, P. (2006). Engaging students through the use of GIS at Pimlico State High School. *International Research in Geographical and Environmental Education, 15*(3), 278–282. https://doi.org/10.2167/irgee196g.0

Kansas State Teachers College (1955). *The Kansas school naturalist: Children's books for nature study*. *The Kansas State Teachers College of Emporia, 1*(3), 3-16.

Kara, I. (2008). The effect on retention of computer assisted instruction in science education. *Journal of Instructional Psychology*, *35*(4), 357–364.

Lorsbach, A. & Jinks, J. (2013). What early 20th-century nature study can teach us. *Journal of Natural History Education and Experience, 7*, 7–15.

Louv, R. (2005). *Last child in the woods: Saving our children from nature deficit disorder.* Chapel Hill, North Carolina: Algonquin Books.

Lux, M. F. (2002). An activity-based format increased students retention in a community college microbiology course. *Journal of Microbiology and Biology Education*, *3*(1). Retrieved 24-04-2017 at http//jmbe.asm.org/index.php/jmbe/article/view/64/html_34

Mancl, K.; Carr, K.; Morrone, M. 1999. Environmental literacy of Ohio adults. *Ohio Journal of Science, 3*, 57–61.

Murniza, M., Halimah, B. & Azlina, A. (2010). Virtual laboratory for learning biology – a preliminary Investigation. *World Academy of Science, Engineering and Technology*, *1*, 272–575.

North American Association for Environmental Education (NAAEE). (2000). Environmental education materials: Guidelines for excellence. The workbook. Available at http://www.naaee.org/npeee/Workbook

Pang, Alexis (2006) Geographical Information Systems (GIS) in education in Ministry of Education, Singapore IT Literature Review Educational Technology Division.

Pujol, R. M., & Bonil, J. (2003). Una propuesta de ambientalización curricular desde la formación científica: el caso del crecimiento urbano. In M. Junyent, A. M. Geli, & E. Arbat (Eds.), *Ambientalización Curricular de los Estudios Superiores. 2: Proceso de Caracterización de la Ambientalización Curricular de los Estudios Universitarios* (pp. 151-171). Girona (Spain): Universidad de Girona - Red ACES.

Senemoglu, N. (2003). *Development learning and teaching*. Ankara: Gazi Publishing.

Siegmund, A., Viehrig, K., & Volz, D. (2007). GIS@school – new didactical aspects of using GIS in geography education. *HERODOT-Working Conference: Geography for Society: Putting Bologna into Action.* Retrieved October 19, 2009, from http://www.herodot.net/conferences/stockholm/HERODOT-Stockholm2.html#pres

Thom, Rene (1954). Quelques proprieties des varieties differentials. CM Helvetica.

Tuysuz, C. (2010). The effect of virtual laboratory on students' achievement and attitude in chemistry. *Intern online Journal of Education Sciences*, *2*(1), 37–53.

UNESCO-UNEP. (1978). *Final report intergovernmental conference on environmental education. Tbilisi, Ex-URSS,* October 14–26, 1977. Paris.

UNESCO-UNEP International Environmental Education Programme series 21.

United States Geological Survey [USGS]. (2005). *Geographic information systems in education.* http://rockyweb.cr.usgs.gov/outreach/giseduc.html ad resin den 19 Eylül 2009 Tari Hinde edinilmiştir.

Water Monitoring Youth Portal (2016). Environmental education teaching strategy – Experiential learning in environmental education. Available at www.pjse.ca

Wilson, L. O. (2013). Understanding the new version of Bloom's taxonomy - A succinct discussion of the revisions of Bloom's classic cognitive taxonomy by Anderson and Krathwohl and how to use them effectively." http://www4.uwsp.edu/education/lwilson/curric/newtaxonomy.htm

Working Group on Environmental Education (2007). *Shaping our schools, shaping our future*: Environmental Education in Ontario Schools. Ottawa; Queen's Printer, Ontario.

Corresponding Author: Adeleke, Ayobami Gideon
Contact Email: ag_leke@oauife.edu.ng

Investigating the Major Effect of Principal's Change Leadership on School Teachers' Professional Development

Dian-Fu Chang, Tamkang University, Taiwan
Sheng-Nan Chen, Yong Fu Elementary School, Taiwan
Wen-Ching Chou, Tamkang University, Taiwan

Abstract

In a rapidly changing era, educational change has become one of the crucial tasks for better student performance in schools. Potential and innovative leadership in schools is needed to keep up with the fast-pace of change, and to achieve better learning results for students. Therefore, how to construct a teacher's professional development to fulfil the outcome-based policy in schools is a new challenge for principals. This study focused on principals' change leadership as perceived by school teachers and explored which dimension of change might impact on the teachers' professional development. This study successfully invited 490 teachers from 41 elementary schools in New Taipei City (Taiwan) to participate in this study. There were 453 valid questionnaires returned which represented a 92.4% return rate. Twenty-five indicators of change in leadership were classified into three dimensions, namely: "communicating and shaping change action", "building a supported environment", and "adjusting organization and performance". The teachers' professional development has been defined by eight indicators which classified into "willing" and "effect" of participation. This study employed the stepwise method to determine the major factors that impact a teachers' professional development by using regression models. The results reveal both "building a supported environment" and "adjusting organization and performance" in a principal's change in leadership can explain 23.2% of the teachers' professional development. Based on the results of regression analysis, this study suggests that properly shaping a principal's change leadership can prompt to enhancing a teachers' professional development. Furthermore, change leadership might be applied to wider practices to improve a teachers' performance in various settings.

Keywords: change leadership; elementary schools; principal; professional development; school teachers.

Introduction

Various leadership styles have been thoroughly discussed. For example, contingency leadership (Gelei, Losonci & Matyusz, 2015; Shao, Feng & Hu, 2016), distributed leadership (Cannatelli, Smith, Giudici, Jones & Conger, 2016), transitional leadership (Oplatka & Arar, 2016; Shao, Feng & Hu, 2016), transformational leadership (Chong, 2015; Shao, Feng & Hu, 2016), servant leadership (Liden, Panaccio, Meuser, Hu & Wayne, 2014a; 2014b; O'Reilly, Doerr, Caldwell & Chatman, 2014; Panaccio, Henderson, Liden, Wayne & Cao, 2015), and others. While facing rapid changes in technology and society, change-oriented leadership has caused concern in different organizational settings (Gill, 2002). The "change is manageable" bubble began to burst in the mid-1980s, and by the 1990s it became obvious that managing change was becoming less and less possible (Anderson & Ackerman Anderson, 2001). Most challenges come from the technological revolution, primarily fuelled by information and communication technologies, which increased the speed and scope of change so much that the process of change became significantly more complex.

This study assumes that while change might be manageable, it also requires effective leadership to be successfully implemented and sustained. This is especially the case for traditional and conservative organizations, for instance, as well as different levels of schools that need to introduce a model of leadership for change to reflect their requirements. The question of this research focuses on how we know if change-oriented leadership works in a specific setting. If it works in schools, what kinds of dimensions are consisted of such kind of leadership model? Obviously, it is not appropriate to ask the related questions from school principals directly, while the teachers' perceptions of principal change leadership will reflect the real practices. Specifically, first, this study tries to realize the principals' change leadership perceived by school teachers, then to determine which dimensions of change leadership might impact on teachers' professional development. Finally, based on the findings, this study provides suggestions about how to enhance leadership training programs.

Literature Review

As Fullan argues, the more complex society gets, the more sophisticated leadership must become. He mentions the theoretical reasons and tactical skills for change, including moral purpose, understanding change, developing relationships, knowledge building, and coherence making (Fullan, 2001). Leaders must develop the skills they need to lead effectively, no matter how fast the world around them is changing. In this section, this study reviewed related literature to support the main themes of our study: change leadership and teacher' professional development.

Change Leadership in Organizations

Previous researchers assumed leaders would indeed provide leadership and make decisions, and assumed they would make those decisions in the best interests of the organization. In an organization, most people are employees – that being in management or non-management roles – and at any one moment in time they may initiate one change, support a second, and resist a third. Leaders and managers are change agents, and non-management employees usually resist change. Hence, the non-management employees must be managed by managers who themselves might never resist change (Anderson & Anderson, 2001; Anderson & Ackerman-Anderson, 2001). As a result, leadership is all about action and influence, and not only the titles. Many leaders do not provide leadership, and many who do perform leadership do not perceive themselves as leaders.

Change can range from relatively simple short-term alterations to highly complex long-term transformations, and is likely to involve many kinds of leadership and management behaviours on the part of many different individuals and groups. Anderson and Ackerman-Anderson (2001) argue there are two types of transformation for change leadership in organizations. One is the transformation happens in the organization in terms of the state of awareness that leaders personally bring to change, which influences the actions they take. The leaders 'take' to transformation impacts every aspect of their change leadership capability and experience, including their personal ability to change, the change strategies they develop, their leadership and decision-making styles, their communication patterns, their relationships with stakeholders, their personal reactions, and, ultimately, their outcomes. Therefore, expanded awareness is like getting the benefit of both a wide-angle lens and a high-powered telephoto lens at the same time. Through the wider view, leaders can see more broadly the dynamics at play in transformation (Anderson & Ackerman-Anderson, 2001). Figure 1 addresses the level of the wake-up call for such type of transformation.

The change exerted by leadership may emerge in line with the model in Figure 2. The model can be used to explain the interaction between leaders and followers or members in the organization. The leaders prepare the wake-up call for change, while the followers will prepare to lead and implement the change.

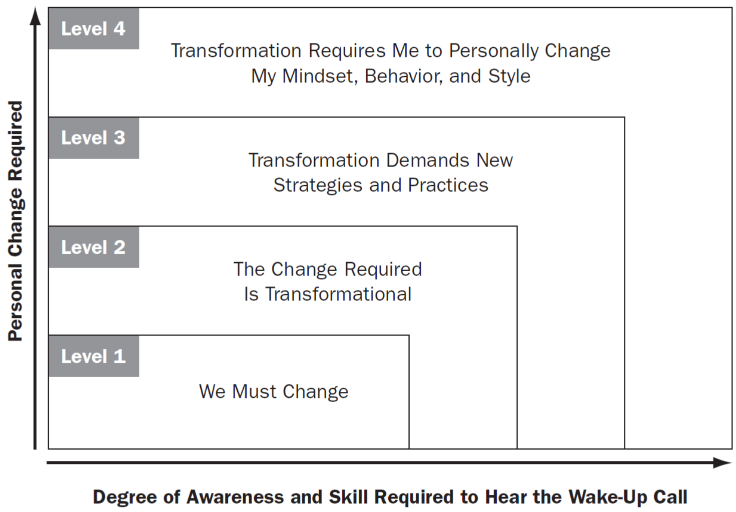


Figure 1: Level of walk-up call for transformation
Source: Anderson & Ackerman-Anderson, 2001, p. 41.

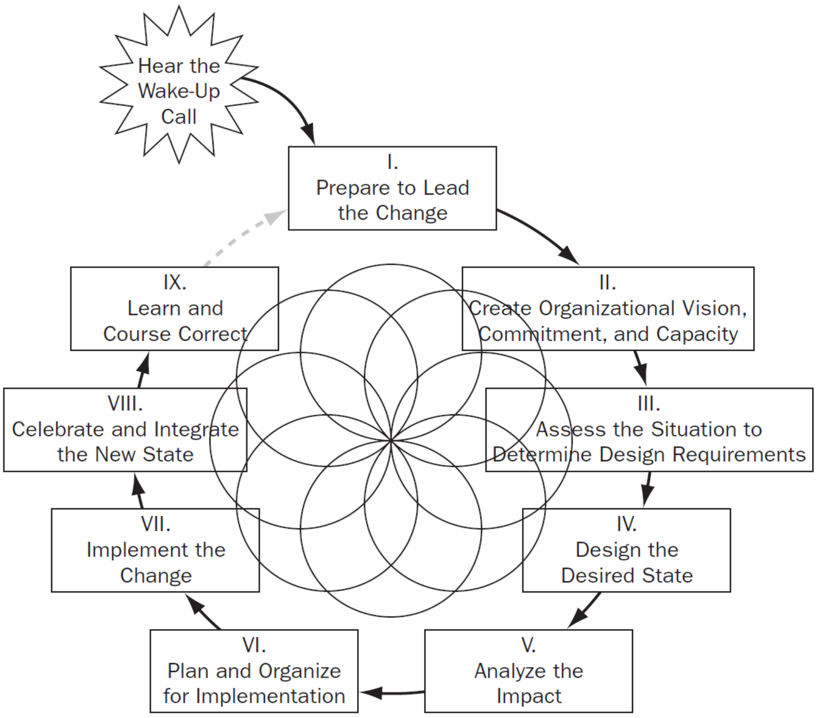


Figure 2: Change process for leading conscious transformation
Source: Anderson & Ackerman-Anderson, 2001, p. 171.

The majority of change leadership studies focus on the individual leader as the source of change outcomes (Ford & Ford, 2012). Following the arguments of Hughes and Ford (2016), this study assumes that leadership is a personal possession of the leader rather than partners in the co-creation of change outcomes.

The Effect of Principal's Change Leadership on Teachers

Kin et al. (2017) claim that a principal's change leadership competencies are significantly related to teacher change beliefs as demonstrated by their SEM model. Their study implies that if school principals equipped themselves with sufficient change leadership competencies, teacher change beliefs can be enhanced. Teacher change beliefs were also significantly related to teacher attitudes towards change, whereby the stronger the teacher change beliefs, the greater the enhancement of teacher attitudes toward change. Therefore, enhancing teacher change beliefs is one of the effective ways to increase the likelihood of teachers to embrace change. Principal's change leadership is an influential factor in enhancing teacher attitudes toward change (Kin, Kareem, Nordin & Khuan, 2017). This study assumes that how teachers perceive principal's change leadership might enhance teacher attitudes toward change. In recent reform initiatives, building and lifting teachers' professional development has become one of the important tasks in schools (National Academy for Educational Research, 2016). Based on the effect of principal's change leadership on teacher's professional development, the result of this study will provide useful information for school leaders.

Fullan argues that there are strong reasons to believe that the five components of leadership represent independent but mutual reinforcing forces for positive change. There are attending to a broader moral purpose, keeping on top of the change process, cultivating relationships, sharing knowledge, and setting a vision and context for creating coherence in organizations.

Then, leaders will be empowered to deal with complex change (Fullan, 2001). Leadership, then, is not mobilizing others to solve problems that they already know how to solve, but rather to help them confront problems that have never been successfully addressed. Basically, schools are beginning to discover that new ideas, knowledge creation, and sharing are essential to solving learning problems in a rapidly changing society. When the principals face change, the leadership they exert might contain the following five domains (Fullan, 2001; Hall &, Hord, 1987):

- Creating a sense of crisis;
- Communicating and shaping version;
- Adjusting and reinforcing organizational structure;
- Building a supportive environment;
- Deeping change culture.
- Previous studies have reported the related effect of principal's change leadership, while the effect of specific dimensions on teachers' professional development is still unclear.

Teachers' Professional Development

The professional development of teachers to enhance teacher's knowledge and skills has become a top priority in schools. In Taiwan, the curriculum reform initiated by the Ministry of Education has been implemented. The significant change is that the paradigm of new curriculum and teaching has shifted from a knowledge-oriented curriculum to one that stresses more activities and practices to bring about knowledge acquisition (National Academy for Educational Research, 2016). However, like other countries, a considerable proportion of school teachers may have been trained in more traditional ways (Chu, Reynolds, Tavares, Notari & Lee, 2017). Moreover, just as every student learns differently, teachers also have many different learning styles and face a variety of circumstances in the classroom. Most professional development today is ineffective because it neither changes teaching practices nor improves student learning. For example, professional development training events are sometimes inappropriate in size and scope, and without the structure to support learning new ideas or skills. They may also lack support for teachers' implementation of new instructional practices. The situation in schools is similar to that of the CPE's report – a professional development initiative that neither recognizes how "teaching is inherently complex and nuanced" nor promotes the empowerment of teachers via professional learning communities (Gulamhussein, 2013). With the aim to provide stronger educational support to in-service teachers in their adoption and development of new skills in teaching, the principal has been expected to initiate school-based professional development more effectively.

Continual professional development may give teachers time to learn and implement new teaching strategies. Therefore, providing ongoing instruction for a significant duration of time is necessary. Providing support addresses the challenges associated with changing a classroom practice. Previous studies have suggested active learning opportunities for school teachers. The activities can include readings, role-play, open-ended discussions, live modelling, and classroom visits. Many forms of active learning help teachers decipher concepts, theories, and research-based practices in teaching, and modelling the new practice (Zarrow, 2014). With a rapidly changing era, educational change has become one of the crucial components for better performance in schools. Innovative leadership in schools has been expected to fit the fast-paced of change to achieve better learning results for students. Therefore, how to build teachers' professional development to fulfil the outcome-based policy in schools has grown into a new challenge for principals. The linkage between leadership and professional development has become an important component in schools.

Based on the discussions in previous studies, this study assumes the leadership for professional development in schools exerted by principals might impact on the change of teachers. This study selected New Taipei City as the target group to collect data in 2016. The reason for this selection is that New Taipei has become the largest city with the largest school system in Taiwan. This study selected the quantitative approach to explore the topic. SPSS has been used to conduct the statistical analysis. In this section, the research framework, sampling, and verified the research tool will be addressed.

Research Framework

This study attempts to realize the relationship between the principal's change leadership and teachers' professional development. To start, the principal's change leadership and teachers' professional development will be assessed by using gender, teaching experiences, and school scale to determine their differences. Then, this study employs the stepwise method to determine the major factors impacting on teachers' professional development in regression models. The principal's change leadership may include various dimensions which will be verified by factor analysis. The teachers' professional development has been defined by willing to participating the related enhancing activities and the effect of the professional development. The testing model has been presented in Figure 3.

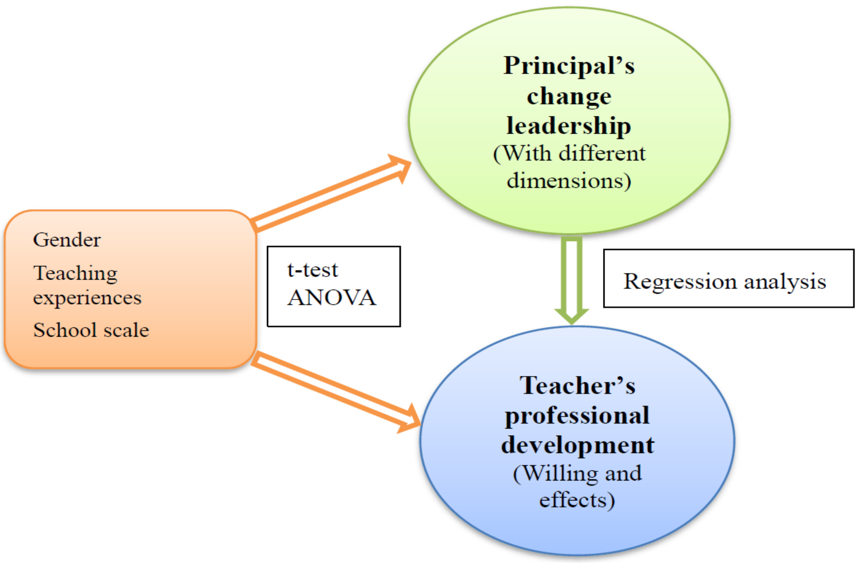


Figure 3: Research framework

Sampling

Based on the criteria for survey, a population over 5,000, the proportion of samples could be 20 percent of the target group (Gay, 1992). More precisely, this study estimated the samples from target group in terms of 16,201 elementary school teachers in New Taipei City with 95% confident level and possible error control under .05. In this case, the satisfied samples for study are 400. According to the sampling formula proposed by Dillman (2000), the fittest estimated samples are as follows:

$$n = \frac{N}{N\left(\frac{2d}{z_{\alpha/2}}\right)^2 + 1} = \frac{16201}{16201 \times \left(\frac{2 \times 0.05}{1.96}\right)^2 + 1} \approx 375$$

N: 16201 elementary school teachers; *n*: fittest samples; *d*: error of tolerance

This study also considers the school scale, and so the samples were classified by following the rules: under 12 classes (14 schools), 12-30 classes (7 schools), 31-60 classes (10 schools), and over 61 classes (10 schools). With 80 percent return rate, we expected to distribute 490 copies of questionnaires for teachers. The detail distribution of 490 samples has been presented in Table 1.

Table 1: Elementary scale and sampling distribution in New Taipei City.

School scale (classes)	Under 12	13~30	31~60	Over 61	Total
Number of schools (%)	68 (33%)	36 (17%)	51 (25%)	50 (25%)	205 (100%)
Target schools (25%)	14	7	10	10	41
Number of teachers (%)	1,246 (8%)	1,910 (12%)	4,984 (30%)	8,061 (50%)	16,201 (100%)
Samples	70	70	150	200	490
Average samples of schools	5	10	15	20	

Source: Bureau of Education, New Taipei City. (2016). Educational statistical data in New Taipei City in 2015. Retrieved from http://www.ntpc.edu.tw/_file/2052/SG/25532/D.html

This study successfully invited 490 teachers from 41 elementary schools in New Taipei City (Taiwan) to participate in this study. It resulted in 453 valid questionnaires, a 92.4% return rate made up of 165 (36.4%) male and 288 (63.6%) female teachers.

Research Tools

Both self-developed change leadership and professional development questionnaires have been verified by factor analysis. Twenty-five indicators of change leadership have been classified into three dimensions, named “communicating and shaping change action” (11 items), “building supported environment” (9 items), and “adjusting organization and performance” (5 items). The Cronbach’s α is counted .917 in the designed questionnaires. It represented the items that have good reliability in term of satisfied internal consistence. Factor analysis with Varimax extraction reveals there are three factors in the change leadership and totally can explained 76.29% variance, see Table 2. The rotation of three factors has been presented in Table 3. The teachers’ professional development has been defined by the willing and effect of participating which includes eight indicators.

Table 2: Factor analysis for developing valid principal’s change leadership questionnaire (Extraction: Varimax).

Factor	Initial Eigen values			Extracted sum of square			Circulate sum of square		
	Total	variance %	cum %	Total	variance %	Cum %	Total	variance %	Cum %
1	18.063	72.251	72.251	17.818	71.274	71.274	7.799	31.196	31.196
2	.920	3.678	75.930	.657	2.628	73.901	6.225	24.899	56.095
3	.798	3.192	79.122	.597	2.386	76.288	5.048	20.193	76.288
4	.593	2.374	81.495						
5	.482	1.928	83.423						
6	.448	1.793	85.216						
7	.347	1.387	86.603						
8	.300	1.202	87.805						
9	.289	1.155	88.960						
10	.260	1.040	90.000						
11	.252	1.010	91.009						
12	.241	.962	91.972						
13	.216	.866	92.837						
14	.206	.823	93.660						
15	.198	.793	94.453						
16	.191	.765	95.218						
17	.179	.718	95.936						
18	.161	.643	96.579						
19	.143	.573	97.152						
20	.136	.543	97.695						
21	.132	.526	98.221						
22	.127	.508	98.729						
23	.121	.485	99.214						
24	.108	.431	99.645						
25	.089	.355	100.00						

Table 3: The rotation of the factor matrix.

Items	Factors		
	1	2	3
A7	.762		
A6	.747		
A2	.709		
A3	.705		
A8	.681		
A4	.672		
A5	.664		
A9	.650		
A10	.647		
A1	.647		
A23	.575		
A20		.733	
A19		.683	
A18		.669	
A24		.633	
A16		.605	
A17		.604	
A22		.584	
A25		.570	
A21		.554	
A12			.777
A13			.723
A14			.653
A11			.622
A15			.595

Note. Extraction: Varimax; Rotation: Kaiser's Varimax

Results

The results demonstrate the group differences in principal's change leadership and teachers' professional development. The main effect of principal's change leadership impacted on the teachers' professional development will be addressed. This study considered the teachers' perception may have gender, teaching experiences, and school scale differences. The teaching experiences have been classified into four groups by 5, 10, 15, and over 15 years. School scales have been defined by four groups: Under 12 classes, 13-30 classes, 31-60 classes, and over 61 classes to verify their differences.

Principal's Change Leadership

According to factor analysis, twenty-five indicators of change leadership can be classified into three dimensions. Principal's change leadership has shown gender differences (t=2.065, p=.039), male teachers perceived higher change leadership from their principals than female teachers. This phenomenon also shows in "building supported environment" (t=2.001, p=.046) and "adjusting organization and performance" (t=2.073, p=.039), while there is no significant difference in "communicating and shaping change action" (t=1.920, p=.055), see Table 4.

Table 4: The principal's change leadership perceived by teachers with different gender.

Gender difference		*N*	*t*	*df*	*p* (two tails)
Principal's change leadership	Male Female	165 288	2.065	451	.039
communicating and shaping change action	Male Female	165 288	1.920	451	.055
building supported environment	Male Female	165 288	2.001	451	.046
adjusting organization and performance	Male Female	165 288	2.073	451	.039

One way ANOVA demonstrated that the various groups of teachers' teaching experiences have shown different perceptions on principal's change leadership ($F_{(3,449)}$=3.342, p=.019). The differences show in "communicating and shaping change action" ($F_{(3,449)}$=4.121, p=.007) and "building supported environment" ($F_{(3,449)}$=3.039, p=.029). But there is no significant difference in "adjusting organization and performance" ($F_{(3,449)}$=1.635, p=.176), see Table 5. Specifically, the differences come from under 5 years group and 5 years group (p=.034), and also displays the differences in 5 years group and over 15 years group (p=.023). In this case, the teaching experience differences did not consist in their explanation of principal's change leadership. Moreover, this study reveals there is no significant difference of principal's change leadership comparing the various school scales.

Teachers' Professional Development

Teachers' professional development has been classified two dimensions: willing to participating related activities and effect of professional development. Table 6 demonstrates the results of teachers' willing to participate and the effect of participating in related activities. The results of teacher's willingness to participate in the learning group or learning community are highly based on their means.

Table 5: Principal's change leadership perceived by teachers with different teaching experiences.

Different teaching experiences		Sum of square	*df*	Mean square	*F*	*p*
Principal change leadership	Between group	4382.768	3	1460.923	3.342	.019
	Within group	196263.263	449	437.112		
	Total	200646.031	452			
Communicating and shaping change action	Between group	955.495	3	318.498	4.121	.007
	Within group	34698.558	449	77.280		
	Total	35654.053	452			
Building supported environment	Between group	631.083	3	210.361	3.039	.029
	Within group	31082.789	449	69.227		
	Total	31713.872	452			
Adjusting organization and performance	Between group	107.684	3	35.895	1.653	.176
	Within group	9749.539	449	21.714		
	Total	9857.223	452			

Table 6: Teacher's professional development reported by teachers.

Indicators	Mean	*SD*	Rank
Willing to participate			
1. Willing to engage in group or learning community to promote teaching skills	4.01	0.85	7
2. Willing to participate class observation activities for improving teaching	3.79	0.96	8
3. Willing to participate workshop activities in or off campus	4.11	0.81	5
4. Willing to keep study and innovation in teaching	4.05	0.75	6
Effect of participating			
5. I can consider student's needs and design teaching	4.18	0.62	2
6. I can promote student learning and enhancing their capability	4.22	0.64	1
7. I can face the students with low motivation and active them	4.13	0.73	4
8. I have satisfied discipline knowledge and still pursuit to learn something new	4.15	0.69	3

Gender did not display significant differences in their will to participate (t=-.217, p=.828) and effect of participate the related learning activities (t=.552, p=.581). There is no significant difference in willing to participate with the teacher's teaching experiences ($F_{(3,453)}$=1.745, p=.157). The effect of participant related teaching activities has also shown no significant differences with the teachers' teaching experiences ($F_{(3,453)}$=2.221, p=.085). While this study demonstrates that teachers in small schools with 12 classes or less are more willing to participate in the related professional development activities (F(3,453)=3.563, p=.014). There is no significant difference in the effect of participating professional development activities ($F_{(3,453)}$=.694, p=.556).

Table 7: Teacher's professional development differences with school scale.

	School scale	*N*	*M*	*SD*	*F*	*p*	Turkey
Willing to participate	①12 classes or less	62	4.14	0.59	3.563*	.014	①>③
	②13-30 classes	58	4.02	0.63			
	③31-60 classes	147	3.84	0.68			
	④61 classes or over	186	3.88	0.68			
Effect of participate learning activities	①12 classes or less	62	4.28	0.50	.694	.556	
	②13-30 classes	58	4.17	0.53			
	③31-60 classes	147	4.19	0.57			
	④61 classes or over	186	4.17	0.55			

The Effect of Principal's Change Leadership

Based on the regression analysis, the teachers' professional development can be explained by principal's change leadership 23.3% of the variance (R^2=.232, $F_{(1,451)}$=135.973, p=.000). This study also considered the two dimensions of teacher profession development: one is willing to participate in related activities, the other is the effect of participating in professional development activities in regression models. First, the result reveals that the teachers' willing can be explained by principal's change leadership only in the "building supported environment" dimension. The regression model shows the R^2 =.217, it means only 21.7% variance can be explained in this model ($F_{(1,451)}$=124.628, p=.000). Second, this study found the effect of teachers' professional development can be explained by principal's change leadership only 18.1% with "building supported environment" and "adjusting organization and performance" ($F_{(2,450)}$=49.605, p=.000). Table 8 presents the details of the two regression models.

Table 8: The effect of principal's change leadership on teachers' professional development explained by regression models.

Models (Dep/In dep. var.)		***B***	***SE***	**Beta**	***T***	***p***	**Tolerance**	**VIF**
1. Willing	(constant)	2.507	.136		18.433	.000		
	CL2	.038	.003	.465	11.164	.000	1.000	1.000
2. Effect	(constant)	3.100	.114		27.271	.000		
	CL2	.016	.006	.239	2.757	.006	.243	4.112
	CL3	.024	.010	.201	2.321	.021	.243	4.112

Note. CL2= building supported environment; CL3= adjusting organization and performance

Conclusion

Over a period of time, the government has initiated school-based reform to promote innovative teaching in order to better student performance. Principals have been expected to exert more influence in leadership for changing the school culture. Focusing on the principal's change leadership and teachers' professional development, this study designed the survey tools to verify the assumption that the principal's change leadership can make differences in schools. In this study, the results reveal the five domains of principal's change leadership did not verify. According to the factor analysis, the idea of a principal's change leadership can be explained by "communicating and shaping change action", "building a supported environment", and "adjusting organization and performance". The effect of a principal's change leadership has shown significantly related to the teachers' professional development in terms of "willing to participate related activities" and "effect of professional development".

Based on the survey, the elementary schools in New Taipei City have shown satisfactory change leadership and high engagement in professional development. This study demonstrates a positive relationship between the principal's change leadership and teacher's professional development. The results reveal that when the perceived principal's change leadership existed in schools, it can reinforce teachers' professional development in terms of their willingness to participate in teaching-related enhancing activities and the expected effect of participation. Even though the study focuses on only elementary school settings, the findings can endorse the knowledge of the specific field.

For further studies, this study suggests focusing on how to enhance the capability of principal's leadership in the changing era. Principal's change leadership competencies are more influential than teachers' self-influence in enhancing teacher attitudes toward change. Therefore, concerted effort may be given to prioritize the continuous development of principal's change leadership in effective change management. The pre-service training program for principals needs to focus on the topic of change leadership. In addition, more complicated research design may provide details of information to interpret the theoretical framework, for example a workable SEM model.

References:

Anderson, D., & Ackerman-Anderson, L. S. (2001). *Beyond change management: Advanced strategies for today's transformational leaders*. San Francisco, CA: Jossey-Bass.

Anderson, L. A., & Anderson, D. (2001). *The change leader's roadmap: How to navigate your organization's transformation*. San Francisco, CA: Jossey-Bass.

Bureau of Education, New Taipei City. (2016). Educational statistical data in New Taipei City in 2015. Retrieved from http://www.ntpc.edu.tw/_file/2052/SG/25532/D.html

By, R. T., Hughes, M., & Ford, J. (2016). Change leadership: Oxymoron and myths. *Journal of Change Management, 16*(1), 8–17. https://doi.org/10.1080/14697017.2016.1137425

Cannatelli, B., Smith, B., Giudici, A., Jones, J., & Conger, M. (2016). An expanded model of distributed leadership in organizational knowledge creation. Retrieved from http://dx.doi.org/10.1016/j.lrp.2016.10.002

Chong, A. (2015). Political leadership in Singapore: Transitional reflections amidst the politics of bifurcation. *Journal of Southeast Asian Studies, 46*(1), 111–118. https://doi.org/10.1017/S0022463414000630

Chu, S. K. W., Reynolds, R. B. Tavares, N. J., Notari, M., & Lee, C. W. Y. (2017). Teachers' professional development. In S. K. W. Chu, R. B. Reynolds, N. J. Tavares, M. Notari & C. W. Y. Lee, (Eds.), *21st century skills development through inquiry-based learning* (pp. 109–129). Singapore: Springer.

Dillman, D. A. (2000). *Internet and mail surveys: The tailored design method.* New York, NY: John Wiley.

Ford, J. D., & Ford, L. W. (2012). The leadership of organizational change: A view from recent empirical evidence. In W. Pasmore, R. Woodman & A. Shani (Eds.), *Research in organization change and development* (pp. 1–36). Bingley: Emerald Publishing.

Fullan, M. (2001). *Leading in a culture of change*. San Francisco, CA: Jossey-Bass.

Gay, L., R. (1992). *Educational research: Competence for analysis and application*. New York, NY: Macmillan.

Gelei, A., Losonci, D., & Matyusz, Z. (2015). Lean production and leadership attributes: The case of Hungarian production mangers. *Journal of Manufacturing Technology Management, 26*(4), 477–500.

Gill, R. (2002). Change management--or change leadership? *Journal of Change Management, 3*(4), 307–318. Retrieved from https://doi.org/10.1080/714023845

Gulamhussein, A. (2013). *Teaching the teachers: Effective professional development in an era of high stakes accountability.* Center for Public Education. Retrieved from http://www.centerforpubliceducation.org/Main-Menu/Staffingstudents/Teaching-the-Teachers-Effective-Professional-Development-in-an-Era-of-High-Stakes-Accountability/Teaching-the-Teachers-Full-Report.pdf

Hall, G. E., & Hord, S. M. (1987). *Change in schools: Facilitating the process.* New York: State University of New York Press.

Kin, T. M., Kareem, O. A., Nordin, M. S., & Khuan, W. B. (2017). Principal change leadership competencies and teacher attitudes toward change: the mediating effects of teacher change beliefs. *International Journal of Leadership in Education* (online). Retrieved from http://dx.doi.org/10.1080/13603124.2016.1272719

Liden, R. C., Panaccio, A., Meuser, J. D., Hu, J., & Wayne, S. J. (2014a). Servant leadership: Antecedents, processes, and outcomes. In D. V. Day (Ed.), *The Oxford handbook of leadership and organizations* (pp. 357–379). Oxford, England: Oxford University Press.

Liden, R. C., Wayne, S. J., Liao, C., & Meuser, J. D. (2014b). Servant leadership and serving culture: Influence on individual and unit performance. *Academy of Management Journal, 57*, 1434–1452. https://doi.org/10.5465/amj.2013.0034

National Academy for Educational Research. (2016). *The Republic of China education yearbook 2014.* New Taipei City, Taiwan: Author.

O'Reilly, C. A, I. I. I., Doerr, B., Caldwell, D. F., & Chatman, J. A. (2014). Narcissistic CEOs and executive compensation. *Leadership Quarterly, 25*, 218–231. https://doi.org/10.1016/j.leaqua.2013.08.002

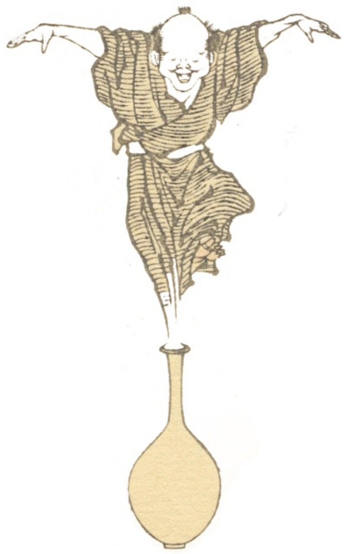
Oplatka, I., & Arar, K. (2016). The field of educational administration as an arena of knowledge production: Some implications for Turkish field members. *Research in Educational Administration & Leadership, 1*(2), 161–186.

Panaccio, A. Henderson, D. J. Liden, R. C. Wayne, S. J., & Cao, X. (2015). Toward an understanding of when and why servant leadership accounts for employee extra-role behaviors. *Journal of Business and Psychology, 30*(4), 657–675. https://doi.org/10.1007/s10869-014-9388-z

Shao, Z., Feng, Y., & Hu, Q. (2016). Effectiveness of top management support in enterprise systems success: A contingency perspective of fit between leadership style and system life-cycle. *European Journal of Information System, 25*(2), 131–153. https://doi.org/10.1057/ejis.2015.6

Zarrow, J. (2014). *Strategies for better teacher professional development.* Retrieved from http://www.teachthought.com/pedagogy/5-strategies-better-teacher-professional-development

Corresponding author: Wen-Ching Chou
Email: sauichou1226@gmail.com



Student-Produced Podcasts in Language Learning – Exploring Student Perceptions of Podcast Activities

Birgit Phillips, University of Applied Sciences Burgenland, Austria

Abstract

Podcasts are a useful tool for developing speaking skills in language acquisition settings, particularly within the context of the emerging Mobile Assisted Language Learning (MALL). While much research has emphasized the effectiveness of teacher-produced podcasts, this study seeks to address the gap in knowledge on student-generated podcasts in language learning. In addition to highlighting some of the main pedagogical considerations of using podcasts in language learning, this paper explores students' perceptions of podcasts as a learning tool. To this end, this study describes the results of two surveys which were conducted with two different student cohorts over the course of two years. The surveys explored the students' levels of acceptance and enjoyment of activities in which they had to produce their own podcasts, as well as the perceived learning benefits. The discussion section describes a range of positive learning outcomes and highlights the pedagogical implications of using podcasts in class. The paper concludes with some practical suggestions for the effective use of student-generated podcast activities in the language classroom.

Keywords: podcasts; language learning; collaborative learning; digital storytelling; learning technology; MALL.

Introduction

Multimodal instructional formats involving the Internet and mobile devices (e.g. smart phones, iPads, tables, laptops) have altered traditional classroom formats not only in terms of space and time but also in terms of the variety of learning opportunities. This is all the more important because in the digital age learners are no longer passive consumers of information but rather now have countless opportunities to actively produce content and share it with others. The learning opportunities that have emerged in the digital era include multimodal approaches and tools for teaching and learning that put the focus on the learners and alter traditional concepts of teaching and learning.

The use of podcasts inside and outside of the classroom is one such innovative tool that has garnered increased interest in the field of tertiary level language learning. A podcast is a digital audio (or video) file that is created and then uploaded to an online platform to share with others. Since it can be downloaded to play on any computer or portable device, it is also part of the paradigm of Mobile Assisted Language Learning (MALL). The use of mobile devices affords learners the opportunity to learn anytime and anywhere, alone or with others, and "has the potential to assist learners at the exact point of need and in ways that are congruent with learners' increasingly mobile, always-connected lifestyles" (Shield & Kukulska-Hulme, 2008, p. 249). The use of podcasts in tertiary education is considered to promote motivation and engagement, cognition and learning, learner autonomy and innovative opportunities for teaching and presenting (Salmon & Nie, 2008). Podcasts are a form of personalized learning that can be tailored to learners' individual needs and extend learning beyond the classroom.

However, while much research has been done to examine the effectiveness of teacher-produced podcasts, for example to transmit (preparatory or supplementary) learning materials or give audio feedback to students (e.g. France & Ribchester, 2008; Lonn & Teasley, 2009), there is a significant gap in research examining the learning benefits of student-produced podcasts (Forbes, 2015; Lazzari, 2009; Rothwell, 2008; Salmon & Edirisingha, 2008). Thus, the present study explores opportunities for creating – rather than consuming – podcasts and examines the perceived benefits and challenges of student-generated podcasts in language learning.

Literature Review

Audio podcasts have long been used in language learning as a unidirectional teacher-to-students mode of transmitting information and course content, for example by recording lectures, providing preparatory material for the next lesson, or giving audio feedback (France & Ribchester, 2008; O'Bryan & Hegelheimer, 2007). Similarly, audio recordings have long been used in language learning to foster authentic listening practice and to supplement textbooks and other teaching materials. Rosell-Aguilar (2007), for example, found that podcasts provide language learners with a wide variety of real-world situations that give them plenty of opportunity to study sentence structure and vocabulary. However, the idea of student-created podcasts has only been gaining traction in recent years, as educators have started to see the vast potential it offers. Producing podcasts requires students to master a number of skills, including researching and analyzing information, creating an outline, drafting and editing a script, and repeated rehearsals to practice pronunciation and fluency (Phillips, 2015). In addition to these useful skills, student-produced podcast assignments offer several additional benefits, which are outlined in the following sections.

Motivation and Confidence

Motivation is essential for any kind of learning and necessary before any learner is willing to invest time and energy into the learning process (Fleenor & Hodhod, 2016). This is certainly true for learning a foreign language, which can be quite frustrating at times, in particular as proficiency increases. This phenomenon can be equated with the economic concept of diminishing returns: Beginning learners can reach a basic level of communication ability within a relatively short period. However, as language ability advances, learners commonly feel that their rate of improvement decreases significantly, which can lead to increased frustration. In the case of Austrian tertiary education institutions, English as a Second Language (ESL) courses start at the intermediate and upper-intermediate level, and many English learners have already reached the level at which they begin to become frustrated by their perceived slow progress. Emerging multi-media-based applications such as podcasting offer opportunities for innovative, learner-centered educational activities that can foster learner motivation and tailor learning to student needs.

Since podcasting is still fairly new in higher education and many students have not been exposed to it, learning a new educational tool such as podcasting can lead to increased student motivation and enhance the learning experience (see for example Dale & Povey, 2009; Lonn & Teasley, 2009). Novel experiences are also memorable and may enhance student curiosity about the task and provide a welcome break from text-based learning. Several researchers (Kemp, Mellor Kotter & Oosthoek, 2011; Nie, Cashmore & Cane, 2008; Prensky, 2009) have pointed to the novelty factor of experiential learning as a main stimulus for learning. A number of researchers have also found that the use of podcasts in education can increase intrinsic motivation (Asoodar, Marandi, Vaezi & Desmet, 2014; Dale & Povey, 2009; McMinn, 2008; O'Bryan *et al.*, 2007; Royer 2009). In contrast to extrinsic motivation, which relies on good grades as a reward, intrinsic motivation is achieved when tasks are interesting and challenging, (O'Bryan *et al.*, 2007).

In addition to the novelty factor, students may also feel a greater sense of ownership when creating their own podcasts. Students who are actively engaged in the creation of knowledge by making authentic and creative use of the target language may feel a sense of pride and purpose. For example, in their study on whether audio recordings assist language learning, Hsu, Wang & Comac (2008) found that the majority of students felt a greater sense of ownership and control of their learning compared to traditional pencil-and paper work. Also, knowing that they can reach a large audience with their podcast can be a highly motivating factor for many students. When students are challenged to share their podcasts with others, they may put more effort and attention to detail into them because they know that people other than their teacher will hear the results (McMinn, 2008). At the same time, the fact that their "production" is recorded makes it more permanent and makes the students more accountable for the work they produce, which helps provide enough incentive to produce meaningful results.

Finally, less confident students or those who are reluctant to use English in class have ample time to prepare their podcast at their own pace. Anxiety, which is all too common in real-time interaction in a foreign language, can then be reduced, and student confidence can be boosted, which ultimately enhances the overall learning experience. Thus, Hsu *et al*. (2008) found that over 80% of the students who participated in the study believed that creating audio recordings is an effective language learning tool that increased their confidence in their English speaking skills.

Collaborative Learning

Podcasting can be a very powerful tool to increase class interaction and foster collaborative learning by developing the skills needed to work towards a shared goal. Thus, Stoltenkamp, Mapuva, Khumalo, & Kies (2011) assert that the majority of the nursing students in their study indicated a positive correlation between podcasting and enhanced group work. In particular, students pointed out that collaborating with peers on the podcast assignment led to better reflection and understanding of their work. Similarly, in their pilot study about student-produced podcasts on the ethical issues of modern genetics, Nie *et al*. (2008) reported that medical students viewed group-based podcasting assignments as helpful for sharing opinions and looking at the topic from different perspectives, thereby enhancing reflective skills. This is in line with Salmon and Nie (2008) who contend that student-generated podcasts "encourage students to reflect on their own learning, improve their performance during content creation as well as reconsider and modify their ideas" (p.9). In addition to the cognitive benefits of broadening their knowledge of the topic and perspective taking, students highlighted the benefit of team-working and community-building skills (e.g. time management and task allocation), which were enhanced by the group podcast assignment.

Language Production Skills

One of the key issues in language learning is the difference between receptive and productive language skills. Second-language learners (L2) tend to have higher receptive skills, whereas productive language skills take much longer to acquire. Unfortunately, factors such as limited class time and large group size are often detrimental to fostering language production skills in class. However, in a technology-enhanced, learner-centered environment, opportunities for self-paced independent learning can be provided in order to compensate for these traditional limitations.

In this context, it is important to keep in mind that self-paced independent or autonomous learning requires students to develop self-awareness of their own learning styles and strategies. However, this awareness is often assumed rather than taught in tertiary education. Podcasts can strengthen learners' reflective processes by compelling them to define, plan and monitor their thinking and learning during the production process (McLoughlin, Lee, & Chan, 2006).

The deliberate, multi-stage process of producing a podcast also helps students develop awareness of key aspects of the target language that they often overlook. When speaking, students generally have difficulty hearing their own pronunciation errors and prosody mistakes. Paralanguage, such as stuttering, pausing, pitch, pace and power changes of the voice, makes communication authentic and natural, and students have to be aware of different intonation systems in a foreign language. When recording a podcast, students have to practice and rehearse the script several times in order to sound fluent and authentic. While this may be repetitive for students, repetition and practice in language learning is key for pronunciation and fluency (Sze 2006; Hsu et al. 2008). Such active use of language is key to fostering language awareness. Huang and Hung (2010) found that the asynchronous nature of audio recordings enabled students to focus on their weaknesses and gave them time to iron out problems, which ultimately resulted in superior results. Furthermore, listening to their own recordings helps learners identify language errors, particularly in pronunciation and grammar, and fosters self-improvement. Additionally, comparing their own work to the work of others can give students a valuable perspective on their own abilities and inspire them to try new things (Armstrong, Tucker, Massad, 2009; Ashton-Hay & Brookes, 2011; Stanley 2006; SZE 2006). Similar results were found by Sun (2009), who reported student-perceived improvement in fluency due to an increased willingness to take risks with the target language.

Transferable Skills

The process of creating a podcast can also help students develop transferable skills that are considered desirable in the modern-day professional world. For example, Middleton (2009) found that student-generated podcasts enhanced student creativity in their academic work, and Armstrong *et al*. (2009) found that the team-based podcast project proved to be "a creative outlet for students to express ideas, share perceptions and bring experts to the classroom" (p. 88). Similarly, Lee McLoughlin & Chan (2008) found that creating podcasts helped students grasp academic concepts more effectively, and Dale (2007) stressed the benefits of student-produced podcasts in developing creative and critical thinking, as well as problem-solving skills. This was confirmed by Kemp et al. (2011), who found that podcasting assignments afforded students opportunities for creativity when writing the audio script, devising techniques to capture the audience and using non-scientific language to describe scientific methods or concepts.

Other researchers have emphasized the enhanced digital literacy skills acquired when producing podcasts, which are essential in the modern knowledge society. Some researchers have argued that educators must adapt their teaching styles to meet the needs of the generation of digital natives and to communicate in the language of their students (e.g. Morris & Chikwa, 2014; Prensky, 2001). Today's students, most of whom were born after 1990, are often characterized as digital natives who "think and process information fundamentally differently" (Prensky, 2001, p. 1). They differ from "digital immigrants" (i.e. the previous generation) in that they grew up with digital technologies and can therefore move smoothly between online and offline spaces. Podcasts can help this new generation of students refine their digital skills. For example, Forbes, Khoo, & Johnson (2012) found that student-produced podcasting contributed to student confidence and the development of digital literacy, and Kemp et al. (2011) found that students developed competence in modern Web-based technology. Of course, they also pointed out that the perceived improvement in skills and technical aspects of audio production was much lower the second time around, which is not surprising considering that the technology can be mastered relatively simply the first time around.

Methodology

The primary purpose of the study was to explore student perceptions of the educational value of podcast producing activities. The study was conducted as part of the interdisciplinary course *"English for Health Professionals"*, a mandatory course in the first semester of the three healthcare-related Bachelor Programs *Health Management and Health Promotion*, *Physiotherapy* and *Nursing Studies*. Although the course is mandatory, English is not a core subject, which affects the level of motivation for some students (as discussed below). The course is designed in a blended learning format and focuses on human health and lifestyle, nutrition-related diseases (e.g. diabetes, hypertension) and disease prevention. The students use the Moodle platform to communicate and exchange information with the instructor and their peers and to perform assigned tasks both autonomously and collaboratively. In the course discussed here, students were assigned two different podcast assignments, both of which were mandatory, but not graded.

The Podcast Assignments

Podcast Competition

Students produced a five-minute podcast in a group of at least three people on a topic pertaining to nutrition-related diseases or lifestyle choices. The formats, which the students could determine themselves, included expert interviews, panel discussions, product advertisements, personal anecdotes, etc. The podcasts were uploaded to the Moodle course management system, where they were made available to other students and faculty. To increase motivation, encourage creativity and give them a better understanding of their own abilities, the students were required to listen to all of the podcasts from their respective course and then vote for their favorite three. The course winners then entered a final round in which the entire faculty of the Health Department and the students voted to determine the final winner (Phillips, 2015).

Digital Storytelling

The second podcast assignment was completed individually and was designed to enhance the students' metacognitive skills and self-reflection by empowering them to share and articulate their thoughts. This podcast was an exercise in digital storytelling. Digital storytelling involves using computer-mediated tools to tell stories and provides rich opportunities for self-reflection that are difficult to accomplish through written assignments (Matthews-Denatale, 2008). Self-reflection can take place because students are not put on the spot and can think about what they want to say before recording it or even go back, delete, edit and re-record it. In her book *Digital Storytelling – Tips and Resources*, Gail Matthews-Denatale (2008) explains that telling a story and learning are inextricably linked because telling a story is also a process of meaning-making, and educators who integrate opportunities for storytelling into their courses foster participant learning. She goes on to explain that *"*through storytelling, students are asked to reflect on what they know, to examine their (often unquestioned) assumptions, and – through a cyclical process of revision– to record their "cognitive development process" (Matthews-Denatale, 2008, p. 2).

In the present case, students were asked to reflect on why they chose their particular career path (i.e. nursing, physiotherapy, or health management & health promotion) and then create a podcast in which they talked about the past experiences that led them to enroll in their degree program, their current feelings about their studies, and their expectations for the future. The podcasts, which ranged from 3 to 10 minutes in length, were uploaded to the Moodle platform, and the students were then asked to listen to at least two of their peers' podcasts and provide personal feedback in a Moodle discussion forum.

Data Collection

In order to gauge student perceptions of the educational value of these podcast producing activities, an anonymous online survey using the EvaSys software was administered to two different student cohorts, namely the students in the aforementioned class in fall 2014 and fall 2015. Of the 79 students surveyed in total, 83.5% were female and 16.5% male, and the majority (77.2%) were between 18 and 22 years old. Both cohorts were very similar in that the student population is quite homogenous (i.e. mostly Austrian Native-German speakers), while their linguistic abilities ranged from intermediate to upper-intermediate (B1 to B2) due to their different educational backgrounds.

In terms of content, the first part of the survey included general questions on demographics (age, gender), general technology use (e.g. hours/day spent online, social networking accounts, perceived confidence with new technology), and experience with internet resources for language learning, blended learning and Content Management Systems. The second part of the survey focused on the level of acceptance and enjoyment of podcast production activities (e.g. ease of use of new technology, time-management, collaborative vs. individual podcast, oral confidence), as well as the perceived learning benefits (e.g. practicing new vocabulary & listening comprehension, feedback, improvement of oral competence, confidence, digital literacy). The survey gathered both quantitative and qualitative data and included open and closed questions. The open questions gave students the opportunity to articulate their thoughts on the podcast activities more clearly. The answer format of the closed questions included yes-no answer categories, matching categories and rating scales using a four-level Likert scale from “strongly agree” (1) to “strongly disagree” (4). In the data analysis, the categories one and two (strongly agree and agree) and three and four (disagree and strongly disagree) were pooled.

In order to avoid selection bias and increase the reliability of the study, the survey was made mandatory and administered at the end of the semester as part of the final class in the computer lab. Thus, all students present on the last day of class completed the survey, and not only those most likely to respond. In the first year the survey was administered, the response rate was 98%, and in the second year it was 100%. In addition to the survey, face-to-face time was used before and after the podcast assignments to address any issues or difficulties with the use of this technology. Concepts and issues that arose during class discussion before the assignment were incorporated into the online survey. For example, when the task was assigned, students expressed anxiety regarding the new technology or apprehension with regard to listening to their own voices. These concerns were then addressed in the survey.

Results and Discussion

The survey gathered information about the students’ perceived digital competence, their attitudes towards and confidence with computers and digital technologies as well as the perceived learning benefits of producing podcasts. Of the 79 participants, almost all of them (96.1%) had a social networking account, with the most popular networks being Facebook (93.7%) and Instagram (39.2). The vast majority of students (84.6%) also indicated that they are very confident or confident when using digital technologies, and an overwhelming 98.7% stated that they have a positive attitude towards new learning technologies.

Although Campbell asserted in 2005 that more and more students know how to use podcast technology, none of the students in this study had ever created a podcast before, and many of them needed continuing guidance throughout the process. This novelty factor gave rise to feelings of anxiety in most students due to the combination of unfamiliarity with the technology and the anxiety involved with speaking English. Their concerns were voiced in class when the podcast task was first assigned, as well as in the open questions section of the survey administered after the course, which gave students the opportunity to explain their general perceptions of the podcast assignments:

> *When I first heard that we had to produce a podcast I was shocked and a bit overwhelmed.*
> *The task seemed too big to handle at the beginning.*

This initial anxiety is consistent with the results of Kemp *et al*. (2011), who also found insecurity and anxiety in students who were asked to produce podcasts.

In addition to the students' reported anxiety about the task, the majority of students (65.8%) also found the production of podcasts time-consuming. This was confirmed in the open-ended section of the survey where some comments addressed mixed feelings about the assignments:

> *I like the podcasts but they were too time consuming and I spent a lot of time on them.*
> *I prefer traditional homework assignments to podcast-productions because I don't like the group interviews; a benefit was our chosen topic and that we had much fun producing it, although it took a lot of time.*
> *In general, they are a good idea but they take a long time to produce and also technical knowledge.*

These findings echo those of other researchers who have found that students need significant technical training and support (e.g. Lee & Tyan, 2008; Lonn & Teasley, 2009). In contrast, Forbes (2015) found no issues with time management or the technical difficulty of producing podcasts in her pilot study on student-generated podcasts involving teacher education students. However, she noted that her students found the task challenging but worthwhile, they received a fairly high-level of technical support, and "student teachers can certainly not expect this level of technical support in their own schools and classrooms (p. 202). Crow (2009) found that students initially struggled with the time required to produce podcasts but eventually became accustomed to the process for subsequent assignments. Similarly, in the present study, 90% of the students indicated that producing the second podcast was easier than the first one, as confirmed by this statement:

> *I think this time was easier because I was alone and much faster because I knew how to do it.*

Thus, even the late adopters and technophobes among the students seemed to grow more comfortable with the technology after only a single attempt.

Another notable factor that came up in class feedback sessions after the assignments was that the students did not like the sound of their recorded voice. In order to gauge the group's feelings about this issue, a question was added to the anonymous survey, and a remarkable 87.3% of the students indicated that they did not like the sound of their voice on a recording. This result was echoed in the open-ended part of the survey in which students expressed their reservations in comments such as:

> *I think it was a good idea but I hate my voice on the podcast.*
> *I think it is pretty helpful but I don't like the sound of my voice so I don't necessarily want to do it again.*
> *My problem is that I am afraid to speak and don't like to hear my voice. I often don't know the right words so that I can express myself. This is why I didn't like the podcast assignments.*

This is not that surprising. When we speak, what we hear is a mix of what resonates in our chest and throat and what comes out of our mouth. The recorded sound is different because it is more isolated, and most people have not heard this recorded version of their own voice enough to get used to it (Geoghegan & Klass, 2005). Presumably, the more often people hear their own voice, the more they get used to it, and it would be interesting to see how people would respond to this question after completing several podcast assignments over a longer period of time.

In addition to increasing confidence with technology, the survey results suggest that the experience of producing a podcast may also increase the confidence of students who are reticent to speak English in class. On the survey, 81% of the respondents asserted that less confident students benefit from the podcast assignments, and 77.7% claimed that the assignments enhanced their speaking confidence. This was confirmed in the open-ended section by statements such as:

> *At the beginning I didn't want to do a podcast because I don't like to listen to my own voice, but now I can say that it helped me overcome my fear of speaking. I also learned to use some of the new vocabulary.*
>
> *I really liked the podcast activities because it was different and totally new to me. I see a lot of benefits since you have to speak in a foreign language, which we didn't really practice in school. Furthermore, it increases your confidence in speaking English to some extent.*

This finding is in line with the results of Hsu *et al*. (2008), whose study participants also expressed increased levels of confidence, and Kemp *et al*. (2011), who found that student-produced podcasts enhanced the presentation skills of the geology students participating in the study.

Beyond increasing student confidence in their English, the results also indicated that the students felt the podcast assignments enhanced their language skills. In fact, 84.4% of the respondents asserted that the podcasting assignments helped improve their language skills, and 87.4% found podcasting a useful tool for practicing and putting new vocabulary into context. Some comments referred to enhanced speaking skills in general:

> *I think it is a great opportunity to improve your skills in speaking. I see a lot of benefits in producing a podcast.*
>
> *It was an interesting experience and a good way to practice speaking skills because we had to record it many times before it was perfect.*
>
> *I could improve my English because I could hear my own mistakes.*
>
> *It seems to me if I would produce podcasts more often I could really improve my English.*

Ultimately, despite their initial reluctance to engage with this new technology, at the end of the semester 91.1% of the students strongly agreed or agreed that creating their own podcasts was a valuable learning experience.

The survey also included an open-ended question that asked students to share their thoughts about the benefits of producing a podcast alone vs. in a group. For those who preferred working alone on the digital storytelling podcasting assignment the most common benefits mentioned were the opportunity to share their personal stories and that working alone allows for greater flexibility and time management*:*

> *I could talk about something that really happened - so it was just like telling a story and therefore easier for me. Further, I could do it on my own, without meeting with colleagues to discuss and write something down --- more flexible.*

Other students saw a benefit in increased language proficiency due to a higher workload:

> *I prefer to do it alone because it encouraged me to work on my pronunciation.*
> *I think I learned more from the podcast we produced alone because it was harder. We had to produce the whole text, which we were going to record, by ourselves and so we had to spend more time thinking about sentence structure, searching for new words (and learn them) and think about the right grammar.*

For those who preferred the group podcast, many commented that the task helped develop their collaborative, interpersonal learning skills and that they simply enjoyed the opportunity to work with their peers:

> *It was more fun to produce it together because there are more ideas and we had some very funny scenes when we recorded the podcast. (We are still listening to our failed recordings).*

In addition, several students appreciated the opportunity for group members to assist and correct each other:

> *I liked the group podcast because we got a lot of input from the other students and helped each other with the language. We also learned to speak clearly.*

Conclusion and Recommendations

Student podcasting assignments show great promise for fostering language production skills due to the high-level cognitive processes involved in producing podcasts. Podcasting supports multimodal ways of teaching and learning and encourages students to produce authentic language outside of the classroom. In addition, podcasting can be a powerful tool to develop desirable digital storytelling skills (Matthews-Denatale, 2008; Armstrong *et al*., 2009) and a valuable outlet for students to express thoughts and ideas, share viewpoints and perspectives and produce authentic language (Nie et al., 2008; Ng'ambi, 2008; Salmon & Nie, 2008). Overall, the participants in the present study ultimately saw the student-produced podcasts as an effective learning tool. The self-reported learning benefits include increased language confidence, fluency and vocabulary acquisition. The present findings also show that podcasting activities are suitable for less confident students, who tend to be quiet in class, because it affords them the opportunity to work at their own speed without the stress of real-time interaction.

Despite the high potential, it is important to acknowledge that incorporating new technologies can be challenging for teacher and student alike. Instructors need to be well-versed in the technologies in order to provide adequate guidance in the use of new technologies and evoke student engagement. To this end, instructors need to be competent and pro-active learners themselves, and develop awareness for different Web 2.0 learning tools (Forbes et al., 2009; Stewart & Doolan, 2009). However, many lecturers are reluctant or lack the skills or readiness to adopt new Web 2.0 technologies. In his study on a university-wide pilot project designed to encourage members of staff to use digital audio creatively, Andrew Middleton (2009) found that many teachers expressed initial anxiety and then became frustrated. Many lacked the confidence to overcome the technological hurdle or simply had no personal strategy for learning to use new technology. Some were deterred from taking part in the pilot, and others avoided it all together. Nevertheless, after the initial hiccups, most staff members were eventually successful and "enjoyed the opportunity to creatively consider how audio could be used to enhance their learning" (Middleton, 2009, p. 153). Thus, it is important that institutions provide guidance for the teachers as well, in order to promote the incorporation of new technologies.

Likewise, labelling millennials as "digital natives" can also provoke a false confidence in the technological abilities of the students. As the findings of this study confirm, many digital natives may be adept at consuming digital content, but not nearly as proficient in producing it. Thus, teachers must be prepared to offer guidance and support for the students in their efforts to acquire and refine these new skills. In the present case, even though the task was technologically relatively simple (thanks to recent advances in freely available audio recording software), the students required a fair amount of encouragement and technical support along the way. To this end, individual support was available via the Moodle forum and sample podcasts were made available (also on Moodle) to give the students a better understanding of what makes a podcast effective (e.g. it was pointed out that distractions and background noise should be kept to a minimum). In addition, for those students who did not want to use their own smartphone or portable device to record the podcast, in-class explanations referred students to the user-friendly, open-source software *Vocaroo* or the more advanced sound recording and editing software *Audacity.* Fortunately, the survey results indicate that students can overcome the technological hurdle relatively quickly if given the proper support. It is therefore important that lecturers endeavor to reduce fear and normalize student attitudes towards using technology in the language classroom in order to capitalize on emerging technology (O'Bryan et al., 2007).

Finally, it is important to note that when incorporating student-produced podcast assignments into a course the focus must remain on the actual learning goals and outcomes, rather than the podcasting medium itself. Podcasting is not a panacea for all of the problems of language learning in the digital age, but rather should be viewed as one of many different digital learning tools. Nevertheless, student-produced podcasts can be motivating and engaging for students and can be integrated throughout a course plan (e.g. project reports, personal reflections, peer feedback). Furthermore, depending on the specific learning goals of the assignment, podcasts can be produced either as individual or group activities. Thus, student-produced podcasts offer a highly flexible and engaging option for students and teachers in the digital age.

References

Armstrong, G., Tucker, J. & Massad, V. (2009). Interviewing the Experts: Student Produced Podcasts. *Journal of Information Technology Education: Innovations in Practice, 8*(1), 79–90. https://doi.org/10.28945/174

Ashton-Hay, S., & Brookes, D. (2011). Here's a story: using student podcasts to raise awareness of language learning strategies. *EA Journal*, *26*(2), 15–27.

Asoodar, M., Marandi, S. S., Vaezi, S., & Desmet, P. (2014). Podcasting in a virtual English for academic purposes course: Learner motivation. *Interactive Learning Environments*, *24*(4). https://doi.org/10.1080/10494820.2014.937344

Campbell, G. (2005). There's Something in the Air: Podcasting in Education. *EDUCAUSE Review*, *40*(6), 33–46.

Crow, R. (2009). Student-generated Podcasts as a Strategy for Learning. In I. Gibson, R. Weber, K. McFerrin, R. Carlsen & D.A. Willis (Eds.) *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 629–632). Chesapeake, VA: AACE.

Dale, C. (2007). Strategies for using podcasting to support the learning of tourism students. *Journal of Hospitality, Leisure, Sport and Tourism Education, 6*(1), 49–57. https://doi.org/10.3794/johlste.61.155

Dale, C., & Povey, G. (2009). An evaluation of learner-generated content and podcasting. In: *Journal of Hospitality, Leisure, Sport & Tourism Education*, *8*(1), 117–123. https://doi.org/10.3794/johlste.81.214

Fleenor, H.G., & Hodhod, R. (2016). Assessment of Learning and Technology: Computer Science Education. In Wang V. (Ed.) *Handbook of Research on Learning Outcome and Opportunities in the Digital Age* (pp. 51–78). Hershey, PA, IGI Global.

France, D., & Ribchester, C. (2008). Podcasts and feedback. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 70–79). New York, NY: Open University Press.

Forbes, D., Khoo, E., & Johnson, E. M. (2012). "It gave me a much more personal connection": Student-generated podcasting and assessment in teacher education. In M. Brown, M. Hartnett & T. Stewart (Eds.), *Future challenges, sustainable future (*326–330). Proceedings ascilite Wellington 2012.

Forbes, D. (2015). Beyond lecture capture: Student-generated podcasts in teacher education. *Waikato Journal of Education*, Special 20th Anniversary Collection 2015, 195–205.

Geoghegan, M., Klass, D. (2005). Podcast Solutions: The Complete Guide to Podcasting. Berkeley, CA: Friends of Ed.

Hsu, H. Y., Wang, S. K., & Comac, L. (2008). Using audioblogs to assist English language learning: An investigation into student perception. *Computer Assisted Language Learning*, *21*, 181–198. https://doi.org/10.1080/09588220801943775

Huang, H. T. D., & Hung, S. T. A. (2010). Implementing electronic speaking portfolios: Perceptions of EFL Students. *British Journal of Educational Technology*, *41*, 84–88. https://doi.org/10.1111/j.1467-8535.2009.00996.x

Kemp, J., Mellor, A., Kotter, R., Oosthoek, J. (2011). Student-Produced Podcasts as an Assessment Tool: An Example from Geomorphology. *Journal of Geography in Higher Education*. *36*(1). 1–14. https://doi.org/10.1080/03098265.2011.576754

Lazzari, M. (2009). Creative uses of podcasting in higher education and its effect on competitive agency. *Computers & Education*, *52*, 27–34. https://doi.org/10.1016/j.compedu.2008.06.002

Lee, M. J. W., & Tynan, B. (2008). Podcasts and distance learning. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 92–102). New York, NY: Open University Press.

Lee M., McLoughlin C., & Chan, A. (2008). Talk the talk: Learner-generated podcasts as catalysts for knowledge creation. *British Journal of Educational Technology 39*(3), 501–21. https://doi.org/10.1111/j.1467-8535.2007.00746.x

Lonn, S., & Teasley, S. (2009). Podcasting in higher education: What are the implications for teaching and learning? *Internet and Higher Education*, *12*, 88–92. https://doi.org/10.1016/j.iheduc.2009.06.002

O'Bryan, A. & Hegelheimer, V. (2007). Integrating CALL into the classroom: the role of podcasting in an ESL listening strategies course. *ReCALL, 19*, 162–180.

Matthews-Denatale, G. (2008). Digital Storytelling: Tips and Resources. Simmons College. Boston, MA. Retrieved from http://net.educause.edu/ir/library/pdf/ELI08167B.pdf

McLoughlin, C., Lee, M., Chan, A. (2006). Using student generated podcasts to foster reflection and metacognition. *ACEC Australian Educational Computing, 21*(2), 34–40.

Middleton, A. (2009). Beyond podcasting: creative approaches to designing educational audio. In *Research in Learning Technology*, *17*(2), 143–155. https://doi.org/10.1080/09687760903033082

McMinn, S. (2008). Podcasting Possibilities: Increasing Time and Motivation in The Language Learning Classroom. European Institute for E-Learning. *Learning Forum 2008*, 212-215.

Morris, C., Chikwa, G. (2014). Screencasts: How effective are they and how do students engage with them? *Active learning in higher education*, *15*(1), 25–37. https://doi.org/10.1177/1469787413514654

Ng'ambi, D. (2008). Podcasts for reflective learning. In G. Salmon & P. Edirisingha (Eds.),*Podcasting for learning in universities* (pp. 132–145). New York, NY: Open University Press.

Nie, M., Cashmore, A. & Cane, C. (2008). The educational value of student-generated podcasts. Paper presented at *Association for Learning Technology Annual Conference (ALT-C 2008)*, Leeds, September 9-11.

Prensky, M. (2001). Digital Natives, Digital Immigrants. Part II. Do They Really Think Differently? *Horizon*, *9*(6). https://doi.org/10.1108/10748120110424843

Prensky, M. (2009). H. Sapiens digital: from digital immigrants and digital natives to digital wisdom. *Innovate*, *5*, 1–9.

Rothwell, L. (2008). Podcasts and collaborative learning. In G. Salmon & P. Edirisingha (Eds.), *Podcasting for learning in universities* (pp. 121–131). New York, NY: Open University Press.

Stewart, W., Doolan, M.A. (2008). Listen to this: Enhancing the learner experience through the use of audio within the next generation technologies. *Proceedings of Higher Education Academy's fourth Annual Conference*, July 1-3, at the Harrogate International Center.

Phillips, B. (2015). Empowering students: Using technology-enhanced learning to foster learner autonomy. In A. Trink (Ed.) *Pannonia Research Award: regionale und europäische Zukunftsfragen* (pp. 83–94). Graz: Leykam.

Rosell-Aguilar, F. (2007). Top of the pods – In search of a podcasting "podagogy" for language learning. *Computer Assisted Language Learning*, *20*(5), 471–492.

Royer, R. (2009). Educational Blogging: Going Beyond Reporting, Journaling, and Commenting to Make Connections and Support Critical Thinking. In I. Gibson, R. Weber, K. McFerrin, R. Carlsen & D.A. Willis (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 507–514). Chesapeake, VA: AACE.

Salmon, G., & Edirisingha, P. (Eds.). (2008). *Podcasting for learning in universities*. New York, NY: Open University Press.

Salmon, G., & Nie, M. (2008). Doubling the life of iPods. In G. Salmon & P. Edirisigha (Eds.). *Podcasting for learning in universities* (pp. 20-32). New York, NY: Open University Press.

Shield L., & Kukulska-Hulme, A. (2008). *Special issue of ReCALL on Mobile Assisted Language Learning*. Cambridge University Press.

Stanley, G. (2006). Podcasting: Audio on the Internet Comes of Age. *TESL-EJ*, *9*(4).

Sun, Y. C. (2009). Voice blog: An exploratory study of language learning. *Language Learning & Technology, 14*(2), 88–103.

Stoltenkamp, J., Mapuva, J., Khumalo Y., & Kies C. (2011). Rolling out Podcasting to Enhance Teaching and Learning: A Case of the University of the Western Cape. In: *International Journal of Instructional Technology and Distance Learning, 8*(1), 1–21.

Sze, P. M, (2006). Developing Students' Listening and Speaking Skills Through ELT Podcasts. *Education Journal*, *34*(2).

Corresponding author: Dr. Birgit Phillips
Contact email: birgit.phillips@fh-burgenland.at

Guide for Authors

Articles should be submitted through the online submission form in Microsoft Word format. Before submitting your article, please ensure that it is prepared in accordance with the Author Guidelines below.

For further information please also view details of the journal review process, copyright and licencing policy, and publication ethics statement.

Submit: **iafor.org/journal/iafor-journal-of-education/manuscript-submission-form**

Review process: **iafor.org/journal/iafor-journal-of-education/about**

Copyright and licencing: **iafor.org/journal/iafor-journal-of-education**

Publication ethics: **iafor.org/journal/iafor-journal-of-education/publication-ethics**

If you have any queries about how to prepare your article for submission, please contact publications@iafor.org.

Article Structure

Abstract
A concise and factual abstract is required (maximum length of 250 words). The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, references should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Keywords
Immediately after the abstract, provide a maximum of **6 keywords**.

Introduction
Present purposes of the study and provide background for your work.

Literature Review
Include a pertinent literature review with explicit international connections for relevant ideas. Discuss the findings of published papers in the related field and highlight your contribution.

Methodology and Methods
Provide sufficient detail to allow the context of the work to be thoroughly understood and/or for the work to be reproduced. Provide sufficient detail for readers to understand how you engaged in your inquiry. Clear descriptions of your context and participants along with strategies used to collect and analyze data should be described.

Discussion
This section should explore the significance of the results of the work, not repeat them. Combining your results and discussion into a single section may be suitable. Returning to

relevant literature from the introduction should show how your work connects with or interrupts already published literature.

Conclusions
The main conclusions of the study may be presented in a Conclusions section, which can include the main findings, the implications, and limitations.

Appendices
If there is more than one appendix, they should be identified as A, B, etc.

Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g. providing language help, writing assistance or proof reading the article, etc.).

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers.

References

Citation in Text
Please ensure that every reference cited in the text is also present in the reference list (and vice versa).

Reference Style
Within the text: Citations in the text should follow the referencing style used by the American Psychological Association (APA). *Publication Manual of the American Psychological Association*, Sixth Edition, ISBN 978-1-4338-0561-5.

List at end of paper: References should be arranged first alphabetically and then further sorted chronologically if necessary. Please single-space, and indent after the first line of each.

Reference to a journal publication:
Van der Geer, J., Hanraads, J. A. J., & Lupton, R. A. (2010). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51–59.

Reference to a book:
Strunk, W., Jr., & White, E. B. (2000). *The elements of style.* (4th ed.). New York: Longman (Chapter 4).

Reference to a chapter in an edited book:
Mettam, G. R., & Adams, L. B. (2009). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281–304). New York: E-Publishing Inc.

For more details about referencing, please read our APA referencing style guide: **iafor.org/journal/iafor-journal-of-education/apa-referencing-style**

Please follow the style checklist:

- APA referencing style.
- 12-point Times New Roman font.
- All paragraphs and body text justified and single-spaced.
- One line should separate paragraphs or sections. Do not indent paragraphs.
- Set page size to A4.
- Margins: Microsoft Word "Normal" (2.54 cm).
- **There is no word or page limit.** Generally, published articles are 20–25 pages in length.
- Main headings, subheadings and sub-subheadings should be formatted as in the example below. No more than three levels of headings should be included.
- All figures must be inserted in a JPEG image format, within the page margins. Centre images. Do not insert loose objects such as arrows, lines, or text boxes. Number and caption below the figure (Figure 1: Caption), centre aligned.
- Tables should be created within the Microsoft Word document, should fit onto one A4 page and should be numbered and captioned below the table, centre aligned.
- Bold any section/paragraph headers and left align.
- Do not use any page headers, footers or page numbers (footers are acceptable if they contain footnotes).
- Use only portrait layout. Do not include any pages in landscape layout.
- Corresponding author contact email address should be added to the end of the paper after references. IAFOR is not responsible for unsolicited emails received.
- Optional: Acknowledgements (max. 150 words) to be included as the last section before reference list.
- References to be single-spaced (indented after first line of reference).
- **Title page information to include:**
  - Title of the paper.
  - Author names and affiliations: Provide authors' affiliation details (where the work was done) including full institution name and country.
  - Abstract: A concise and factual abstract not exceeding 250 words is required.
  - Keywords: Immediately following the abstract provide a minimum of three keywords.

Resources

Rules of Thumb for Writing Research Articles by Tomislav Hengl and Michael Gould: **thesishub.org/rules-of-thumb-for-writing-research-articles**

The *IAFOR Journal of Education* is indexed in DOAJ, ERIC, EBSCO Discovery Service, Education Source, MIAR, SHERPA/RoMEO and Google Scholar. DOIs are assigned to each published issue and article via Crossref.

APA referencing style: **iafor.org/journal/iafor-journal-of-education/apa-referencing-style**

the iafor

journal of education

ISSN: 2187-0594