

## FOREWORD

InScience Press is delighted to publish this book entitled *Education Applications & Developments IV* as part of the Advances in Education and Educational Trends series. These series of books comprise authors' and editors' work to address generalized research, albeit focused in specific sections, in the Education area.

In this forth volume, a dedicated set of authors explore the Education field, contributing to the frontlines of knowledge. Success depends on the participation of those who wish to find creative solutions and believe their potential to change the world, altogether to increase public engagement and cooperation from communities. Part of our mission is to serve society with these initiatives and promote knowledge, therefore it requires the reinforcement of research efforts, education and science and cooperation between the most diverse studies and backgrounds.

The contents of this edition show us how to navigate in the most broadening issues in contemporary education and research. In particular, this book explores four major topics within the broad theme, which is Education, corresponding to four sections: "Teachers and Students", "Teaching and Learning", "Organizational Issues" and "Projects and Trends". Each section comprises chapters that have emerged from extended and peer reviewed selected papers, originally published in the proceedings of the International Conference on Education and New Developments (END) conference series (<http://end-educationconference.org/>). This meeting occurs annually with successful outcomes. Original papers have been selected and its authors were invited to extend them to once again undergo a new evaluation's process, afterwards the authors of the accepted chapters were requested to make the necessary corrections and improve the final submitted chapters. This process has resulted in the final publication of 26 high quality chapters organized into 4 sections. The following sections' and chapters' abstracts provide some information on this book's contents.

**Section 1**, entitled "Teachers and Students", provides studies within educational programs and pedagogy for both teachers and students.

Chapter 1: *Live2Work Project: Increasing The Chances for Successful Integration of People in Situations of Professional Vulnerability*; by Joana Carneiro Pinto & Helena Rebelo Pinto. The Live2Work Project is an ERASMUS+ Key Action 2 Strategic Partnership for cooperation and the exchange of good practices involving four countries (Portugal, France, Denmark and the Czech Republic). Its purpose is to develop an intervention methodology for end-users working with young adults (18-30 years) in situations of professional vulnerability, including migrants and refugees. Throughout this work, we intend to briefly present the six outputs that constitute the project, namely, the conceptual framework, the toolbox, the course guide, the in-service training courses, the online audio-visual learning scenarios, and

the Moodle courses and learning platform on website. Particular attention will be given to the challenge of refugees' integration on a global scale, and to the theoretical rationale of the project. In particular, we will explain the contributions from career normative models, career design, construction and management models, career systemic models, and career culturally adequate models to the development of the theoretical rationale that sustains the project.

Chapter 2: *Socialization and the Construction of a Professional Identity among Public Relations Students in the United Arab Emirates*; by Sandra L. Braun, Mohamed Ben Moussa, Wided Dafri, & Ana Stranjančević. In the United Arab Emirates, economic and cultural forces are affecting the development of public relations. A high imbalance of expatriates to locals (Emiratis) in the population has left the field of public relations lacking in local representation. Without adequate representation across the major sectors of the society, Emirati can lose influence and control over their own homeland where they are a significant minority. A contributing factor to success in any field is the development of professional socialization and construction of a professional identity in the post-secondary environment. This is an exploratory study examining Emirati public relations students and their professional development. It is a qualitative study of semi-structured interviews of 10 Emirati public relations students, utilizing a grounded theory approach. Findings reveal that Emirati public relations students are developing in their professional identities at institutional and relational levels, but there is more that can be done by the students, themselves, to support the construction of their professional identities in their post-secondary environment. This would likely increase their chances for career placement and success in the area of public relations, and further greater representation of locals in the society.

Chapter 3: *Challenges Confronting Kindergarten Teachers in their First Year of Teaching in Israel*; by Eitan Simon & Aviva Dan. Novice teachers' first year in teaching arouses great expectations, but it also engenders anxiety and lack of confidence. Research indicates that novice school teachers' induction processes entails a period of challenges, dilemmas and difficulties. However, little has been written about the first-year experiences of novice kindergarten teachers. This research took place in a teachers' training college in the North of Israel where as part of the student's professional development they are obligated to attend a professional development workshop. The workshop aims to provide a significant support system for the novice teacher. The research described here examined the novice kindergarten teacher's dilemmas and challenges during this critical first year, their attitudes towards the professional development workshop, including the relevance of the workshop in assisting them to cope with dilemmas arising from the field. The findings indicate that the novice kindergarten teachers experience similar dilemmas in their first year in the field to those experienced by school teachers. The workshop was not a significant factor in helping the novice kindergarten teachers cope with this challenging experience. It is concluded that the workshop framework should be re-evaluated to make it a significant place for the novice kindergarten teacher.

Chapter 4: *Physical Education Teacher's Beliefs and Classroom Management Practices: Depicting Convergences, Divergences and Inconsistencies*; by Sacha Stoloff, Claudia Verret, Jean-Christophe Couturier Cormier, & Jean Lemoyne. Teaching practices changed significantly in the wake of the 2001 school reform in Québec. In the past decade, teachers have struggled to adapt to new orientations, particularly as regards the educational approach promoting student responsibility and its effects on classroom management practice. In physical education and health (PE), a complex discipline with varied environments, few studies examine the appropriate practices to adopt. This project aims to better portrait current practice and compare with program expectations. The research objective is to describe PE teachers' beliefs and practices. The methodology was based on the Q-PEPS questionnaire, comprised of three sections: sociodemographic characteristics (8 items); beliefs (8 items); and instructional practices (43 items). A sample of 328 respondents (205 men, 123 women, age =  $41.3 \pm 9.4$  years) enabled a descriptive analysis per item. The findings describe 1) convergent and divergent beliefs among teachers, and 2) convergent and divergent practices regarding classroom management. These findings highlight an inconsistency in the responses to similar items, which could be owed to social desirability bias or a gap between the ideal, desired and actual practices perceived by teachers. Also, findings demonstrate a current gap between actual practice and program expectations.

Chapter 5: *Learners' Views of the Teacher Attributes in Contributing to Meeting the Challenges of the South African Curriculum in Physical Science*; by Leelakrishna Reddy. A decline in learner performance in South Africa over the years in Physical Sciences at grade 12, in the transition from National Senior Certificate (NSC) to Curriculum and Assessment Policy Statement (CAPS), have implored us to do an investigation of the perceived attributes of the teacher in meeting the challenges imposed by the new CAPS curriculum. 150 university students participated in the study. Learners were requested to give their views about their teachers on a questionnaire designed to elicit characteristics of a successful teacher. Learners were requested to indicate their degree of agreement or disagreement to each of the items of the questionnaire. The data was subjected to the Principal Component Analysis (PCA) procedure by use of the SPSS program, which revealed three broad clustered characteristics of the teacher. These characteristics are Teacher efficacy, Teachers' efficiency, effectiveness, and Teachers' understanding of CAPS curriculum. The results reveal that the teachers' frequent and immediate feedback on the quality of their assessments is considered the most important attribute about a successful teacher, while the use of active forms of learning is an area of concern for the present day teacher in meeting the challenges imposed by the CAPs curriculum for Physical Science.

Chapter 6: *Living Abroad: Irish Erasmus Students Experiences' of Integration in Spain*; by Rosario Hernández. Living and studying in another country requires students to pursue a process of integration into a number of areas of life, among them university itself, as well as social and cultural events and day-to-day activities, all of which require the building of relationships. As English has become the *lingua franca* in many countries, English-speaking students nowadays face increased challenges to using Spanish as a means of communication to fully integrate into the host country. This paper identifies the strategies employed by a cohort of students from an Irish university during their year abroad in Spain with the aim of explaining their process of integration into the host country. The data used for this study were an integral part of a module completed by the students during their study abroad, where students wrote two reflective assignments in Spanish to analyse their experiences during study abroad. Results show that students who made efforts to move out of their comfort zone had a positive experience of integration. The experiences of students who did not integrate so successfully are discussed and recommendations that may be relevant for students and institutions in their preparation for study abroad are provided.

Chapter 7: *Plurilingual and Intercultural Awareness and its Integration into Practical Domains of Teacher Education*; by Anne Julia Fett & Peter Grüttner. Dealing with cultural heterogeneity has become one of the most crucial challenges for teachers making it necessary to linguistically and culturally diversify teacher education (HRK, 2015). The project “Intercultural Ambassadors at Schools and in Teacher Education” aims precisely at this kind of diversification. It has been initiated at the Centre for Teacher Education of the University of Halle as a measure of professionalization. The project has the intention to raise prospective teachers' awareness of different beliefs and values in culturally heterogeneous teaching/learning environments. In so doing, it defines the dimension of plurilingualism as a vital component of cultural diversity, which is inseparably linked to culturally heterogeneous interpretive schemes. Accordingly, the immediate experience of cultural as well as linguistic differences is at the centre of the project: future teachers are put into an international Co-Teaching-situation in a culturally mixed team. Together with foreign teachers and students, they enter a teaching/learning setting in which they first experience and later reflect on the cultural dimension of their individual idea of school and teaching.

Chapter 8: *Undergraduate Physics Practicals at the University of Johannesburg: A Survey on Students' Perceptions*; by Leelakrishna Reddy. For the conductance of physics, practical use was made of one of the seven technologically enhanced laboratories. These laboratories are designed to offer some 350 undergraduate experiments. A unique software-embedded system, the first of its kind in South Africa, was used to assess the students' results. Once the students submit their results, these are captured by the data capturer, fed into the software system, and simulated for comparison with the background readings. To appreciate the scientific

value of these experiments and its offerings, a modified questionnaire, developed by Deacon & Hajek (2011) has been used. The questionnaire survey has been administered to 100 first year university students. A Likert-type scale from Strongly Disagree to Strongly Agree was used to analyze the results. The framework used for this study was taken from the work developed by the American Association of Physics Teachers (AAPT), which highlights goals to be achieved in a physics laboratory. The results of the survey revealed at least four factors that contributed to a positive perception to the value of the lab practicals. They ranged from the labs contributing to their knowledge, understanding, skills and enjoyment of the practicals.

**Section 2**, entitled “Teaching and Learning”, offers research about foundations in the education process itself, in various contexts, both for tutors and students.

Chapter 9: *Sensitization Sessions for Healthy Environments - Stakeholders' Point of View*; by Marie-Claude Rivard, Maude Boulanger, Sacha Stoloff, François Trudeau, & Sylvie Ngopya Djiki. Healthy food choices and regular physical activity are two key behaviours that help prevent the premature development of chronic diseases, obesity and their complications. To raise awareness on the issue, numerous sensitization sessions were held across Quebec to sensitize stakeholders on ways of facilitating healthy environments (physical, economic, sociocultural and political) that promote healthy food choices and active lifestyle. The objectives were to 1) explore the knowledge and skills acquired during the sessions and 2) examine the transfer from sessions toward concrete actions for fostering environments conducive to healthy lifestyles. Individual interviews were conducted with 52 stakeholders (F=41; M=11). The results reveal, first, that most of the stakeholders consolidated or even improved their knowledge and skills and were better able to recognize the four types of environments in their respective workplaces. They also developed a common vocabulary and a better understanding of the the influence of environments on lifestyles. Second, the transfer into action, although possible, was more problematic because the concerted actions needed to facilitate healthy environments are complex. These results will be discussed in light of Kirkpatrick and Kirkpatrick's four-level pyramid model. Sensitization sessions can be viewed as a societal project encouraging influential stakeholders to develop environments conducive to healthy lifestyles.

Chapter 10: *Difficulties with the Academic Writing: What do the Students from the First Year of the Pedagogy Course Reveal*; by Ana Luzia Videira Parisotto, Michelle Mariana Germani, Zizi Trevizan, Andréa Ramos de Oliveira, & Adriana Locatelli França. In spite of undergraduates having passed exams to enter higher education, this does not necessarily imply that they can read and write proficiently. In light of this situation, it is important to reflect on the initial education of teachers. This text presents some results of a broader research project investigating the socioeconomic-cultural profile of first-semester student teachers' reading and

writing skills via questionnaire at a state university in São Paulo State, Brazil. This text aims to describe the reasons they give for their writing difficulties or insecurities. The research participants are 79 first-semester undergraduates in Pedagogy — 36 and 43 students from the afternoon and evening shifts of the program, respectively. Participation was made available to those interested in collaborating with the research — all of the students enlisted to participate. This research is of a qualitative nature with a descriptive-analytical approach. The data were analyzed in light of the content analysis, with categories created *a posteriori*. When asked about the reasons for their writing difficulties or insecurities, the participants indicated low self-confidence and increased anxiety, lack of knowledge about the topic/subject, deficient knowledge of standard language, no writing training/habit/practice and difficulty in organizing ideas.

Chapter 11: *A Qualitative Study on the Perception of Undergraduate Student's Cooperative Learning Experience in the Case of Roleplay*; by Youngsoon Kim, Gi Hwa Kim, & Youngsub Oh. The aim of this study is to investigate the perception of cooperative learning experience through the roleplay among undergraduate students participating in a liberal arts course related to multicultural education of 'I' university in Korea. In this study, we adapted qualitative research method, including participatory observation and focus group interview. We collected reports, questionnaires, journals, and roleplay scripts. We analyzed the implications of experiences of students in terms of interdependence and individual responsibility as core elements of cooperative learning. Results are as follows: First, interdependence was experienced by students in dealing with conflicts in the cooperative learning process. It reflected their own will to pursue and practice a strategy for harmony and coexistence among members. Moreover, interdependence meant positive trust among members, formation of human relationship, and expression of interest and praise for members. Second, recognizing that one's role in a team influences on other members and team achievement, students seriously took individual responsibility. Individual accountability meant performance of assigned role, compliance of promise, and care for members. Individual accountability is rooted on and realized by interdependence.

Chapter 12: *Towards Improved Corrective Feedback in Japanese EFL Writing Instruction*; by Richard S. Lavin. This paper addresses issues in tertiary EFL writing instruction, focusing on the situation in Japanese universities. Students in Japan typically find academic writing extremely difficult, partly because at high school they typically write no more than two or three sentences for a single "composition". Thus, university writing instruction needs to tackle nearly all aspects of writing from a near-beginner level. This paper describes the writing curriculum at a Japanese provincial public university, focusing especially on the approach to corrective feedback taken by the author. This approach chiefly leverages two technologies—a blog with microposts and Google Docs—to bridge the gap between two strands of feedback: standardised feedback and contextualised feedback. Traditionally,

standardised feedback has been seen as less useful but more sustainable, while contextualised feedback has been regarded as potentially more useful, but impractical in terms of teacher time. The approach described may make it possible to provide feedback that is both contextualised and sustainable. More generally, this account shows one example of a writing instructor, embedded in his local context and facing its inherent challenges in an imaginative way, addressing those challenges using the resources at his disposal to effect small improvements.

Chapter 13: *The Impact of the Ethnical Background and the Number of Siblings on the Scores of Mathematics Anxiety. A Study on Mathematics Anxiety of Undergraduate Students of Mathematics and Engineering*; by Mahshid Farjadpour & Carlos Fresneda-Portillo. Mathematics Anxiety (MA), the ‘phobia of numbers’, is related to poor performance in Mathematics. There are numerous studies that discuss a wide range of factors affecting Mathematics Anxiety in students at primary and secondary schools. Furthermore, there are some studies looking into MA in students of Psychology, Engineering and Nursing at a Higher Education level, see, for example (Alves, Rodrigues, Rocha, & Coutinho, 2016; McMullan et al. 2012) and more references therein. However, we believe that this is the first work on MA in undergraduate students of Mathematics. Consequently, our purpose is to determine whether factors such as gender or ethnicity affect MA. Our main results are that there are significant differences between male and female students; there is a significant difference among students with three siblings or more, compared to students who have two siblings or less. Finally, we discuss the significant difference between the gender of the main family figure providing Mathematics support amongst students with a British and Non-British background.

Chapter 14: *Teaching Evolution to Grade 12 Learners: Teachers’ Views and Pedagogical Practices*; by Lydia Mavuru. The world over, evolution has proved to be a contentious topic to teach to high school learners despite its value in acting as ‘a blending concept’ in Biology. In the South African Life Sciences curriculum, evolution accounts for 44% of Grade 12 content in terms of mark allocation in examinations. Hence teachers are obligated to address the topic adequately as there are accountability issues at the end of the year. However, previous research has shown that teachers question the theory of evolution and are conflicted to teach it. In the current study 15 teachers were each interviewed once to explore their individual views about evolution and the pedagogical practices they employ when teaching the topic. Qualitative analysis of data showed teachers’ mixed views about the content of the topic of evolution, the value of that content to learners and society in general and the best approaches to teach the topic in science classrooms. The study revealed that at times teachers failed to reconcile their beliefs and those of the learners against their science classroom practices. In conclusion, teachers who lack the understanding of the nature of science have difficulties in teaching the topic evolution for scientific understanding. There is need for teacher professional development programmes in this regard.

**Section 3**, entitled “Organizational Issues”, gives a glance on tools for implementing organizational learning and change in the education context.

Chapter 15: *Characterization of the “Education & Education Research” Journals Included in the Journal Citation Reports (JCR)*; by Julia Haba-Osca, Francisco González-Sala, & Julia Osca-Lluch. The evaluation of the quality of scientific journals is a topical issue. The implementation of an evaluation policy based on international indicators has contributed to improving the quality and visibility of journals from different countries, measured through their indexing in the Journal Citation Reports (JCR) databases. Currently, in some countries, such as Spain, the main criterion used to evaluate the performance of individuals, institutions or research groups is the number of publications made, especially in high impact journals in the JCR. However, the adoption of international evaluation criteria based on the JCR has been the subject of numerous criticisms by researchers, who are forced to send their research papers to foreign journals to the detriment of the journals of their own country, since in order to obtain a positive evaluation it is fundamental to publish in high demand journals, mainly published in English. In this competitive environment, where the pressure to publish in quality journals is a reality, it is useful to know the profile of the journals of your specialty in order to be able to select the one that is most appropriate for the dissemination of your own work.

Chapter 16: *Education Reform in Trinidad and Tobago through the Lens of Complexity Theory*; by Jeniffer Mohammed. The education system in Trinidad & Tobago has been subject to on-going reform though thousands leave secondary school each year with minimal qualifications. Threats to equity and social justice continue because the failures occur primarily in the state-led sector, and not in ‘prestige’ schools. Historically, there has been a concerted effort to maintain this dual system while implementing reforms. Adopting a complexity theory approach reveals an educational landscape conditioned by powerful elites and their ideologies about a ‘good’ education, which stymie reforms today. Fifteen teacher educators gave their views on the failure of education reforms to take root, and through qualitative data analysis the researcher sought to determine whether complexity theory was of potential value in conceptualizing education reform in the future.

Chapter 17: *Respect for Human Dignity as a Framework and Subject of Education in the Light of Present Challenges*; by Zoltán Rónay. Our world is full of challenges. Some of them have been present for decades; others are newer phenomena. For instance, the literature mentioned the phenomenon of black pedagogy at the beginning of the twentieth century. Aggression in school also has a long history. Digitalization has only been source of conflict in the past few years. These challenges often lead to more and more conflicts which directly or indirectly affect the most unprotected and exposed layer of our society: children. Children can become either victims or perpetrators. It is the family’s role to help them to avoid



these conflicts. However, families do not have the ability or time to handle this problem. In some cases, the family is even the cause of the conflicts. Therefore, the role of school and education is increasingly significant. Education strives to teach why these conflicts are dangerous, the dangers they represent or how to avoid them, and explains that these conflicts are wrong because they violate laws or school rules. Nevertheless, teachers often disregard the morality aspect. For that reason, it is important to define a standard which can help to highlight the moral issues. This standard could be the respect for human dignity.

Chapter 18: *The Implications of Arts Education Acts for Professional Music Training Programs: The Tut Experience*; by Hua Hui Tseng. Professional music training programs are confronted with major changes in the sociocultural and educational landscape. In response to Taiwan's societal challenges, such as current issues about Music Education Policy, the Ministry of Education, Taiwan, amended the Arts Education Act (AEA) that outlines the curriculum for study in the performing arts in 1997. The AEA of 2015 is a sequel to the Special Education Act of 1984 that was designed to apply relevant theories to curriculum standards for education reform in Taiwan. The Acts are founded on the belief that high expectations and setting goals will result in success for gifted and talented students. The reauthorization mandates that funds, knowledge of art, and art-related courses be incorporated following the model of artists-in-residence projects. The purpose of this case study is to revisit and examine policymaking within the context of professional music training programs by describing and analysing the history of arts education in Taiwan and the current policymaking framework implemented at the Tainan University of Technology (TUT), Taiwan. The conclusion drawn is that education institutions can provide a conceptual framework for understanding the implications of the AEA of 2015 for professional arts education in both the legal macro- and microenvironments.

**Section 4**, entitled "Projects and Trends", delivers chapters concerning, as the title indicates, education viewed as the center for innovation, technology and projects, concerning new learning and teaching models.

Chapter 19: *Promoting Mobile Learning Through the Establishment of a Mobile Learning Community*; by Lixun Wang. With the fast development of mobile technologies, mobile learning has been adopted by more and more students and staff in higher education institutions. This chapter reports on a project which aimed to promote mobile learning in higher education. In order to find out students' and teachers' experiences and perceptions of mobile learning in a tertiary institution in Hong Kong, over 100 students and around 50 staff members across different disciplines were surveyed online, and follow-up interviews were carried out. The research findings suggest that both students and staff were generally positive towards mobile learning. Based on the findings, students and staff were invited to form a mobile learning community and share their mobile learning or mobile-assisted teaching experiences through various activities, such as writing app reviews,

compiling mobile learning e-portfolios, participating in sharing sessions and offering seminars about mobile learning. To facilitate sharing among community members, a website titled 'Mobile Learning @ EdUHK' has been created to showcase good practices of mobile learning. The framework of creating and maintaining a substantial Mobile Learning Community (MLC) will be summarised. It is hoped that our study will shed some light on how mobile learning can be promoted effectively in higher education institutions.

Chapter 20: *On the Positive Effect of Rabbit-Assisted Interventions in Classroom Environment on the Anxiety of Pupils*; by Marcell Molnár, Réka Iváncsik, & Barbara Di Blasio. In our study the effect of rabbit-assisted interventions on the anxiety of first grade pupils of elementary school was investigated during a 24-week period. The rabbits were involved in the classroom according to the following pattern: 6 weeks without rabbit, 6 weeks with rabbit, 6 weeks without rabbit, 6 weeks with rabbit. After the end of each 3-week period anxiety of pupils were measured by a standardized test. These actions were performed in two different classes; one with pupils in the general population and another one containing mainly pupils with special education needs; we called the latter the integrating class. Our study shows the beneficial effect of a classroom application of rabbit-assisted interventions, as the anxiety of pupils became significantly smaller in the middle and at the end of each 6-week intervention period. Moreover, this positive effect was particularly prominent in the integrating class. Our findings support the assumption that the increasing practice of animal-assisted education is reasonable and that rabbits can be helpful assistants in education, since stress interferes with learning and performance in students.

Chapter 21: *Interdisciplinary Projects Implemented in the Entrepreneurial School. Four Crucial Steps*; by Maude Boulanger, Marie-Claude Rivard, & Rollande Deslandes. Entrepreneurship education appears to be a promising avenue for developing entrepreneurial skills (e.g., leadership, motivation, teamwork) and the school is targeted because young people are considered as key players in promoting economic growth (European Commission, 2013). One of the appropriate teaching methods for achieving academic and entrepreneurial goals is the project-based learning (P-BL). The P-BL is also the prioritized strategy to implement interdisciplinarity in schools and it appears that entrepreneurship is a privileged context for realizing interdisciplinary projects in order to give meaning to the learning experience. Based on the framework of Proulx (2004), the objective is to describe the processes of implementation of interdisciplinary projects in the context of the entrepreneurial school. Eight individual interviews were conducted with school staff from one entrepreneurial school. Our results show that the teacher assumes a key role as a supervisor throughout the interdisciplinary project in making sure that the education program objectives are achieved. However, the lack of collaboration between the teachers remains a challenge in order to help them with the realization of these projects. Interdisciplinary projects correspond to a

non-traditional and promising method of teaching; solutions are identified in the discussion to optimize the implementation and thus ensure the sustainability of these projects in this entrepreneurial context.

Chapter 22: *Design Thinking Applied in Higher Education - D-Think, A European Project for Innovating Educational Systems*; by Katja Tschimmel & Joana Santos. As a response to continual social and technological transformations, many academic, governmental and private organisations call attention to the need for urgent changes to educational systems. Because of its collaborative and creative approach, its cross-disciplinary and human-centeredness, Design Thinking is seen as a useful mindset and method to face the challenge of a new learning paradigm. Between 2014 and 2017, seven institutional partners from six different European countries developed the Research Project *D-Think*, supported by the Erasmus+ Programme of the European Commission. The goal of the *D-Think* project is the promotion of the application of Design Thinking as an innovation method to rethink not only learning/teaching methods but also pedagogical approaches, learning spaces or the role of educators. In this wider context an open access training course for Higher Education Institutions (HEI) educators and Vocational Education Training (VET) professionals was developed, through which they can learn how to apply Design Thinking tools and how to get into the designer's mindset.

Chapter 23: *Challenge in Classrooms: Moral Reasoning and Emotional Competence*; by Carmen Mañas Viejo. This article presents the first fruits of research focused on pupils in their first year at Secondary School. Its main aim is to explore the possible relationship between moral development, as understood by Kohlberg, and the impact that the components of emotional intelligence described by Baron-Cohen (e.g. self-concept, empathy, flexibility and control) have on moral detachment. At a cooperative school in the province of Alicante (Spain), following Kohlberg's method and through an action-research design, we presented 11 dilemmas and a BarOn questionnaire (EQ-i YV-S) to be resolved by a small group of 25 boys and girls (ca. 12-14 years old) during their tutoring session. The obtained results show that the whole group was at the same level of moral reasoning, but at different sublevels. We also found that the same individuals who are at lower sublevels obtain lower scores (below the group average) in the four analysed emotional components (intrapersonal level, interpersonal level, stress management and adaptability). Use of moral dialectics in the classroom promotes cognitive progress, social responsibility and decision-making at a critical developmental moment.

Chapter 24: *Challenges Faced by Female Learners Following an Engineering Career in South Africa*; by Corina-Maria Mateescu & Dorina Ionescu. The objective of this study is to examine the specific problems that arise in a society with patriarchal attitude toward women and their choice of a future career. Within the University of South Africa (UNISA) College of Science, Engineering and

Technology (CSET) started a community engagement programme called GirlPower in 2009. To understand better the hurdles faced by the female learners while choosing an engineering career, the authors carried out a survey among a sample of 74 future female engineering students, currently part of the “GirlPower” group. It emerged that although 99% of the female learners enrolled for mathematics and physical science only 32 % intend to continue with engineering studies at tertiary level. The big problem is parental and society attitude toward a female child being “able” to study engineering. Looks like our female engineers just “disappear”. The current survey shows a relatively bleak picture of the future of female engineers even if the schools in Johannesburg area are among the best in the country. Based on the present survey the authors will attempt to suggest some solutions to the problems faced by female learners.

Chapter 25: *Management of Behavior Problems of Children with and without Disabilities: Towards Parental Training and Intervention Programs in Greece*; by Pagona Leonidou & Lefkothea Kartasidou. The role of the family is extremely important in a child’s social development. Parenting style and strategies can be either a protective factor or a risk factor (Earle, 2013). Therefore, the purpose of the present study is to investigate the opinions of parents on the use of behavior management strategies. This study asked (a) which strategies parents used to manage behavioral problems and (b) if there were differences in the use of such strategies between the parents of children with disabilities and the parents of children without disabilities. Parent Practices Interview (Webster-Stratton, 1998b) was used as an instrument in this particular study in which 110 parents of children with and without disabilities have participated. The sample was randomly selected and came mostly from cities in Central and Northern Greece. The results show that, in general, parents manage behavioral problems mostly by using positive verbal discipline strategies, which contradicts Harman and Blair’s (2016) previous study, according to which parents manage behavioral problems by stating clear expectations. Also, there seems to be no statistical significance regarding parenting practices between the parents of children with and without disabilities, except for the subscale of appropriate discipline: parents of children with disabilities are using more such strategies.

Chapter 26: *A Problem-Based Learning Approach to Diversity*; by Peter Stevenson & Rita Day. Diversity is a positive approach to the systematic, fair and objective management of workforce diversity. Diversity can be triangulated into discrimination, difference and dominance. The objective was to achieve a better understanding of disabilities by working on a real-life case study. Students in this study attended a conference with other students from various European countries working together in order to find a solution to the case study during the three-day time frame. Students needed to be open minded, willing to listen to the opinions of others in order to build upon their understanding of culture and behaviours and immerse themselves in a different way of life. The method was problem-based learning using the seven-step approach of clearing difficult or unclear words and

terms, defining the problem, analysing the problem, reorganising the problem systematically (constructing a mind map), defining aims of learning, searching for information and reporting. Following the investigation, students then determined that the case was a case of unlawful harassment and discrimination. The students highlighted the key findings and outcomes of their case study through a group poster presentation with each student having an opportunity to articulate his or her findings to the wider audience.

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