Abstracts

Part 1: Comparative Education & History of Education

Marzanna Pogorzelska

Project-Based Learning in Polish-American Comparative Perspective

In the presentation I am going to focus on my own research related to the Project-Based Learning. The research has been based on the experiences of introducing in Poland the projects of an American educational center (the Lowell Milken Center promoting the projects on "Unsung Heroes"). The realization of the projects in the examined schools inspired me to conduct a wider investigation of attitudes towards Project-Based Learning in Polish schools. Thus, the presentation will consist of three parts. Firstly, I am going to describe the model of conducting the projects worked out at the Lowell Milken Center as the example of American approach towards Project Based Learning. In part two of the presentation I am going to show, taking into account the whole socio-political context, the process of implementation of these projects in a number of schools in the south-west of Poland and the evaluation of the project realization. The results of this evaluation, obtained through in-depth interviews with teachers and students have been the starting point for me to do further research on the attitudes of Polish adolescents towards the realization of the projects with the use of Project Based Learning. The anlaysis of the results, based on quantitative data, will form the last part of my presentation.

Considering that the described projects can serve as model solutions for educators in Europe in introducing intercultural education in an innovative way, the presentation, with its comparative dimension, will show both the opportunities and limitations of implementation of the American idea on the European ground.

Keywords: project-based learning, American projects, Polish education

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Part 2: Pre-service and In-service Teacher Training & Learning and Teaching Styles

Juliana Smith

Teaching and Researching Intervention and Facilitation in a Process of Self-reflection: Scrutiny of an Action Research Process

This paper aims to explore a way of making connections between a research problem, a research process and a theory arrived at, through action research. Action research is viewed as a useful approach to pedagogic research in general. The

research focused on a particular action research project based on the intervention and facilitation of teaching and learning of pre-service commerce students by a teacher educator. The interaction was pursued through a continued dialogue between theory and practice. The research resulted in a principled, theoretical framework to describe and guide the interventionist approach of the teacher educator.

Arriving at the theoretical framework involved repeated cycles of interaction of theory with practice and required the integration of multiple theoretical perspectives. The theoretical underpinning of the teacher educator's intervention and facilitation of the teaching and learning of the pre-service teachers found legitimacy in the underlying philosophies of different theorists.

The paper provides a framework for intervention and facilitation for teaching pre-service students in higher education. It also illuminates the teacher educator's self-reflection on practice through action research as the research methodology.

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Ayşe Duran

Investigating Perceptions of Male Students in Early Childhood Education Program on Learning Experiences

The main problem of identification and perception of early childhood teaching is women-work. Male teachers should be a part of early childhood education as they may make important contributions to the field. The male students in preschool teacher training programs in Turkey have become the disadvantaged minority because of their percentage. The aim of this study is examination of learning experiences of male preservice teachers in early childhood education programs. The sample of study consisted of 9 male students in the Adıyaman University, Turkey. The data collected for this study included records from interviews to which content analysis was applied. According to results, in their learning experiences, male students have problems about lessons, communication with female students and lectures because of their gender.

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Emine Gumus & Mehmet Sukru Bellibas

Teacher Professional Development and Student Achievement in Turkey: Evidence from TIMSS 2011

It has been well-acknowledged that improving teacher quality and teaching effectiveness is crucial for achieving educational goals. As a result, a persuasive

research has emerged which emphasize that the continuing development and learning of teachers are essential in improving the quality of schools (Borko & Putnam, 1995). Professional development, as defined teacher development in this study, means "the professional growth a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically" (Glatthorn, 1995, p. 41). In the existing literature, professional development for teachers is also recognized as a vital and critical mechanism for enhancing teaching effectiveness and improving the instruction (Bredeson, 2000). However, the studies which investigate the direct relationship between teacher professional development and student achievement are limited (Blank & Alas, 2009). In this context, current study aims to explore the relationship between teachers' participation in different types of professional development activities (e.g., content knowledge, pedagogy, IT integration etc.) and the achievement of their students. With this aim, multilevel regression analyses conducted by using Turkey's data from 2011 cycle of TIMSS, controlling for several important student (gender and home education resources), school (school size, disadvantaged student population, and location), and teacher level (experience and level of education) variables. Results show that only professional development activities related to critical thinking is positively associated with student achievement. Several control variables – School size (-), disadvantaged student population (-), teacher experience (+), teacher level of education (+), student home education resources (+) – are also found to be significantly related to student achievement as expected.

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Part 3: Education Policy, Reforms & School Leadership

Yehuda Bar Shalom & Amira Bar Shalom

The Usage of CBT and Ayeka Approach at the Kedma School

In Israel, during the 1970s, an effort was made to promote 'integration' between population groups, on the assumption that an encounter between children from prosperous backgrounds and children from 'weakened' families, to use the term coined by sociologist Shlomo Swirsky (1990), would enrich the students from poorer families, most of whom were of Mizrachi (Jews who came from Arab counties) origin.

The policy of integration achieved some successes, particularly in terms of individual students who were able to achieve social mobility. However, a large number of students were left behind. In many schools, streaming resulted in the concentration of weaker students in classes that were considered inferior (Swirsky, 1995), leading to the emergence of tension among the students along social, ethnic, and class lines. This tension is the result of an unequal encounter (Swirsky, 1990).

One culture is perceived as better, hegemonic, and deserving of being copied, while the other as inferior, and should be rejected and forgotten. The preferential status of one culture over another was manifested, for example, in curricula that presented Jewish history from the perspective of an Ashkenazi and European narrative, almost completely ignoring the achievements and riches of the Jewish culture in the Arab countries.

The Kedma School was established as a framework in which the students, most of whom are Mizrachim and live in a neighborhood that is stigmatized due to its deprivation, will learn that they are equal to others and are able and entitled to advance their social status through education (Bowels & Gintis, 1976).

Keywords: CBT techniques, Ayeka approach, Kedma School, at-risk youth

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Mehmet Sukru Bellibas & Sedat Gumus

Factors Affecting Turkish Teachers' Use of ICT for Teaching: Evidence from ICILS 2013

The integration of technology into education has become one of the most common educational goals in many countries during the last few decades. Turkey is not an exception. Although Turkey's earlier efforts to integrate technology into education go back to the 1990s, the Turkish government started a new nation-wide initiative, FATIH Project (Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi – Movement of Enhancing Opportunities and Improving Technology Initiative), which aims to provide one tablet for each student and an interactive white board to each classroom (FATİH Project, 2012). This project is known as one of the biggest technology integration projects worldwide in terms of its budget and content. Despite this bold attempt of the Turkish government, existing research shows that there are significant problems in practice. Teacher or school related barriers, such as lack of infrastructures, shortage of related professional development activities, lack of managerial support, teachers' low motivation, perceptions on ICT usage, etc. impede teachers' actual integration of ICT into their teaching practice (Akcaoglu, Gumus, Bellibas & Boyer, 2015; Vatanartiran & Karadeniz, 2015). In this context, this study aims to investigate the school and teacher related factors affecting teachers' use of ICT for teaching purposes in Turkey, by using a large-scale data set, ICILS (International Computer and Information Literacy Study) conducted in 2013. A multilevel regression analysis was conducted by using 'teachers' use of ICT for teaching' as a dependent variable and several key teacher and school related variables as independent variables. The result showed that professional collaboration among teachers, their age and perceptions regarding the use of ICT, school location and size, and ICT resources at school are significant predictors of teachers' use of ICT for teaching.

Keywords: FATIH Project, ICILS, Turkey, use of ICT for teaching

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Part 4: Higher Education, Lifelong Learning & Social Inclusion

James Ogunleye

Application of Big Data Predictive Analytics in Higher Education

In the United Kingdom, the Higher Education Statistics Agency (HESA) is charged with the responsibility for collecting data from higher education colleges, universities and other providers of higher education. The data is provided to the UK governments and higher education funding agencies to inform state regulation, funding policy and mechanisms in the higher education sector. For many universities, however, the government-encouraged data-driven culture is generally seen as a compliance necessity – something that has to be done for reporting purposes. Thus, the potential use of internally-generated data remains largely untapped. The recent phenomenon of Big Data, a quantum increase in the amount of digital and physical data that exist and the innovation that surrounds the use of this data, has brought home the importance of analytics in the higher education sector. This is more so as an increasing amount of student data, especially on student learning, is fluid and the need to perform analytics on the data – for example, on student course selection, student learning, attrition, progression, achievement, satisfaction and destinations – becomes a critical necessity. The paper examines the phenomenon of Big Data more broadly and how analytics can be used to derive actionable insights from universities' own internally-generated data. The paper concludes that engaging with big data analytics will help universities to make better use of, as well as leverage their data assets.

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The Pursuit of Excellence in Malaysian Higher Education: Consequences for the Academic Workplace

Academic staff in Malaysian universities are coming under considerable pressure to increase their research and publication rates, largely from a government-initiated push to raise Malaysian university placement in international university rankings. This emphasis on research has translated into new pressures on academic staff, many of whom entered their profession when the emphasis was on teaching. This study investigated the manner and extent to which academic staff in Malaysian universities believe that these external pressures are affecting the nature of their

work-lives and their professional relationships with colleagues and students. The study is grounded in on Job Characteristics Theory (Faturochman, 1997) and Gappa, Austin and Trice's (2007) conceptual framework of the "essential elements" in academic work that relate to faculty members' satisfaction and motivation. Semi-structured interviews were conducted with 67 faculty members across two public research universities, two public regional universities, and two private universities in Malaysia. Data were analyzed using thematic content analysis to identify themes that emerged in the interview and to assess how frequently these themes were expressed. Findings indicate that the pursuit of excellence in Malaysian higher education is placing new and largely unwelcome demands on academic staff, though there are difference by institutional type. Many believe that the increasing external pressures on academic staff are eroding the quality of faculty work-life. Many believe that the increased demand for research and publication, viewed by government and university managers as the pathway to excellence, is largely disconnected from a meaningful or equitable reward structure. Although this study is limited to selected higher education institutions in Malaysia, the findings have wider implications in contributing to the understanding of governance and academic culture in the broader context of higher education.

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Pepka Boyadjieva & Petya Ilieva-Trichkova

Challenging the Value and Missions of Higher Education: New Forms of Philanthropy and Giving

All countries around the world face the challenge of how to democratize access to quality higher education given the constraints of available limited public funds. A way out is sought by diversifying the sources of funding of education and the introduction of different cost-sharing models. Two recent developments in the sphere of philanthropy and giving have not only gained a lot of attention within and outside academia, but have also raised questions about the value and essence of higher education. The first one is the Thiel Fellowship, which is granted to students from prestigious universities not to attend college for two years and to develop business ideas instead. The second one is the so-called "philantrocapitalism" or "venture philanthropy". This new philanthropy is associated with extraordinarily wealthy people, who have donated a lot of resources to education, becoming at the same time powerful policymakers regarding it and thus creating threats to democracy. Against this background, the present paper aims at reconsidering the value and missions of higher education. Relying as a theoretical framework on the ideas of the intellectual inspirers of the German university model (Shelling,

Humboldt, Fichte) and on the capability approach, it argues that higher education performs a plurality of missions/roles and that it has not only instrumental, but intrinsic and empowering value as well. The paper develops a model of the roles of higher education, which highlights its intrinsic and empowering value at both individual and societal level.

Keywords: value and missions of higher education, philanthropy, giving, capability approach

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Jinmin Yu & Hong Zhu

The Effects of Major-changing between Undergraduates and Postgraduates on the Major Development of Postgraduates

By exploring the data of "Beijing Master Students Development Survey" (2014), through descriptive statistics, multiple linear regression, ordered logistic regression and path analysis, this study examines the professional current situation of the major-changing postgraduates (no changing, parallel changing, subject changing, category changing) and its influential factors and mechanism. The study concludes that:

1) The proportion of postgraduates who have different individual characteristics – such as gender, type of college, major type, recruitment and location and family – on the major-changing type shows a wavy line trend: no changing (15%-25%), parallel changing (35%-55%), subject changing (0%-15%), category changing (15%-25%).

2) With the increasing of major change degree, the professionalism of postgraduates is decreasing. Postgraduates of category changing are especially true. Although they have intense interest in their major, and make great efforts to make up for the major defects, their professionalism is still worse than other types of students, and the probability for them to achieve a high rank is lower. Moreover, the advantage of the multi-subject isn't manifested clearly.

3) Internal and external motivations can not only directly influence the professionalism and the development of innovative thinking of the postgraduates, but also indirectly influence them through professional interest, efficacy and devotion. Similarly, the influential degree varies with the postgraduates' different major-changing types. The study concludes with set a set of suggestions for positive outcomes for the individual student, their family and the college.

Keywords: major-changing, master students, major development

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Part 6: Research Education: Developing Globally Competent Researchers for International and Interdisciplinary Research

Ewelina Kinga Niemczyk

Spotlight on Canadian Research Education: Access of Doctoral Students to Research Assistantships

Graduate students' development as researchers is a key objective in higher education internationally. Research assistantships (RAships) have potential to nurture graduate students as novice researchers as they develop theoretical and methodological knowledge. However, few studies have investigated graduate students' access to and experiences with RAships and the ways that institutional regulations, informal practices, and students' academic status may influence such experiences. Based on a larger case study exploring RAship experiences of full-time and part-time doctoral Education students at an Ontario university in Canada, this paper reports key arguments and conclusions regarding students' access to RAships.

Considering that the culture of the academy has embraced research as its highest value and that comprehensive universities have adopted missions to discover, produce, and share knowledge, it is somewhat surprising that RAships seem to be in the process of development in terms of organization and distribution at the institution under investigation. The multiple data sources considered in this study— the interviews with doctoral students, research supervisors, and administrators— highlighted how inaccessible RAships can be to some students, especially part-timers from distant locations. The results have also shown that institutional regulations and recruitment practices can hinder doctoral students' participation in RAships.

The study's findings offer quality recommendations to improve full- and part-time students' access to RAships. The results may help students understand access to RAships, assist academics in hiring research assistants, and inform administrators and academic program committees about possible organizational changes to be made. Although the study is context specific and cannot be generalized, described practices and recommendations can inform other institutions and programs nationwide about ways to enhance students' access to RAships.

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JP Rossouw & MC Rossouw

Regulation or Freedom? Considering the Role of the Law in Study Supervision

While the law traditionally has a regulatory function, suggesting structure and control, in a modern democracy the legal system also entrenches freedom as a fundamental right of all. On a continuum, with regulation and freedom on the

opposing extremes, supervising post-graduate students poses a specific challenge to study supervisors: in their research education provision they have to strike a balance between controlling and guiding the research process, while simultaneously affording the developing researcher a fair amount of freedom. Freedom, however, may unfortunately be perceived by some students as neglect (Bitzer, 2010: 48) or the supervisor being apathetic towards the research project. Strict regulation, on the other hand, may deprive students of independent critical thinking, thus hindering their development of proper scholarship and the creation of high-quality research learning environments (Bitzer, 2010: 26).

This paper argues that the law, if correctly understood and applied, can provide a framework for a balanced approach. A legal focus in research education literature, however, seems to be limited. Wadesango and Machingambi (2011: 32) refer to tort law based court cases in the United Kingdom where unsuccessful PhD students brought court actions against supervisors based on the latter's alleged neglect of their duty of care. This paper steers away from this retributional characteristic of the juridical system, according to which courts or other tribunals are approached to formally resolve disputes.

The focus is rather on the positive contribution of certain legal principles towards a healthy relationship between supervisor and student, characterised by security and leading to a successful, timely completion of the study (Kiley, 2011: 588-589). A number of fundamental human rights serve as guiding principles, while contract law offers a number of measures that can be utilised to prevent complications in the supervision process. Bitzer (2010: 30) refers to "negotiated contracts" as a strategy associated with adult learning.

This paper argues that a fair amount of regulation, approached in a constructive way, can create a caring environment for sound education provision in Higher Education context. The argument is based on an ongoing empirical research project, which involves data analyses of interviews with students and supervisors, and a critical analysis of existing regulatory documents concerning formal agreements between supervisors and students.

The theoretical framework is developed from a number of relevant legal principles, such as fundamental rights and the law of contract. Guidelines are finally offered for properly drafted agreements which, if aptly implemented, can ensure and enhance the much needed freedom during research education processes of emerging scholars.

Keywords: regulation, freedom, supervision, law, higher education

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Gertrude Shotte

The Subjectivity-Objectivity Battle in Research

In traditional research dialogues, subjectivity and objectivity are often spoken of as being diametrically opposite to each other, where subjectivity is connected to the

traditions of qualitative enquiry and objectivity is aligned with quantitative paradigm. This paper takes a divergent view. It contends that it is the very essence of subjectivity that arms qualitative researchers with the insider knowledge, which is useful in interpreting participants' constructions and understanding a particular phenomenon. The paper challenges the post positivists' arguments that the methods and procedures used by qualitative researchers are in themselves subjective and therefore restrict the desired level of objectivity that makes their research work sound and credible. Similarly, the paper asserts that quantitative approaches are sprinkled with subjective elements such as reference to perceptions, critical analysis, and logical reasoning. Both scenarios seem to suggest that qualitative as well as quantitative methodologies do, to some degree, benefit from objective and subjective processes. The paper begins by examining accepted conceptualisations of subjectivity and objectivity and how they relate to those who are considered insiders and outsiders in the research process. Then, in order to support claims made, the paper brings forward four principal sources: (1) Bourdieu's habitus; (2) Creswell's four philosophical worldviews and their interconnection to research methods and approaches; (3) Nagel's theoretical notions of where truth can be found; and (4) author's personal experiences as a researcher. In addition, the paper brings attention to some perspectives of qualitative and quantitative researchers. The conclusion reveals that all researchers, consciously or unconsciously, bring to the research process a set of values that can enhance and/or distort basic truths.

Keywords: subjectivity, objectivity, habitus, positivism, post positivism, philosophical worldviews, insider, outsider, constructivism

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Margarita Stoytcheva & Roumen Zlatev

An Interdisciplinary Approach to Teaching Chemistry: Electrochemical Biosensors Case Study

Currently, the interdisciplinary approaches and convergence tendencies in modern natural sciences are considered as an undeniable fact, exemplified in numerous methodological and research works.

In this report, the interdisciplinary approach to teaching chemistry is illustrated examining the case study of biosensors. The biosensor is "an integrated receptor-transducer device, which is capable of providing selective quantitative or semi-quantitative analytical information using a biological recognition element". The biosensors are developed taking advantage of the progress in the biotechnology, the biochemistry, the material science, the analytical chemistry, etc., in association with the modern principles of transduction of the chemical information. Hence, the education in the area of the biosensors technology requires a great number of interdisciplinary actions, commented in this work. These actions assume the introduction of lecture concepts in conjunction with significant laboratory experience. Three lecture courses and laboratory sessions are presented in this report, with emphasis on the enzyme immobilization techniques, the electrochemical

methods of analysis, and finally, the electrochemical biosensors construction and application.

It was demonstrated that the biosensors technology represents an excellent example of successful combination of interdisciplinary knowledge and skills to generate new insights.

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