

Education

SYMPOSIUM

7706

Inclusive mental health interventions in diverse school settings: The role of school psychologists

Chair: Ester Cole Private Practice, Canada

The symposium will present a wide-ranging consultation and intervention model applicable to school psychologists and mental health service providers. Its design aims to address the ongoing demands faced by educational systems concerning academic functioning and social-emotional adaptability of children and adolescents, particularly during the COVID-19 era. The presentations interconnect evidence-based guidance for Primary, Secondary, and Tertiary prevention and intervention applications, that allow for methodical consultation, comprehensive planning, and cost-effective services. The model, applicable to international populations, will be used with examples of specific student needs encountered in schools (e.g., adaptability of immigrants, Autism Spectrum Disorder, ASD), and with issues that require school-level interventions (e.g., promoting resilience, crisis response). The application of the model will be demonstrated through the specific issues of addressing the needs of A/immigrant and refugee students, and B/students with ASD. Practical resources and tools for user-friendly applications will be presented throughout. Learning objectives: 1. Gaining knowledge and skills in promoting broad services based on the model, 2. Identifying factors that require flexibility and adaptability of the framework to shape local intervention and prevention, 3. Broadening service structures for school psychologists, 4. Strengthening orientations of academic programs involved in training future practitioners.

Integrative model for comprehensive psychological services in schools

Ester Cole Private Practice, Canada

The model is an organizational framework with multiple service options that can be applied flexibly, based on the needs of the school communities with the aim of achieving a balance of direct and indirect service delivery at given periods of the school year. The model presupposes that not everyone can participate in all the identified service priorities, but that representatives of psychology sector can facilitate reciprocal communication and have assigned roles or consultative input into the development of a system's programs. In addition to working with and responding to priorities set

by school administrators, it is essential to promote advocacy with decision-makers at the system level in order to increase their awareness of the consultative avenues by staff in line with strategic plans and reframed priorities. One service delivery vehicle by psychologists is their participation in multidisciplinary school teams. The core function of such teams is to provide teacher consultation about individual or groups of students. In addition to offering supports for regular and special education programs, advocates of consultative teams document their advantages for sharing knowledge/resources, while supporting teachers, administrators, and families. Facilitating group participation promotes acceptance of jointly formulated recommendations as well as commitment to implementation of strategies. Sharing of online resources can also lead to the promotion of knowledge and tools for implementation. Last, teams facilitate referrals to community mental health services with monitoring of interventions through intermittent consultation. Characteristics of evidence-based effective teams, and an example of a guided Disaster Response Network will be presented.

Application of the model: Addressing the needs of immigrant and refugee students

Maria Kokai Private Practice in Consulting, Canada

This presentation describes the way the school psychology consultation and intervention model can be applied in school setting to support immigrant and refugee students. These school-age children and youth present with varying levels of language competencies, bring other types of learning experiences with them, may have had disrupted schooling, and often are survivors of traumatic experiences. Thus, it is important to provide consultative supports to educators who teach these students, as well as direct mental health prevention and intervention services to the students and families. In addition to reviewing classroom, school and system-level indirect (mediated) Primary, Secondary and Tertiary prevention/intervention services along with direct services to students and families, practical implementation of many of these supports in a large urban Canadian school district will be discussed. The presentation will share practical experiences from school psychology practice addressing the needs of immigrant and refugee students.

Application of the model: Addressing the needs of students with autism spectrum disorder

Carolyn Lennox Toronto District School Board, Canada

This presentation demonstrates how the conceptual integrative consultation model can be applied in practice, with specific reference to Autism Spectrum Disorder (ASD). Children with ASD often present with pervasive and

complex mental health and learning needs. These needs require Primary, Secondary and Tertiary prevention/intervention involving all stakeholders and settings. This presentation offers examples of consultative services that can be provided by school psychologists and mental health practitioners at each of the levels, and to all stakeholders. For example, primary prevention activities at the classroom, school and the larger system level may include professional development regarding characteristics of ASD and consultation concerning evidence-based interventions; consultation to parents providing a linkage between home and school; knowledge translation activities; representation of psychologists on board or government committees around developing services for students with ASD, etc. Secondary prevention/intervention for groups of ASD students, or students who present greater difficulties, may incorporate consultation to school staff regarding program development; understanding and adaptation of manualized programs including implementation fidelity; progress monitoring and evaluation of program effectiveness; as well as collaboration with parents. Tertiary prevention/intervention activities address the more severe challenges with individual students. They include assisting school staff understand the unique needs and characteristics of the student and helping to develop, through multidisciplinary team work, individual intervention plans; supporting students in understanding their own unique strengths and needs and involving them in treatment programs; as well as working with parents as members of the team.

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Consequences of globalization in BRICS nations: Emerging education and mental health concerns

Chair: Purnima Singh Indian Institute of Technology Delhi, India

The BRICS nations together represent a significant proportion of the world's population and trade. Today the BRICS bloc has not only emerged as an economic force but also has immense potential to drive the pathway of the sustainable development goals of the United Nations. Two major goals – health and wellbeing for all and quality education have relevance for the present symposium. The symposium focuses on globalisation-induced changes and examines their impact on education and mental health in BRICS nations. We attempt to look at some concerns that need attention if equity and access to education and mental health is the goal. Education and mental health issues are embedded in a variety of inequalities and deprivations as well as rapid social changes impacting values and identity issues. The poor and those on the periphery are the most affected in terms of lack of opportunities, mental health indicators and educational attainments. Connections between mental health and

human rights violations impacting the right to human dignity and access quality health care are discussed. A number of contradictions can be seen like prevalence of underweight and malnourishment and at the same time increase in obesity and various forms of life style diseases, putting a double burden on the poor. Emotional development and psychological pro-social competences and well being and reducing risk of mental disorders are addressed. Further challenges of globalization in the primary education will also be discussed. Most of the above mentioned concerns are relevant to BRICS nations. The symposium addresses how psychology as a discipline and a profession can be of help.

Challenges of globalization in the primary education of China

Buxin Han *Key Lab of Mental Health, Chinese Academy of Sciences Institute, China*

This presentation will talk about challenges of globalization in the primary education of China from three perspectives. Firstly, deprivation of delayed gratification for children in many urban or even rural families because of only child policy, grandparents rearing, and the trend on nuclear family scale. These produce problems in the development of emotional intelligence and even induced mental disorder in the long run. Hedonism, but not eudemonism, has been promoted either implicitly or explicitly. Secondly, marketing is revising the educational system and redefine the education itself in many ways (e.g., from inducing characters, talents, interests, etc. to inputting knowledge and training skill), hence the identity of children in early life span. Training classes or extracurricular or off campus tutoring classes have been promising. Thirdly, evaluation in primary education do not put psychological/mental health of children in an appropriate consideration, never mention the life span healthy development. Knowledge based training system emphasized academic score or examination performance, rather than character building monitoring. Cultural tradition in character modeling and mental health promotion, e.g., Chinese language arts such as poetry, calligraphy, painting, seal cutting, were normally put aside for hobby but not a useful skill of self reflection, if not have been ignored. It was supposed that these were not only for China, but similar cases hold for all BRICS countries. Psychology as a discipline and a profession can be of help and must do something for that.

Deinstitutionalisation of mental health and human rights in South Africa: A delicate balancing act

Tholene Sodi *University of Limpopo, South Africa*

In 2016, South Africa experienced what has now become known as the Life Healthcare Esidimeni Scandal. This tragic incident involved the death of more than 90 mentally ill patients in some hospitals and a few facilities run by some non-governmental organisations (NGOs) in Gauteng Province (South Africa). This resulted in the national Minister of Health requesting the Health Ombud to investigate the circumstances surrounding the deaths of these mentally ill patients. A report by the Office of the Health Ombud revealed that the Life Healthcare Esidimeni project was executed and implemented in complete disregard of the rights of the patients and their families. Some of the human rights that were violated include: the right to human dignity; right to life; right to freedom and security of person; right to privacy; and, right to access quality health care services, sufficient food and water. I start by giving a brief background to this tragic incident, including the circumstances that led the Gauteng Provincial Health Department contemplating to move mentally ill patients from selected hospitals to some NGOs. I move one to highlight the different human rights violations that were committed in the process of implementing a deinstitutionalisation policy. In the third part of the presentation, I reflect on how and why these human rights violations were committed despite the South African government's commitment to implement its National Mental Health Policy Framework and Strategic Plan (2013 to 2020) which was supposed to help prevent these kinds of human tragedies. In the fourth and final part of the paper, I highlight some of the lessons that the BRICS countries can learn from the Life Healthcare Esidimeni Scandal as they strengthen their mental health services. The paper is concluded by imploring mental health professionals to be more vigilant about the plight of mentally ill patients.

You are what you eat: Psychological components of obesity in Brazil

Lisiane Bizarro *Universidade Federal do Rio Grande do Sul, Brazil*

The decrease in the prevalence of underweight and the increase in that of obesity are similar among adults and adolescents in Brazil but with a double burden among the poorest citizens; those with poor nutrition and stunt during infancy are more likely to become obese during adulthood. Obesity in children increases odds of worse health and psychosocial functioning, while in adults it is associated most notably to depression. Obesity is an outcome of multiple factors; in a set of studies we will show that it is accompanied by progressive subtle changes in motivation with an interplay of environmental, cognitive and emotional factors that might undermine later choices and modification of lifestyles. Watching television increased subjective hunger among non-obese young adults. Television advertisement of food products in Brazil employ persuasive techniques to target

emotion and decision making and constitute the category with the second highest amount of airtime (9%), lagging behind channels' TV programming advertising (26%). Among non-clinical population of young adults, distal factors (family history of obesity and personality) and proximal psychological components (impulsivity and distress) predicted desire to eat caloric food; and symptoms of depression and low inhibitory control predicted emotional eating in young women. Young lean individuals can disengage automatic attention and present voluntary attentional avoidance of food stimulus, but in older adults with severe obesity we did not observe the voluntary avoidance to food stimulus and if they had symptoms of binge eating disorders such disengagement of attention was retarded. In this interdisciplinary field, basic psychological research contributes to elucidate progressive changes in individual factors of vulnerability that can undermine both prevention and modification of lifestyle to improve health and mental health within an unfavorable macroenvironment. Sensible action throughout life stages would provide opportunities for improving health, and for reducing risk of mental disorders associated with obesity.

Impact of globalization on mental health and well being among adolescents in India

Purnima Singh *Indian Institute of Technology Delhi, India*

Given the rapid advances in all kinds of technologies, communication technology in particular, globalisation is a challenge to health and wellbeing worldwide. It impacts social and other determinants of health in ways that are detrimental to physical and mental health. The wellbeing of individuals is shaped by an array of factors including the structures of society and the social conditions, in which people grow, live and work. Social determinants of mental health and wellbeing may include a wide range of factors, the material and social environment of groups, their economic status, employment, occupation, housing, education, access and equity to resources as well as experiences of prejudice, marginalization and discrimination. This paper examines some of these social determinants and their impact on mental health and wellbeing of adolescents. Though prevalence of mental health concerns is now acknowledged but such concerns are not addressed with the priority that they should receive. If not addressed at the right time the consequences can extend to adulthood, having an impact on physical and mental health. India has been said to have a demographic dividend which can be a huge asset for the country and contribute to nations growth to development. However, awareness about the severity of these diseases is very less in the society especially in the rural areas. There is also a big gender gap. Given the fact that mental health issues have the

potential to have an impact on a large section of the population leading to lost economic opportunities and wasted talent. This paper examines the risks and potential benefits of timely intervention.

Television exposure and emotion outcomes in 5-to 6-year old children

Aleksander Veraksa *Lomonosov Moscow State University, Russia*

Studies have shown the important role of children's emotional development for their psychological pro-social competences (Mathieson and Banerjee 2011, Liao, Li, and Su 2014), well-being (Albanese et al. 2010), and academic achievements (Franco et al. 2017; Józsa and Barrett 2018). Emotion understanding and recognition gradually develops in the preschool and school years and has a variability associated not only with child's cognitive or affective factors but also with environmental factors (Pons et al. 2003). The aim of the study was to establish to what extent the daily amount of TV exposure impact children's emotion understanding and recognition. The study involved 245 children aged 5–6 years ($M = 5.3$, $SD = 8.7$); boys (52.2%) and their parents. The majority of parents described their families as belonging to the middle-income social class (79.9%). Information on the average daily duration of children's watching TV was obtained from a survey with parents. Test of Emotion Comprehension (Pons, Harris, 2000) was used to assess the level of emotion understanding. Affect recognition (NEPSY-II, Korkman, Kirk, Kemp, 2007) was used to assess the ability to recognize affects by facial expression. Basel Picture Anxiety Test was applied to evaluate the level of children's anxiety. Colored Progressive Matrices (Raven, Raven, Court, 1998) was used to assess the non-verbal intelligence of children. The study and methods were approved by the Ethical Committee of the Russian Psychological Society. Cluster analysis identified two groups of equal size with cluster centers: (a) child watching TV for 0.5 to 1-hour ($N = 122$), (b) child watching TV for 1.5 hour and more ($N = 111$). Regression analysis was performed to determine the potential effect of age, gender, belonging to the 1st or 2nd cluster, peculiarities of mother's work, number of children in the family, family status, mother's education and socio-economic status of the family on the dependent variables. Among several factors only age and belonging to the 1st or 2nd cluster in terms of TV watching duration per day have a significant impact on understanding and recognizing emotions. Analysis of differences between clusters using the T-test for two independent samples showed that children who watch TV for up to 1 hour show significantly better results in general level of emotion understanding and its components. In turn, children who watch TV for 1.5 hours or more are better at recognizing emotions by facial expression, but also have a significantly

higher level of anxiety than children who watch TV for no more than an hour a day.

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Introducing the newly founded European Society for Psychology Learning and Teaching

Chair: Birgit Spinath *Heidelberg University, Germany*

Giving psychology away is an important responsibility that all psychology instructors share. This symposium will introduce the newly founded European Society for Psychology Learning and Teaching whose aim it is to advance the learning and teaching of psychology at all educational levels, and to provide a forum to engage researchers and teachers of psychology in communication and exchange (<https://esplatorg.weebly.com/>). Besides providing information about ESPLAT, the symposium presents four typical research examples dedicated to improve the teaching and learning of psychology. The first contribution introduces the approach of Scholarship of Teaching and Learning (SoTL), which has become a movement in higher education. It will be shown, how this approach learning can be implemented into a large lecture program and how it can lead to evidence based changes in the way the lecture is taught. The second presentation elaborates on the concept of Flipped Classroom and how to use face-to-face time with students in a more active way compared to traditional lectures. By means of an Audience Response System, quizzes were implemented into the lectures to monitor students learning and provide the instructor with information to act upon. The third talk will target the issue of neuromyths in education psychology, that is widespread notions about learning and the brain that are not in line with empirical findings. It is shown that neuromyths are highly prevalent in pre-service teacher students, not only at the beginning of their studies but also in higher semesters. The fourth talk will report on a teaching concept aiming to improve students' introspective knowledge of their personality alongside with conveying diagnostic competencies in an undergraduate diagnostics class. The presentation will summarise student-identified benefits as well as typical findings. Finally, an overarching discussion of how to improve psychology teaching and learning will be initiated.

Flip-it SMART: Benefits and constraints of transforming a main lecture into a flipped classroom scene

Claudia Prescher *Technical University Dresden, Germany*

This field project aims at investigating the benefits and constraints of transforming a psychology lecture for up to 500 teacher students into a Flipped Classroom, in which classroom time is not used primarily for teacher led instruction, but for elaborating and discussing

what students have studied in preparation for the session with the help of online study resources. The interactive course sessions of our Flipped Classroom project start with a self-reflection phase in which students have to answer questions addressing their engagement with the preparatory activities and material, as well as their reasons for attending the session. To check for their understanding of the material, students then have to respond to several quiz items using an Audience Response System. Depending on the rate of correct answers, students are provided either with a short peer instruction phase (35%–70% correct responses), teacher instruction (less than 35% correct) or a summary of the correct response (more than 70% correct). Then up to 4 conceptual challenging tasks using classroom vignettes or empirical findings are provided. Students have to work on these tasks following a think-pair-share procedure. To close the session, a transfer question is provided to check students' level of understanding. To evaluate the benefit and constraints of flipping the introductory lecture, we collect quantitative and qualitative data throughout the semester. At the end of the semester, students' level of knowledge will be assessed with a written exam. Based on these data, we will discuss the benefits and constraints of transforming a lecture into a Flipped Classroom.

Scholarship of teaching and learning as a means to improve psychology teaching and learning

Birgit Spinath *Heidelberg University, Germany*

Scholarship of Teaching and Learning (SoTL) has become a movement in higher education. Within the framework of SoTL, instructors investigate the effects of their didactic approaches with the overarching aim to improve teaching and learning. Both instructors and students can benefit from SoTL on several levels. At the same time, SoTL is meant to advance the knowledge about effective teaching and learning by systematically investigating the effects of teaching methods. In this presentation, a specific approach to SoTL in psychology teaching is introduced that consists of a seven-step iterative process. In a large introductory lecture program on psychology, a series of experimental studies has been conducted over several semesters. It will be reported how the process of SoTL was established and what insights it yielded. Specifically, we investigated the development of students' knowledge, motivation, and satisfaction with the course during the semester and the effects of several learning activities (such as practice tests) that were included in the lecture. The results of these investigations led to significant changes in the design of the lecture. I would like to discuss how findings can be cross-validated by cooperation among instructors across different teaching formats, topics, and institutions.

Neuromyths in educational psychology among pre-service teachers

Ines Deibl University of Salzburg, Austria

Myths about learning and Neurosciences, also known as Neuromyths are among other myths about learning widely spread. Even among teachers, such Neuromyths are rather common and might have unbeneficial impact on teaching and learning (Dekker et al., 2012). While first research within this area examined in-service teachers (Krammer et al., 2019), the aim of this study was to examine prevalence and distribution of Neuromyths among pre-service teacher students at different stages of their study programs. Overall, $N = 195$ participants (34.2% male, Mean Age = 22.46; SD = 4.1) participated in this study. 83 were freshmen of the teacher training program, 74 students were enrolled in the master program of teacher training and 36 were law students acting as a reference group. Participants had to fill-in a questionnaire and judged 46 statements about the brain and its influence on learning as well as learning with digital media with regard to their validity. The instrument was an adapted and extended version of Krammer's (2019) Neuromyth Questionnaire. In addition, students' academic self-concept (Schoene et al., 2012) and Need for Cognition (NFC; Beißer et al., 2014) were assessed as control variables. Results reveal that participants correctly identified 36% of the given statements as myths. Master students identified slightly but not significantly more myths correctly than freshmen did (37% vs. 35%). Both teacher students cohorts performed significantly better than students in law school (32%; $\eta^2 = 0.07$). Nevertheless, the difference is small. Number of correct answers correlated weakly positively with academic self-concept ($r = .21$; $p < .01$) but not with NFC. Taken together, these first analyses indicate similar patterns to prior studies (Krammer et al., 2019). The results emphasize the importance to address these topics during pre-service teacher study programs to overcome myths about the brain and education.

Increasing psychological literacy by personality testing in the undergraduate psychology curriculum

Paul Wilson Queen's University Belfast, United Kingdom

It has been established that students are able to estimate their personality trait scores, albeit with low/moderate accuracy (Furnham & Chamorro-Premuzic, 2010). This suggests that there is scope to increase introspective knowledge of personality, with the potential for application in future academic, work and everyday life settings. This presentation will describe an initiative to increase university students' insight into personality. After learning about the 'Big Five' trait theory, students were asked to estimate their levels on each trait, then participated in a practical class where they

completed and scored a psychometric measure of the Big Five (the NEO-FFI-3). They were then guided to reflect on surprising discrepancies, and think about how their trait levels may be beneficial or counterproductive in their working, academic and personal lives. Student feedback has revealed this initiative to be an enlightening experience, beyond the practical psychometric skills developed; particularly with respect to preparing for graduate-level employment. This presentation will summarise the student-identified benefits, and interesting trends between estimated and measured trait scores in the student cohort.

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Positive education and contributions from the Ontopsychological School

Chair: Ricardo Schaefer Faculdade Antonio Meneghetti and UFSM, Brazil

This symposium, titled Positive Education and Contributions from the Ontopsychological School, brings together Brazilian and Russian researchers and research results of a qualitative and quantitative approach, which they have been conducting for at least five years, regarding positive education and positive socialization for training, young people of present and future generations. The general objective is to identify the results of youth education projects and programs in Brazil and Russia, with emphasis on positive education, positive socialization, socio-emotional skills formation and integral formation, and also the contribution of theoretical contributions and the application of the method and ontopsycho-logical pedagogy for the development of successful lives, well-being and contribution to the social context. The researches discuss theoretical and empirical categories such as: positive education; categories and characteristics of positive socialization; programs and methods for training young people in contemporary society; pillars of youth formation with the contribution of the Ontopsychological School, namely: study, work, high morality, ontopsycho-logical science, internationality; relations between Ontopsychological Pedagogy and Positive Education; formation of entrepreneurial attitude and leadership in young university students and the importance of the relationship and medication of university professors that contribute to the effective formation of leadership, entrepreneurship and people who seek integral development, personal and professional growth, social and emotional skills, self-realization, well-being for themselves, for their peers, in their institutions and contributing to solving problems in the social context and to well-being on a broader social scale.

Ontopsychological pedagogy and positive education contributing to the formation of young professionals

Patrícia Wazlawick, Any Rothmann Faculdade Antonio Meneghetti, Brazil

Empirical, qualitative, exploratory, longitudinal approach, with the general objective of investigating the integral formation of adolescents/young people who undergo personal/professional training at Faculdade Antonio Meneghetti, located in the Recanto Maestro District, Restinga Sêca, Southern Brazil, Brazil. The theoretical foundation is based on the theoretical constructs of Positive Education in interdisciplinarity with the approach of the Ontopsychological School, with studies by Meneghetti about the development and formation of young people and on Ontopsychological Pedagogy. The research problematizes the main stereotypes of young people (biologism, critical idealism and consumerism), and identifies the study of the potential of nature and identity of each young person, seeking to verify the personal and professional training performed in activities of the higher education institution, through from various experiences, work and study. Over a period of five years, more than 200 young people are being studied through participant observation and action research with research subjects during university study activities and in companies where they perform professional activities. The research results objectively describe fundamental points of this training, present practical projects of application with adolescents/young people, which converge to the results of the formation of youth as a man as a social function, with the focus on promoting self-excellence, even well-being, integral development, encouraging participation in the labor market, achieving concrete results for themselves and their personal, professional and social life context.

Entrepreneurship as a way of being, knowing and doing: The development of entrepreneurial mindset

Ricardo Schaefer Faculdade Antonio Meneghetti and UFSM, Brazil

The interest in the entrepreneurial education has grown significantly over the last years, stimulating new studies and new understandings of what it is to be an entrepreneur and the role education plays in its development. The researches about entrepreneurship have grown in visibility and importance, however, the entrepreneurial education issue still requires a more solid discussion that will help it to mature and will allow it to be directed and disseminated in a more effective way. This study had as its main objective to analyse the development of the entrepreneurial mindset and behavior in graduation students and professors of a private college institution, by the means of an entrepreneurial education which is directed to contemplate the entrepreneurship as a way of being, knowing and doing. An exploratory qualitative and quantitative study was conducted based on theoretical-empirical

research and data triangulation. The first step of the research, so called informal research, identified the faculty members who, from the student's point of view, develop unique activities in the classroom. Out of this informal research, which included 249 students, the four most frequently mentioned professors from each course were selected – an amount of 12 professors to be interviewed. The results obtained evidenced direct connection between the students' expectations in relation to the entrepreneurial education, the intensity of the dimensions of the entrepreneurial mindset and the entrepreneurial behavioral characteristics to what the professors seek to develop. The search for ways of improving the entrepreneurial formation in high education seems promising.

Forming a responsible personal position of young people: Experience of the Eco-biological Centres **Victoria Dmitrieva, Tatiana Vereitnova** *Russian State Social University, Russia*

This work stems from the result of scientific research of quantitative and qualitative nature, conducted since 2014 with the objective of verifying how the personal and professional training of young people in Eco-biological Centers built by the Ontopsychological School in Russia, Ukraine and Brazil. Ontopsychological Pedagogy and Positive Socialization are the main theoretical frameworks and scientific foundations, whether from scientific research or from the practical application of these people formation projects. Responsibility is the central point of formation of young people, based on the methodology and ontopsychological pedagogy. Positive Socialization identifies theoretical and empirical criteria for training and practical application, such as: the construction of professional self-determination (professional identity); the existence of positive (conscious/responsible) parental care regarding the family relationship; responsible attitude towards one's own health (physical and mental); existence of normative conduct and attention to laws (legal freedom) and construction and development of psychological well-being. The results of the formation of young participants of formation programs in the projects of the Ecobiological Centers are presented, that contribute to the realization of Positive Education, with the development and growth of healthy people, in self-realization process, in professional formation and, consequently, training. Leadership aspects, which also contribute to the improvement of the social context of life and professional performance.

The Emergence of automated counting procedures during development

Catherine Thévenot *University of Lausanne, Switzerland*

The results of simple calculations such as $4 + 3$ are classically viewed as retrieved from long-term memory by expert solvers. However, according to an alternative theory, simple additions are rather solved by experts through extremely fast, unconscious and automatic counting procedures. One way to reveal the existence of such procedures is to present the sign of the problem shortly before the operands (i.e., -150 ms). Priming effects, or in other words, facilitation of the solving process by the anticipated presentation of the arithmetic sign, is interpreted as the automatic pre-activation of a procedure that is used to solve the problem. Using this paradigm in children, we showed that it is only from the age of 13 years that automated counting procedures can be revealed.

Variability and malleability of sensitivity to interference during arithmetic problem-solving

Roland Grabner *Universität Graz, Austria*
 A major building block in the development of mathematical competencies is the ability to acquire and retrieve arithmetic fact knowledge such as the multiplication table. However, there are large individual differences in this ability in children and adults, and deficits in arithmetic fact retrieval are the hallmark of children with developmental dyscalculia. A new hypothesis on the origins of these individual differences was proposed in the sensitivity-to-interference (STI) in memory hypothesis. According to this hypothesis, individuals differ in the sensitivity to proactive interference that emerges during learning when new arithmetic facts display similarities to those facts already stored in memory. Even though the hypothesis has been supported by behavioral data, little is currently known about the neurocognitive mechanisms underlying individual differences in STI. Two functional magnetic resonance imaging (fMRI) addressing this issue are presented. In the first study, we investigated the neural correlates of the STI effect in 42 adults with a broad range of arithmetic competencies by presenting them with a set of low- and high-interfering multiplication problems. We found that the STI effect in the left inferior frontal gyrus is larger in individuals with low (compared to high) arithmetic competencies. In the second study, we tested whether the STI effect can be modulated by a 5-day multiplication training. Preliminary results from 46 adults revealed that only adults with low arithmetic competencies display an STI effect at both the behavioral and the neural level, and that this effect could not be diminished through the training. These findings provide novel insights about the neural mechanisms of the STI effect and its association with individual differences in arithmetic competencies.

Brain systems for mathematical learning in the typical and atypical developing brain

Teresa Luculano *Université de Paris, France*

The use of mathematics to categorize, visualize and manipulate information extends to virtually all domains of human activity in the modern world. Although individual differences in mathematical skills have been extensively documented, little is known about the brain systems supporting successful – or unsuccessful – math learning. This talk will shed light on the functional brain correlates of mathematical learning in typical and atypical developmental cohorts. Specifically, by combining an intensive 8-week math cognitive training with task-based functional resonance imaging (fMRI), we assess learning-induced brain plasticity effects as a function of heterogeneous profiles of mathematical skills during the early school years – a critical time for arithmetical skills' development. First, we show that math cognitive training can rescue poor performance and aberrant brain functioning in a population of 7–9 year old children with Mathematical Learning Disabilities (MLD). Brain plasticity effects in this group manifested as significant reduction of widespread over-activation across multiple brain systems important for numerical problem-solving encompassing parietal, frontal, and ventral temporal-occipital areas. Critically, training-related changes in these brain areas were correlated with performance gains in MLD. In Typically Developing (TD) children, the same training was instead associated with greater engagement of memory systems anchored in the hippocampus, and concurrent increases in hippocampal-cortical functional connectivity. Finally, in a population of 7–9 year-old children with high levels of math anxiety, math cognitive training elicited significant functional brain changes in emotion-related circuits anchored in the basolateral amygdala. Together, these findings help to elucidate the neural correlates of individual differences in mathematical learning. Furthermore, they suggest that the recruitment of brain systems supporting mathematical learning varies as a function of heterogeneity of skills, highlighting potential venues for intervention. More generally, this work helps to refine neurodevelopmental models of mathematical learning and cognition during a critical stage of academic skills' development.

Inhibitory control as a core mechanisms of rational number comparisons

Gregoire Borst *Université de Paris, France*

When comparing fractions or decimal numbers school-aged children tend to rely on strategies constructed when learning to compare whole number. These strategies are well adapted to compare fractions or decimal numbers in some contexts but lead to systematic errors when fractions have common numerator or when the smallest decimal number has more digits after the decimal point. We will present a series of

experiments showing that at all ages inhibitory control over misleading strategies is needed to overcome systematic errors in rational number comparison but also in logico-mathematical reasoning (arithmetic word problem). We will also provide evidence that citizen science project can potentially bridge the gap between the lab and the classroom.

INVITED ADDRESS

1109KA

Developing 21st century learners: Good and bad motivation(s)?

Woon Chia Liu National Institute of Education, Nanyang Technological University, Singapore

We live in an exciting time of relentless change and unprecedented technological transformations. In this time, the “dissemination of information and recalling of facts” kind of education is not adequate, although it is debatable whether it has ever been adequate. Today’s children will solve problems that require complex solutions and face challenges that are not found in textbooks. They need to have a curious and inquisitive mind to ask questions and find connections. They need to assume personal responsibility for continuous learning to thrive in the 21st Century. This address sets out to deconstruct the psychological factors underlying student motivation using the wisdom from the Self-Determination Theory (SDT). It will provide an overview of the SDT, looking specifically into whether there is such a thing as good and bad motivations, and what research tells us about them. Using Singapore as the context, the address will also examine what could and should be done in education systems and schools that want to develop autonomous learners.

474KA

Turning girls ‘brains pink and boys’ brains blue – the effects of gender stereotypes in education

Christiane Spiel University of Vienna, Austria

Despite many efforts to increase gender fairness in education in recent years, the issue has not yet become obsolete: Gender discrimination still exists and finds expression in unused chances and limited action repertoires for both sexes. From the first day of their lives, children are exposed to gender-stereotyped environments. Despite some slight differences, there are common ideas about what is typically “male” or “female” across cultures and children are educated according to these beliefs. Parents’ and teachers’ implicit reinforcement of gender stereotyped behavior leads to vicious cycles. Children behave in the expected way in the sense of a self-fulfilling prophecy. While little to no performance differences are observed in early childhood and

in the first years of schooling, they become increasingly apparent at the beginning of adolescence. In girls gender stereotypes e.g., lead to detriments in STEM fields, in boys to detriments in reading. The paper presents studies from the Vienna research group describing the central role of parents’ and teachers’ gender stereotypes for the development of sex differences in performance and motivation in children and adolescents. As interventions, the school-based training program Reflect is presented which enhances gender competence in secondary school teachers and their students and a similar program developed for the elementary education. Large-scale implementation of such programs in kindergarten and schools is recommended.

INVITED SYMPOSIUM

7080IS

Psychology, neuroscience and education: Toward a scientific approach of pedagogy

Chair: Gregoire Borst Université de Paris, France

A growing number of studies investigate the neural foundation of academic learning in children, adolescents and young adults and more generally how the brain is affected by learning to read, to perform arithmetic operations or to solve logical problems. The aim of the present symposium is to bring together researchers from various disciplines (cognitive psychology, developmental psychology and educational neuroscience), to present novel findings regarding the neurocognitive processes involved in math and scientific reasoning and to discuss to what extent these findings can help inform pedagogy in the classroom.

5508IS

Methods and benefits of teachers’ training on social and emotional learning (SEL)

Chair: Markus Talvio University of Helsinki, Finland

Promoting psychological well-being and social and emotional learning becomes more and more important part of the school education. Indeed, increasing number of recent studies report benefits of social and emotional learning (SEL) for students. However, without teachers’ motivation to teach SEL, its effective implementation strategies and their own social and emotional competence the studies of student’s SEL might be threatened. Therefore, it is important to look at teachers’ own development of SEL. Today, trainings of SEL are available both in teacher initial training and in their in-service training. Symposium will present fresh approaches to social and emotional learning in the schools and their benefits for teachers and learners will be presented. The

examples from different school types and from cultural contexts will be discussed.

The development of PE teacher students’ social and emotional learning in their initial training

Tommi Mäkinen University of Jyväskylä, Finland

The purpose of the study is to explore PE students’ socioemotional learning (SEL) and the meaningful learning experiences during the SEL-course. In the teaching profession understanding SEL is important because the guidance of learning and group dynamics is essentially an interactive social process (Kanning et al. 2012, Tynjälä et al. 2016). Further, previous research shows that focusing on socioemotional skills promotes students’ academic achievement (Durlak et al. 2011). Teachers’ SEL-skills can be developed by training (Klemola 2009). In PE teacher education annually 60 first-year-students participate in 20 hours SEL-skills course based on Gordon’s interaction model and SEL-concept (Lintunen & Gould 2014). The course consists of practicing SEL-skills such as listening, clear self-expression and conflict resolution. The data was collected before and after the course and consists of the knowledge test and the DCI-instrument (Talvio 2014), and learning diaries analyzed by qualitative content analysis (Krippendorff 2013). Results indicate that PE students’ SEL-skills developed especially in active listening and clear self-expression. Further, students reported improvement in their self-awareness and importance of the skills. Students expressed willingness to develop their SEL-skills further. Training SEL-skills in the early stages of teacher education is important in awakening their awareness for the socioemotional aspect in teaching.

Fostering of the social emotional learning through expression

Alena Nohavová University of South Bohemia, Czechia

The presentation focuses on fostering the development of social and emotional competencies (Elias et al., 1997) through learning based on expressive production. Expressive production (or personal expression) provides opportunities to practice and further develop social and emotional skills. To understand this relationship between social and emotional learning and expressive production the chapter presents the theory of American philosopher N. Goodman (Goodman, 1976, 1984; Goodman & Elgin, 1988). An important aspect of building personal expression is the so-called expressive experimentation (Nohavová & Slavík, 2012). Within it, a person explores different possibilities of expressing a particular issue or topic as rooted in his life experience in the form of metaphor – figurative expression. By doing so, expressive experimentation and its reflection help to develop insight into

self-awareness and social awareness. As a result, the deepen self- and social awareness also improve self-management and responsible decision making. The presentation introduces three specific examples of facilitating expression (working with clay, an object, and pictures), which demonstrate the application of expressive experimentation for the development of emotional and social competencies of university students, future teachers within the course of introductory psychology. Based on the theory of expression, the chapter tries to inspire how to use expressive techniques in psychology teaching for fostering social and emotional learning and for developing functional psychological literacy of future teachers.

The art-therapy collage technique as a tool for teachers' professional reflection

Luboš Krninský *University of South Bohemia, Czechia*

Social emotional learning plays an important role in teachers' training as it may help them to deeply understand their professional roles, models, challenges, etc. The submitted study presents an art-therapy technique of projective thematic collage as a tool for reflection on teachers' professional identity. The collage, similarly as other techniques of a similar kind, is (among others) a space for personal projection in terms of psychodynamic approaches (Müller & Müller, 2003). The text therefore firstly introduces the theoretical background of a projection principle as applies in the collage technique. The next part of the theoretical section deals with different perspectives on teachers' professional reflection (e.g. Marcos, Miguel, & Tillema, 2009; Van Beveren et al., 2018) and professional identity (e.g. Beauchamp & Thomas, 2009; Korthagen, 2004). Using these starting points, the chapter describes the specific possibilities of working with a thematic collage to help teacher trainees achieve the deepened view on themselves as teachers. Using this technique in our concept, we require students to work out a collage on the theme of Me as a teacher in all her/his positions and roles. Authors of the collages thus create a metaphorical overview of their perception and experience of the teacher's profession in relation to themselves through an artifact. Findings from previous surveys show that the use of thematic collages is very useful for reflecting on the profession, but also on the current life situation of the participants. Working with collages enriches participants' insights into significant findings regarding their emotional experience and broadens their perception of the teaching profession, including their own position within it. These facts develop self-awareness and social awareness among the authors of the collage (students examine their attitudes to teaching, to pupils, to themselves as teachers, they realize their emotional experience in this context, but also its possible influence on

pupils) and can in practice influence (at least) their self-management within school reality.

Sustainability of the benefits from teachers' workshops on social and emotional learning

Markus Talvio *University of Helsinki, Finland*

Teachers play an important role on promoting students' social and emotional learning (SEL). However, teachers do not always know how to teach and implement SEL as a part of school curriculum. Previous studies on the effectiveness of teachers' SEL trainings indicated that teachers benefitted from training on SEL in many ways. Yet, little is known how sustainable the gains are. The current study aimed at investigating teachers' short-term and long-term outcomes of SEL from the Lions Quest (LQ) teachers' workshops. Participants of this study consisted of 151 Asian teachers and other members of the school staff who participated in the Lions Quest teachers' workshop. Results indicated that perceived competence of the teachers who participated in LQ workshop increased during the training and stayed at that level showing a sustainable effect. However, knowledge application and the sense of importance appeared to improve immediately after the training too, but after a half a year the effect of the training declined. Support for teachers in sustaining the benefits of their SEL is discussed.

3840IS

Issues related to training and education for international LGBTQ+ advocacy

Chair: Julie Koch *Oklahoma State University, United States of America*

Advances of political climates and understandings related to LGBTQ+ individuals and identities occur at different rates for different countries and cultures. Additionally, the global context of LGBTQ+ advocacy efforts presents opportunities and challenges regarding best practices for facilitating education and change. For example, those developing education for care providers may utilize support from international advocacy organizations while also shaping content and format to best fit within the sociopolitical context. The unique needs, resources, sociopolitical climate, and cultures of each community are important for individuals or organizations to consider when planning and implementing LGBTQ-affirmative psychotherapy training. This symposium will highlight approaches to creating programs, navigating systems, and disseminating information across a variety of international contexts. Presenters will share insight gained from their experiences and discuss how specific training initiatives or tailored educational processes can inform global advocacy.

Psychology training and heterosexism: Heterosexual vs. LGQ+ as health care providers in Columbia

Reynel A. Chaparro *Universidad Nacional de Colombia, Colombia*

Recognizing and addressing institutionalized heterosexism in psychological training is necessary to promote meaningful change of individual attitudes and institutional culture. This presentation will consider different group strategies to better address heterosexism in practice and take action to improve LGBTIQ+ affirmative healthcare. The results of a qualitative approach between heterosexual vs. LGQ+ health care providers in Colombia will be discussed.

Training and competence in LGBTQ+ asylum assessment in the US

Marty Cooper *State University of New York Old Westbury, United States of America*

This presentation will review training and developing competence in asylum assessment with LGBTQ+ individuals. The structure and format of asylum assessment reports will be discussed. The author will discuss strengths and challenges of working with different asylum agencies. Barriers to the granting of asylum will be highlighted. Finally, the discussion will address how interviewers need to be nimble enough to address the unique threats experienced by LGBTQ+ individuals from diverse areas of the globe.

Giving LGBT psychology away: Efforts to promote LGBT rights and well-being in the Philippines

Beatriz Torre *University of the Philippines, Philippines*

LGBT psychology in the Philippines seeks to promote the rights and well-being of LGBT individuals, families, and communities through research, education, advocacy, and practice (Manalastas & Torre, 2016). This paper discusses recent efforts by the Psychological Association of the Philippines LGBT Psychology Special Interest Group (PAP LGBT SIG) to build on past work aimed at mainstreaming LGBT psychology in the Philippines by engaging with communities and professions beyond psychology practitioners and academics. These include (a) participation in legislative advocacy towards the passage of legislation at the local and national levels that prohibit discrimination on the basis of sexual orientation, gender identity, and gender expression; (b) education of community workers on the provision of LGBT-inclusive mental health support for survivors of domestic and family violence; and (c) participation in networks of health professionals that were formed to address health issues of LGBT Filipinos. Challenges and opportunities

encountered in these efforts, as well as insights gained and lessons learned, are also discussed.

LGBTQ+ psychotherapy and training across borders: Challenges and opportunities

Matthew D. Skinta *Roosevelt University, United States of America*

Global advances in political rights and psychotherapy training occur at different rates nationally, against a backdrop of an increasingly connected professional world. In this talk, experiences will be discussed related to providing training, consultation, and dissemination in a variety of national contexts. This includes the use or challenges in translation and the most effective types of translators, as well as the relative differences between in-person or web-based work. Further, the role of cultural humility, a concept most frequently applied within the U.S. to working across racial and ethnic lines, will be explored as it pertains to working with a variety of cultural groups. This includes the importance of an awareness of current events and political changes that affect the training context, sometimes within nations close in proximity yet experiencing divergent paths in development both societally and within psychology. Such contexts are also affected by the work of international anti-LGBTQ+ organizations that may target mental health providers as a specific strategy to reduce acceptance and promote pathologizing models regarding sexual orientation and gender diversity. Attention will also be paid to the role of local experts, cultivating an international network, and the importance of supporting rather than supplanting local efforts to advance training and LGBTQ+ clinical competence. Finally, this talk will consider principles of economic justice given the cost of on-site training or relative ability to pay Western rates for consultation or on-line trainings, and the trade-off between environmental factors in travel for face-to-face training in contrast to the limitations of web-based training and consultation.

A case study in training on sexual and gender diversity affirmative practice in South Africa

Niel Victor *University of South Africa, South Africa*

Presenters: Niel Victor, MA and Juan Nel, PhD The initiative, "Practice Guidelines for Psychology Professional Working with Sexually and Gender-Diverse People," was launched in 2018. This initiative's primary goal is to "increase psychological knowledge of human diversity in sexual orientations, gender identities, gender expression, and sex characteristics" with the intent to raise more awareness among the targeted group of professionals (PsySSA, 2017, p. 6). The guidelines reflect the affirmative stance of the Psychological Society of South Africa's [PsySSA] sexual and gender

diversity position statement, which is consistent with the Constitution of South Africa (Republic of South Africa [RSA], 1996). The Department of Social Development contracted PsySSA to conduct training to improve the competence of social work staff in working with sexually- and gender diverse clients, based on the guidelines. An initial pilot of 5 workshops were conducted in February 2019. The program consists of a three-day experiential intervention which primarily focuses on acquiring knowledge and skills and, to a lesser extent, changing attitudes regarding LGBTQ+ health and well-being. The training employed a multi-method approach which included mini-lectures, DVD/video viewing, case studies, facilitated group discussions, role-plays by participants, and illustrations by facilitators. Workshop attendees completed feedback questionnaires before and after being exposed to workshop content, in addition to a workshop evaluation questionnaire. The Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS), was used as the main instrument (questionnaire) within this context and is characterized as a clinical self-assessment tool for health and mental health professionals (Bidell, 2017). This presentation will briefly discuss the program background and content, the results of the pre- post test evaluation, and reflections on the training by two of the facilitators themselves.

2098IS

Psychology training in Latin America

Chair: Maria E. Humphrey *ANDEPSI, Nicaragua*

This will be an introduction to commonalities of obstacles and opportunities derived from contemporary social changes for psychology training in the region. This includes historical demands on psychology, description of resources and limitations, strategies that are not exclusive to the Latin American region.

Before Boulder and Bogota. Concerns around psychology education.

Hugo Klappenbach *Universidad de San Luis, Argentina*

The presentation will focus in the first debates around Psychology Education or Teaching in Psychology. The state of affairs during the 1920s will be first analyzed. Later, one of the first inquiries prepared by a Committee at a psychology organization focused on the courses required for clinical psychological work in 1936 is exposed besides the survey devoted to courses in psychology offered by undergraduate colleges of liberal arts in 1938. Then, the presentation will focus on the well-known Shalow proposals concerning the training of the clinical psychologists at the beginnings of the 1940s. The Boulder Conference is presented as the capstone

of the previous debates and concerns on the topic. Finally, the presentation analyzes how the first undergraduate programs in Psychology in Latin America incorporated such state of affairs. Keywords: psychology, education, history.

Core competencies as the basis for professional training in psychology

Germán Gutiérrez *Universidad Nacional de Colombia, Colombia*

Latin American countries have experienced a fast growth in professional training and social recognition of psychology. During the past three decades, the number of programs of psychology, at the undergraduate and graduate levels has increased manifold. Despite regulations in most countries of the region, there is not a common ground to construct curricula seeking to promote adequate training of psychologists at various levels. In the present study, a comparison of programs at the undergraduate level is made, based on the use of competences as the basis for their curriculum construction. Evidence for a growing adoption of competence as the basis for quality is shown and an argument for the implementation of a core competences model with local adaptations is presented. A description of some of the ways in which a competence system could be adapted in Latin America, as well as the benefits for professional communities practicing psychology, is presented. Keywords: psychology training, competences, Latin America.

A microteaching experience with graduate students in Colombia

Karen Ripoll *Universidad de los Andes, Colombia*

Since teaching is a profession that requires specialized knowledge and skills, teacher candidates, in order to perform their jobs, should possess certain competencies. Training graduate students to teach is a practical, professional, and, arguably, ethical responsibility of graduate programs. The learner-centered teaching education is a perspective that focuses on different principles and activities to train students and professionals on the fundamental knowledge and skills to practice high quality teaching. Based on this approach, the Learner-Centered Micro Teaching model (LCMT) proposes an organized learning process that leads teachers in training to develop: Critical, reflective and creative thinking. In the present study, a LMCT experience was implemented with 5 graduate students in an advance seminar on developmental psychology. Two rounds of microteaching that involved theoretical as well as applied teaching were implemented by each student. The process involved the following activities: material preparation, lesson planning, lesson observation, application, feedback (peer co-evaluation), reflection, evaluation and reorganization. Participants were interviewed

at different stages of the process and also wrote reports reflecting on their experiences. Data were analyzed using thematic analysis. Results will be discussed with a focus on the characteristics of the process, the dynamics of students' interactions, and on the skills students develop through the microteaching experience. Additionally, a reflection on the use of the LMCT model for graduate students' teaching training and recommendations for its use in graduate courses will be presented. Keywords: micro-teaching, graduate students, teaching skills.

Improving the academic advancement of psychologists in Nicaragua

Maria E. Humphrey ANDEPSI, Nicaragua

The purpose of this project, financed by American Psychological Association, and implemented by the Nicaraguan Association for the Development of Psychology, was to learn about the academic training of psychologists in Nicaraguan universities. We met with a group of psychology program coordinators and professors of the capital's universities and asked them, following a basic protocol, to describe and characterize the training given to students in their universities. They shared their ideas about the characteristics of their programs, and how they could improve curricula and teaching. They also responded to questionnaires which were later analyzed. Participants thought the psychology curriculum should be reviewed and improved so there would be more classes offered that included ethics and scientific standards. Research and publication should be promoted, with the participation of professors and their students. There should be continuous education and training about teaching methodology and about specific topics of psychology as a professional career. Finally, it is important to open channels of communication to discuss the situation of psychology in Nicaragua, and how professional training can continuously be improved in the country.

ORAL PRESENTATION

8429

Education during pandemic – The perspective of youth

Dominika M. Zakrzewska-Oleđzka Poland

The coronavirus epidemic brought a number of critical changes in the functioning of entire societies and all of the structures within the respective countries. One of the aspects of life that were affected by the restrictions was education, especially those carried out within the walls of the sizeable institutions. Each of the countries responded to the challenges in a way adapted to its system capabilities and social needs. In this presentation, I will discuss the ways in which the changes of the education

system were implemented in Polish schools (on a high school and university level), its strengths and weaknesses from the perspective of youth and young adults. The collected data is an outcome of the participatory research carried out among 332 respondents, young people in the age of 15–25 from all around Poland between August–December 2020. Its goal was to hear the opinions of young people about their situation during the pandemic, with a special emphasis on adaptation of the education process and its effectiveness in the new realities. The research was conducted using quantitative (questionnaire) and qualitative (focus groups, interviews, and ethnography) methods. It consisted of three parts: preparing questions together with a group of 22 young people (the Ambassadors of the EU Youth Dialog operating within the Polish Council of Youth Organizations), collecting data and analyzing the obtained answers together with young people involved in formulating the scope of the questions. Answers give an opportunity to hear the voice of youth and understand their needs in those challenging times.

8413

Children and adolescents on the internet: Digital skills and school performance

Patricia J. Fiuza (1), Catia R. Fernandes (1) 1. UFSC, Brazil

The digital skills development among children and adolescents has been following the advances offered by technologies. However, there is a persistent gap in how to integrate digital skills into regular classrooms. The objective of this empirical study, conducted in November 2019, was to analyze the relationships between digital skills, the internet user profile and the school performance of elementary school students. The participants were 80 children aged between 11 and 14 years from a public school in Florianópolis, southern Brazil. One of the research instruments was adapted from the National ICT Kids Online Brazil 2015 Survey and another was the Official School Registry containing the individual performance of the participating students and according to the quali-quantitative analyses performed, it was identified that the students have good use of their school learning and among internet users preponderated the daily profile. Regarding the level of digital skills, 25% were classified as active collaborators and 63% as advanced and creative according to the literature. There was a significant statistical association between the level of digital ability of students related to the primary location of internet use in public places. However, there was no statistically significant difference between the average school performance of students at different levels of internet skills. It was found that these students would be "ordinary or popular users" due to the level of digital skills that oscillates between basic use to creativity to meet the aspirations

of the age of their time. They demonstrated greater interest in online activities of recreational use than for educational use and a standard behavior in the use of the Internet in public and family places linked to the level of digital ability.

8206

Academic efficacy, anxiety and stress among undergraduate students during pandemic in Indonesia

Nida N. Nabila (1), Hariz E. Wijaya (1) 1. Islamic University of Indonesia, Indonesia

During the pandemic, online learning became a new policy implemented in the Indonesian learning system. Online has several negatives impacts on students, such as stress and anxiety. The study aims to establish a relationship between academic efficacy, anxiety, and stress. Also, the mediating role of anxiety between academic efficacy and stress among undergraduate students in Indonesia during the Covid-19 pandemic. A total of 206 participants enrolled in this study 35 were male and 171 female, aged 18–23 years. They filled out two questionnaires, the Depression Anxiety Stress Scale (DASS), and Academic self-efficacy. The results showed that the academic efficacy and anxiety were significantly and negatively correlated, while stress had a positive correlation with anxiety. Furthermore, anxiety mediated the relationship between academic efficacy and stress.

8151

Executive Functions and Socioemotional Learning: Working for an integrative approach to development

Teresa M. Sgaramella Italy

Objective. Executive Functions (EF) refer to higher-order, self-regulatory cognitive processes that aid in the monitoring and control of thought and action (Carlson, et al., 2016) and include cognitive flexibility, inhibitory control and working memory (Anderson, 2002; Carlson, 2005; Diamond, 2016), both cognitive and self-regulation, emotional and behavioral components (Stuss and Benson, 2002). Socioemotional Learning (SEL) refers to the process by which children acquire skills needed to identify and manage their own emotions; recognize others' emotions and develop empathy; develop decision-making skills, and handle conflict (CASEL, 2003). Studies also indicate clear connections between SEL and EF and highlight their great relevance to many developmental outcomes. Several major theoretical and applied questions are stimulated by research studies. Method. Results from research studies conducted in the last decade have been analyzed and used to conduct a multilevel analysis exploring similarities in the dimensions

addressed, theoretical foundations and guiding principles, as well as the relationships between the Executive Functions and Socioemotional Learning. Results. The exploration highlights an overlapping picture in the dimensions addressed as well as in theories of child development and neuroscience referred to. Complex relationships emerge from program intervention studies both in terms of positive impact and their value as significant predictors of children's skill development across childhood. Conclusions. Results confirm the relevance and interest in the integration of the two approaches from a theoretical standpoint. At the same time, several major questions are outlined and awaiting further extensive study, namely, how to integrate the dimensions addressed under these two umbrella terms, guiding principles in their assessment, and their role in intervention programs aimed at positive development.

7509

A pilot qualitative exploration of the Chinese affective perspectives towards long term goals

Ka Lai Lam Macao

According to Peterson and Seligman (2004), grit refers to a personal characteristic that people keep the voluntary continuation of goal-directed action in spite of challenges and obstacles. Duckworth, Peterson, Matthews, and Kelly (2007) further operationalized grit into two facets: consistency of interest refers to individual passion in focusing their long-term goal, while perseverance of effort refers to individual sustained personal determination and consistently spending effort to attain their long-term goal. However, up to date, a number of researchers have suggested that this is a need to identify a new component in grit construct in order to improve the limitation of the current grit measurement model with two facets, and its weak internal consistency of grit items (i.e., Clark & Malecki, 2019; Datu et al., 2018). A pilot qualitative study was aimed to explore a new component towards long-term goals which situated in a Chinese context. This pilot study was first addressed to fulfill an existing grit literature gap in a non-western context and revealed a new perspective towards long-term goals. Four university students were recruited from a purposive sample and joined the individual semi-structured interviews. Three themes in affective perspective towards long-term goals were revealed: Calm down when facing obstacles, excitement towards goals attaining, and optimism towards long-term goals. Interestingly, no participants have mentioned interest as important elements for them to achieve long-term goals, but effort and Guanxi were revealed. Cross-cultural differences towards long-term goals were discussed.

7492

The effect of the introduction of

a new educational model on perceived musical abilities

Melynie Campbell University of Northern Colorado, United States of America

Every musician should be encouraged to strive for peak performance. The self-directed online Maslow for Musicians program was created to foster an environment that could encourage musical peak performance right at the fingertips of the user. The purpose of this study was to discover if the application of the Maslow for Musicians program is beneficial to help musicians work towards peak performance. Participants ($N=25$) went through a five-week intervention using the Maslow for Musicians program to measure weekly confidence, flow, emotional/mental fulfillment, and overall performance experience. In addition, participants were also given The Positivity Scale, the Performance Anxiety Inventory, and a self-created assessment of current Musical Abilities pre- and post-intervention with the addition of the Measurement of Self-Actualization Index post-intervention. Using a mixed methods design, quantitative data from this study found increased perceived weekly confidence ratings, self-reports of engagement in flow, perceived emotional and mental fulfillment, overall performance experience ratings, personal optimism, perception of musical abilities, and decrease in performance anxiety scores from pre-intervention to post-intervention. Survey data collected also found that 23 out of 25 participants felt happy with their performance progress during the duration of the intervention and believed that the Maslow for Musicians program helped strengthen their practice routine and overall feelings of personal musicianship. Further preliminary inferential statistical analysis found significance in confidence, overall experience, personal optimism, and musical abilities. Likewise, qualitative data supported quantitative findings through thematic coding analysis suggesting progression of confidence, change in mindset, belief in one's self and musical abilities, positivity, improvement, and creation of new habits. Post-intervention, 22 out of 25 participants reported that they felt to have either achieved or were close to achieving musical self-actualization, and 24 out of 25 participants reported that they would continue using the Maslow for Musicians program in the future.

7099

Emotional intelligence and its association with factors of academic success and academic performance

Sajida Agha Pakistan

BACKGROUND: Emotional Intelligence (EI) is linked to student qualities including empathy, monitoring of one's own feelings and using them to improve academic performance. Although it is an important factor in academic success, very few studies have been

conducted so far. OBJECTIVES: This study investigated the potential influence of EI on students' success in the program and its association with academic performance. DESIGN: A cross-sectional study SETTING: College of Medicine, King Saud bin Abdulaziz University for Health Sciences, Riyadh. SUBJECTS: All medical students of clinical years were invited to respond to the self-administered the Schutte Self-Report Emotional Intelligence Test (SSEIT) and The Academic Success Inventory for College Students (ASICS) and their scores were paired with GPA scores obtained from institutional assessment unit. To gather demographic information, an additional questionnaire was developed and linked with the questionnaires. MAIN OUTCOME MEASURES: The relationship of emotional intelligence with academic success and achievement of medical students. SAMPLE SIZE: 296 medical students RESULTS: The response rate was 78% with a mean age of 23.3 (1.0) year. A significant association of EI scores with ASCIS was reported. EI score was constant in males and females and year of study. No statistically significant association was found between EI and academic success across gender and academic years. However, in terms of external motivation and career decision-making by the level of study, students in their final year scored higher as compared to the students in their first two clinical years. CONCLUSIONS: This study provides primary data on the impact of EI scores on the academic success of students in medical education and ascertains several factors associated with EI and academic success. These results suggest that EI and academic success are linked and vital to increase academic performance.

7010

Perceived metacognitive skills and growth mindset in students learning quantitative research methods

Jenny Josephs United Kingdom

Statistics and quantitative research methods are criteria for accreditation with The British Psychological Society, but students report anxiety and lack of confidence when studying these topics (Field, 2014). Here I report data from the first cycles of an Action Research Project that used self-paced video interventions to scaffold learning and reduce anxiety in a sample of second year criminology students (Liu, 2005; Josephs, 2018, in preparation). Initial quantitative data showed a significant increase in confidence after attending statistics workshops, though focus group data suggested this was due to mere exposure to statistics rather than interventions, and self-efficacy for learning new software was low. Cycle two builds on the first cycle to include six quantitative methods workshops that will emphasise intelligence as a malleable, rather than immutable characteristic (Dweck, 2006). Each workshop will challenge students to evaluate and

fix common analysis and graphical errors in SPSS statistics, and communicate problems and solutions to others; students were reluctant to take part in this “think aloud” procedure when concluding cycle one, perhaps demonstrating limited metacognitive skills or fear of addressing mistakes (Malik, 2015). Students will be invited to participate in pre- and post-workshop growth-mindset surveys to encourage self-reflection on cognitive abilities. A reflective focus group on thoughts and experiences in studying quantitative methods will be analysed, exploring questions around self-efficacy, teaching and problem-solving. Themes emerging from this analysis will be valuable for understanding any perceived changes in thinking, strategy or beliefs, or identifying whether these skills can be applied to other learning domains.

6965

Searching for emotions in learning: A critical historical review of learning theories in psychology

Sukanya Menon (1), Minati Panda (1)
 1. Jawaharlal Nehru University, India

This paper undertakes a critical review of ‘learning’ literature in psychology in order to examine the extent to which the significant learning theories address the emotional dimensions of learning. It intends to bring to the fore and question the alarming gap in learning research that explores its emotional dimensions. The review work is done within the paradigm of internal history of psychology. The concept of emotion is inadequately featured in the literature on popular learning theories in psychology. The present study shows that most learning theories failed to rise to a level where they can fully acknowledge or explain the role of emotion. Watsonian behaviorism makes sure that affect has nothing to do with learning. The scenario changes when Skinner acknowledges emotions in the process of learning, but emotion remains a product of learning and has no role in the process of learning. Neither cognitive behaviorist theories nor Kohler’s gestalt theory discusses emotion in their narrative of learning. We see a need to look into emotions while researching learning when Piaget says that affectivity gives the impetus for learning. Although the involvement of emotions in learning gets acknowledged, it is not clear how emotions are involved in the process of classroom learning. At the same time, we see that as theories broadened and started including the role of more aspects of the nature of learning, the involvement of emotion in the process learning start to be acknowledged and explored. The review of Vygotsky’s theory adds a whole new cultural historical dimension to the discourse of learning as well as a remarkable shift in its understanding of the concept of learning. With the review of Vygotsky’s theory, this paper argues

for acknowledgement of emotional dimensions of learning in psychology and the need to understand learning as an emotional process.

6822

The influence of instructor’s narcissism on student’s rating in online business education

Yajun Cao (1), Xinyu Zhang (1), Qingyuan Fang (1), Ruijue Chen (1), Yuhao Kong (1) 1. Peking University, China

Massive open online course (MOOC) has become popular in recent years, then how could the online business education satisfy learners’ needs better? We explored the role of one of the instructor’s personalities — narcissism which is considered by psychologists as a double-edged sword in interpersonal interactions. With the help of LIWC, we analyzed the scripts of 172 business-related courses on Coursera to measure instructor’s narcissism by linguistic markers, and coded reviews and star ratings from learners for each course. Our main finding suggested that the instructor’s narcissism could lead to high user ratings. Besides, the analysis of learners’ review contents shows that learner’s self-efficacy and their dissatisfaction mediated the relationship between instructor’s narcissism and the rating. Moreover, we also found that the main effect of narcissism on rating is mediated by the instructor’s rank and the type of course. Finally, we got a moderated mediation model to describe the relationship between instructor’s narcissism and rating. Discussions focus on the interpretation of how the moderators and mediators worked, and the need to study the effects of narcissism in general non-physical scenes.

6434

Influence of epistemic preparative activities on learning outcomes in a flipped classroom

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This study aims to evaluate students’ comprehension and viewing behaviors of lecture videos by associating with psychological values through a flipped classroom of statistics and data analysis. Authentic problem-solving games that are relevant to the learning contents of lecture videos and face-to-face activities were introduced to the class, which can encourage students to understand and apply statistical knowledge. We compared pre- (before EPA), middle- (after EPA and viewing lecture videos), and post- (after face-to-face collaborative inquiry activities) comprehension tests scores and investigated the degree of video viewing between an individual EPA group and a collaborative EPA group, in order to determine which EPA style has a greater advantage

in a flipped classroom. We conducted an experiment in an introductory course “X” in which 17 to 21 undergraduate students participated during the winter semester of 2018 and 2019 at Y university in Japan. According to a split-plot ANOVA and a Holm’s sequentially rejective Bonferroni test, in the individual EPA group, the post-score was significantly higher than the pre-score, and in the collaborative EPA group, the middle-score and post-score were significantly higher than the pre-score. Furthermore, Brunner-Munzel test revealed that the degree of video viewing in the individual EPA group was significantly higher than that in the collaborative EPA group. Additionally, according to Chi-squared test, students’ psychological value tended to have a significant correlation with the degree of video viewing. These findings indicate that the following three suggestions: (1) the collaborative EPA group perceived greater understanding of the learning contents before viewing lecture videos, (2) individual EPA effectively encouraged students in knowledge acquisition and construction in viewing lecture videos, and (3) the students with high psychological value tended to be divided into two patterns such as “not viewing videos at all” or “repeatedly viewing videos in their own pace”.

5888

Academic motivation of first graders attending schools with different educational priorities

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Objective The goal of the study was to learn if there are any differences in academic motivation of first-graders, attending the ethno cultural oriented school with priority of ethnic identity and favorable psychological climate (School 1) and School 2, prioritized high academic achievements and competition between students. We surveyed 54 first-graders attended School 1 and 126 first-graders attended School 2. Both schools are located in Moscow, Russia. **Methods** The orientation of academic motivation, school attitude and educational motivation level were used as academic motivation measures. We asked children to draw picture “I’m at the school”, to fill questioner “Talk about school” orally and interviewed them about why do they think they need to go to school (“Six stories” method). Results The Mann Whitney test ($\alpha \leq 0.05$) was performed to find significant differences between the two groups. Comparison of motivation level showed that in School 2 first-graders have lower levels of educational motivation. They were more likely to have social and achievement motivations and average level of educational motivation. About 30% of first-graders had inappropriate game motivation. In School 1 first-graders mostly had broad

social and educational motivation. Conclusion The educational environment can provide conditions for satisfying cognitive needs and support an academic motivation, or, on the contrary, frustrate these needs, reduce the academic motivation. During school transition we recommend to avoid focusing on academic achievement, because this may leads forming of inadequate motivation. Creating a favorable psychological climate can help shape educational and social motivation, optimal for later academic success and wellbeing.

5793

Exploring the mediating role of epistemic emotions in knowledge generation

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Emotions are ubiquitous in our everyday life and play a salient role in the learning process. When emotions emerge from cognitive tasks such as information processing and acquisition of knowledge, they are termed as epistemic emotions. A few such emotions are Curiosity, Surprise and Confusion which have been known to play a significant role in learning experiences of students. However, the impact of these emotions is not straightforward. This relationship between Epistemic Emotions and learning is further complicated by various dispositional as well as contextual factors such as situational perception, cognitive appraisal, and physiological processes. The Control – Value theory of Achievement emotions (Pekrun, 2000) proposes that the appraisal of subjective control over activity, outcome and subjective value of the task determines a range of emotions in students and influences learning. Moreover, emotional experiences are also influenced by belief about self-concept, self-efficacy, and locus of control. An academic environment shapes the interest of students and underlying emotions. For example, when learning task matches students' need and their preferred style of learning, they seem to be more engrossed in the task. The epistemic emotions not only get affected by the aforesaid factors but also influence learning via motivation to learn, organizing attentional resources, and usage of learning strategies. For example, curiosity and interest in the task provide intrinsic motivation to learn and facilitate flexible and creative learning strategy like the elaboration of learning material. This paper proposes that the epistemic emotions which are generated by the interplay of dispositional and contextual factors (Control-Value theory) mediate the relationship between cognitive task and knowledge generation by affecting motivation, attentional resources, and usage of learning strategies. A combination of these psychological processes influences the learning outcome.

5746

An Experimental Investigation of

Pedagogical Agents as Opponents in Educational Videogames

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The addition of affective or motivational facets to established cognitive learning theories increases the research interest in topics that might influence these elements during the learning process. For instance, psychological research investigates supportive pedagogical agents in multimedia learning. Within educational videogames, however, a contrary role might exist – the opponent that needs to be defeated. This raises questions about whether existing research can be transferred or new effects might emerge. To shed more light on this topic, an experiment with 85 participants (84% female; $M_{age} = 22.01$; $SD = 3.95$) playing an educational videogame was conducted. The experimental manipulations included a variation of facial expression and gestures, resulting in either a rather friendly or hostile opponent. To replicate previous findings regarding an interaction within the Situational Motivation Scale, the second factor of difficulty (high vs. low) was chosen. After it was ensured that gender, age, prior knowledge, gaming skill, and competitiveness did not differ between the resulting four experimental groups, this interaction could not be confirmed ($p = .43$). Instead, the main effect of the opponent was revealed ($p = .048$) indicating higher induced motivation while playing against the hostile antagonist. An effect of difficulty on other aspects such as perceived competence ($p < .001$) or emotions ($p = .03$) could be found. Currently carried out analysis of physiological data and additional factors (e.g., attribution, enjoyment and performance) is going to expand these results. Overall, the experiment provides further insights into the complex interaction of artificial social entities and the learner.

5529

Top 20 principles from psychology for PreK-12 teaching and learning

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With the myriad challenges facing primary and secondary educational systems around the world, schools and school systems are recognizing the importance of using instructional strategies and interventions based upon and informed by relevant research. Recent findings in psychological science can support and enhance teaching and learning methods, as these methods involve social and behavioral

processes. Psychological knowledge in the areas of cognition, student motivation, social interactions, communication, and assessment can enhance instruction and the creation of conducive learning environments. To this end, the Coalition for Psychology in Schools and Education (CPSE) of the American Psychological Association (APA) identified the twenty most important principles from psychology that can be used to support PreK-12 classroom teaching and learning. The “Top 20” include psychological principles across five domains – thinking and learning, motivation, social-emotional learning, classroom management, and assessment. Each principle is described, relevant literature is noted, and implications for classroom practice are offered. The Top 20 Principles are currently available in 13 languages, and recently have been adapted for creative, gifted, and talented youth, as well as for early childhood populations. In this presentation we will introduce the audience to the Top 20 Principles, describe the methodology used to develop them, discuss the five domains as well as the 20 principles within them, and identify key implications for the classroom learning environment.

5434

The axiological competence of teachers and moral education in Kazakhstan

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We have incorporated the focused knowledge of moral education developments into the axiological competence of a teacher. It is required that teachers of the new subject of Self-cognition, which has been introduced since 2010 in Kazakhstan, build this competence. Purpose of study is to model the content of the axiological competence for teachers and its development in the course of training of Self-cognition teachers. Research methods include teacher questionnaires, designing the content of axiological competence courses, testing in the context of tertiary education and teacher trainings. 123 Kazakhstani teachers took part in the experiment. A comparison of moral education experience in Kazakhstan, South Korea and Japan has been conducted. It has been established that moral education in these counties is specific: on the one hand, it is based on the traditional teachings of the nations, for example, the Türkis Code of honor among the Kazakhs, the Samurai Code among the Japanese, and the Canons of upbringing among Koreans. On the other hand, there exists influence of religious dogmas, such as Islam, Buddhism, and

Christianity. At the present stage, it is worthwhile noting the secular orientation of moral education in these countries, which secondary education systems contain disciplines of spiritual and moral content. That is, the axiological competence of teachers focuses on the knowledge about the theories of moral education in addition to the traditional inclusion of the axiological knowledge. These represent the ideas of ancient Greek philosophers about the upbringing of the following virtues; Al-Farabi's doctrine of the virtuous citizen and the virtuous city, the ideas of I.Kant on the categorical imperative being the moral basis, etc. A study of the history of moral education shows that these theoretical concepts have been reflected and developed in the theories of moral education of J.A.Comenius, I.Herbert, moral development of Piaget, Colberg & others.

5358

Teachers contribute more to undergraduate students' math self-efficacy than family and peers

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Individuals who endorse an interdependent self-construal are believed to pay more attention to self-efficacy information from others than those with independent self-construals. This study sought to determine how Filipino undergraduate students weigh socially conferred sources of information from family, teachers, and peers in assessing their self-efficacy in mathematics. Data from 664 students taking a general mathematics course were obtained using self-report instruments that measure their math self-efficacy and sources of self-efficacy. Results from a hierarchical multiple regression analysis showed that undergraduate students pay significant attention to efficacy information from their teachers (i.e., social persuasion and vicarious experience) more than they do to information from other social models (e.g., family and peers). The study highlights the important contribution of higher education teachers in influencing undergraduate students' mathematics self-efficacy.

4986

Design a video game to assess previous knowledge in statistics in elementary school children

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This research designs a test in the form of a video game to assess the previous knowledge required by primary school children to successfully perform statistical tasks. The test design is based on the hierarchical cognitive diagnosis model and three information sources: the basic standards of mathematical competencies by the Colombian Ministry of National Education, previous theoretical and empirical studies and

the method of conceptual mapping proposed by Trochim, which allows organize on a map the ideas in natural language of a group of experts. Since both statistical and probabilistic thinking are built in the classroom, it is valuable to work with teachers who offer such contents, because they actually face the difficulties the children have and can identify which previous knowledge the children require. Twelve professors with experience in teaching statistics in primary school were selected: seven from Colombia, one from Chile, two from Peru and two from Guatemala (since statistics curricula are similar in all Latin America). First, they identified for each basic standard the previous knowledge (precursors) they consider elementary students should have. Next, a list of all the precursors was made and the teachers classified them into groups by similarity level. Finally, a multidimensional scaling and a cluster analysis were performed, and a map was obtained showing the final groups. Based on the information collected, a test was created with four dimensions: representation and interpretation of data, measures of central tendency, formulation and solution of problems and probability. The test is designed as a video game taking part in a pre-Columbian world. The fact that the measuring instrument is a video game allows to use the game story to contextualize the data, that is to work with context-based tasks.

4813

Relaxation training with children with learning disabilities

Birgit H. Spohn *Germany*

Several authors (e.g., Krowatschek, 2006; Winkler, 1998) pronounce themselves in favor of the use of relaxation techniques in school because those techniques could help children to cope with stress, improve power of concentration, learning and social behavior as well as class climate. Children with learning disabilities might profit from those techniques in a special way because they contribute to improved learning behavior. There is no study addressing the frequency of the use of relaxation techniques in special schools for children with learning disabilities in German speaking countries. The paper presents a study in which all teachers of special schools for children with learning disabilities in a district of South Germany ($n = 625$) were questioned about the use of relaxation techniques in school using a standardized questionnaire. Variables addressed were the use of these techniques in the classroom, aspects of their use (kind of relaxation technique, frequency and regularity of their use) and potential influencing factors. The results are discussed and implications for further research are drawn.

4771

Parents perceptions of children's math ability influence children's math scores and math anxiety

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Objectives: This paper analyzes the influence parents' perceptions of their child's math ability have on their child's self-reported math anxiety and their math test scores. **Method:** Students aged 11–14 were first asked to report their math anxiety by completing the Academic Achievement Questionnaire- Elementary School (AEQ-ES). Students were then given 5 math questions taken from a standardized provincially mandated mathematical test. Parents were asked to rate their child's math ability (1 = very low, 5 = very high). **Results:** A mediation analysis indicated a full mediated pathway between child math anxiety, parent ratings of child math ability, and math test performance. There was a significant relationship between parent ratings, child math anxiety and math scores. The A pathway, from children's math anxiety to parents ratings of child math abilities was significant $b = -.033, t(40) = -2.83, p = .0072, 95\% CI [-.0561, -.0094]$. The B pathway from parent ratings to math scores was not significant $b = .3785, t(39) = 1.53, p = .1332, 95\% CI [-.1207, .8777]$. The mediated effect of parent ratings of child math abilities were significant $b = -.0522, t(39) = -2.64, p = .0119, 95\% CI [-.0922, -.0122]$. The model accounted for 28% of the variance in math test scores, as the proportion of variance in y explained by the mediator (mediator) and the independent (x) ($R^2 Y, MX = .2800$). **Conclusions:** The mediated relationship indicates that parent perceptions and expectations may have a strong influence on their children. Results add to the existing literature which point to parents as influencing the development of student math anxieties and lowering their performance in math (Beilock, Gunderson, Ramirez & Levine, 2010).

4666

University teachers and students' profiles in terms of professional burnout

Fatima Valieva *Russia*

Today teachers and students have to draw upon physical, emotional and intellectual resources in order to be more effective in the classroom. Greater demands, complex responsibilities and duties, and an expanding knowledge base that is continually being upgraded, became challenges of a new type for the higher school community. Stress and burnout are so prevalent in education environments that they have an enormous detrimental effect on the teaching-learning process, manifesting in teachers' and students' performance far below their maximum potential, regardless of how well prepared and committed they are. The research work aimed at investigating the burnout phenomenon among both teachers and students. The study included short theoretical analysis of different schools of thought,

self-assessment of students and teachers' abilities to discern and identify the constructs of burnout phenomenon, as well analyze the correlation between individual prerequisites and the PBS level. The survey sample included about 300 participants belonging to one higher school community. The set of questionnaires the respondents were asked to complete consisted of five sections, including MBI, authored resilience scale, MDMQ, EQ test and personal data form. The empirical study findings included the description of the sample in terms of burnout level; correlation analysis identifying the relationships between factors stated and burnout subscales as well as among all variables; factor analysis reducing the number of variables and extracting principal factors associated with professional burnout. The comparison of the results identified differences not only on the level of PB, but also on the respondents' individual characteristics, the research project participants ended with was made using SPSS program and R-studio. To summarize the findings of the research on personality factors influencing burnout we compiled teacher and student profiles based on the level of burnout.

4553

Academic flow mediates the relationship between academic self-efficacy and academic burnout
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Academic burnout refers to burnout among college students, resulting from academic demands. It comprises emotional exhaustion, cynicism toward meaning of studying and feelings of incompetency as a student. Since academic burnout has serious consequences, studies are trying to find protective factors. Recently, experiencing flow in an academic domain (characterized by total absorption in activity, effortless concentration and enjoyment, while doing some academic activity) was proposed as being protective factor for burnout. Previous studies, both cross-sectional and longitudinal, indeed found that academic flow was negatively associated with academic burnout. This study extends previous findings by exploring the role of academic flow along with the role of academic self-efficacy. Specifically, we hypothesized the mediational role of academic flow in the relationship between academic self-efficacy and academic burnout. The sample comprised 214 university students of University of Zagreb, mostly female (94%). Participants age ranged from 18 to 36, with mean age of 20 years. Academic flow proneness, academic self-efficacy and academic burnout were assessed by means of questionnaires. Results were in line with hypothesis and showed that those with higher self-efficacy had higher proneness to experience academic

flow, which in turn, leads to experiencing less burnout symptoms.

4534

The study of navigation in digital texts using eye tracking
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Objective. The external forms of reading from devices and books differ, however, the question remains unclear whether the reading mechanisms themselves change or not. This is of the current interest in terms of total digitalisation of education and economy. Our study is devoted to the very narrow aspect of this topic – the ability to find information in the text, or to navigate in the text, and to the impacts on different characteristics of the text to this ability. The hypothesis was the following: spatial encoding of information during reading a long text would vary with the type of text presentation, impoverished or enriched with spatial cues in the digital settings. Methods. We examined this issue using eye tracking. 12 subjects participated in this study. We designed 15 stimuli, each of them consisted of one text. Text samples represented neutral content, normal word frequency and length about 4.000 characters (more than 1, 5 of a standard page). There were three types of text presentation: text with isolated pages, text with isolated pages and navigation bar, layout text. The participants task was to find particular content after the primary text reading. SMI RED 120 eye-tracker was also used to investigate the eye movements parameters. Results. The significant differences in eye movements indicators and navigational parameters were obtained between different types of text presentation forms. In case of layout texts the fixation count was the higher, accuracy if finding was the lower in comparison to other types of text presentation. Conclusions. Thus it was demonstrated using behavioural indicators that the type of text presentation in digital environment influenced on navigational characteristics and level of understanding. This work was supported by the Russian Foundation for Basic Research (No 18-29-22049).

4390

The relation between social support and mental health in South African first-generation students
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Transformation in education policy following the establishment of a democratic South Africa has resulted in a marked increase of first-generation students (FGS) in our higher education institutions. First generation students have been found to experience a range of challenges, one of which is a lack of social

support. This may affect the mental health in this student population, which in turn can affect academic performance. There is limited literature in this area in developing countries like South Africa. The aim of this study was to determine the relationship between social support and mental health in a sample of first-generation students in South Africa. A cross-sectional survey was administered to 291 undergraduate first-generation students and 190 continuing generation (CGS) undergraduate students at a South African university. Participants completed a demographic questionnaire covering a broad range of variables, as well as the Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS is a measure of perceived social support and consists of a full-scale measure and three sub-domains of perceived social support. Finally, the General Health Questionnaire 12 (GHQ 12) was administered. The GHQ-12 is a measure of psychological distress, consisting of a full-scale measure and three sub-scales. Analysis revealed statistically significant differences between FGS and CGS in terms of social support, with FGS scoring lower than CGS on the measures of overall social support, social support from significant others, and social support from family. Significant correlations were found in the FGS group between various aspects of social support and different aspects of mental health. Finally, aspects of social support significantly predicted mental health in FGS.

4322

Implicit Theories of Intelligence and Academic Procrastination Among School Students
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The beliefs about one's abilities or intelligence have previously been found to have important consequences on various aspects of one's academic life including achievement, motivation, coping, learning, perseverance, attribution to failure and self-handicapping or disengagement behaviors. Implicit theories of intelligence can be fundamental in understanding how students' underlying beliefs about their abilities or intelligence influence their behaviours particularly in challenging and demanding academic situations. The present study examined the relationship between implicit theories of intelligence and academic procrastination among school students. Using a cross-sectional study design and convenience sampling, 226 school students (60% males and 40% females) between the ages of 15–18 years (mean age being 15 years), were recruited from two schools of Jorhat, Assam (India). The two variables in the present study were measured using Implicit Theories of Intelligence Scale (Self-Theory Scale) (2015) and Academic Procrastination Scale

(2016). The chi square analysis revealed a significant association between implicit theories of intelligence and academic procrastination (13.249, p -value < .001). However, the t -test analysis found no significant differences in the mean values of implicit theories of intelligence scores and academic procrastination scores among the two groups of gender. The results indicate that students' implicit beliefs may be useful for understanding procrastination and ways to deal with it. Future studies can look into the cultural and environmental factors influencing the differences in the variables, incorporating data not only from self-report measures but also parent and teacher ratings.

4308 Impact of short-term study-in-China program on the development of Hong Kong local undergraduates

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Objective: The present study aimed to examine the impact of short-term (1–8 weeks) study-in-mainland China programs, as a specific type of study abroad program, on Hong Kong local university students' intercultural competence, understanding about mainland China, and students' ethnic identity. **Methods:** The study adopted a pre-test post-test control group design. A total of 377 Hong Kong university students who studied in different short-term study-in-mainland China programs in the summer of 2018/19 academic year were recruited to participate in the study as the experimental group. Another class of students ($N=59$) studying a local summer course at the same time were recruited as the control group. Both groups of students completed a questionnaire that measures multiple dimensions of intercultural competence, perceptions about mainland China, and ethnic identity, before and after they studied in the summer programs. **Results:** The findings showed after participating in these programs, the experimental group students reported higher levels of intercultural effectiveness ($M_{pre} = 3.40$, $M_{post} = 3.55$, $p < .001$) and intercultural communication competence ($M_{pre} = 3.00$, $M_{post} = 3.34$, $p < .001$). They also demonstrated more positive perceptions about the development of the country ($M_{pre} = 2.61$, $M_{post} = 2.74$, $p < .001$) and positive attitudes towards people from mainland China ($M_{pre} = 2.69$, $M_{post} = 2.79$, $p < .001$). In contrast, no significant pre- and post-test differences in these areas were found in the control group. **Conclusions:** The findings suggest that short-term study-in-mainland China programme has meaningful impacts on Hong Kong local university students' intercultural development and their understanding about mainland China. Further investigation should be undertaken to identify the facilitators and

barriers to students' learning and participation in such programs.

4203 Inclusive school practices in countries of refugee resettlement: A mixed methods study with students

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Globally, refugee movement is at the highest levels ever. Resettlement processes lead to an increasing cultural and linguistic diversity of student cohorts in education systems of the global north. The ways in which these systems respond to this increasing diversity are vital to positive outcomes for former refugees and receiving communities. The study presented in this paper used a transformative-advocacy approach and mixed-methods design to investigate youth, parent/caregiver, and teacher perspectives on the ways in which schools can support wellbeing, educational pathways and engagement of young people with refugee backgrounds in Australian high schools. This paper reports on findings from the quantitative survey with students ($n=351$) along with qualitative interviews with a subset of those youth ($n=23$), their parents/caregivers ($n=16$) and educators ($n=21$). Key findings from the data show the impact of inclusive school practices on the educational engagement and wellbeing of young people from refugee backgrounds. The survey results show that the connections young people maintain with family and the relationships with staff and peers they develop at school are both critical for success and engagement with education as well as overall wellbeing. Qualitative data investigate young people's educational aspirations and relevant support systems, relationships at home and school, and school practices that enhance wellbeing and engagement in education. Findings from this study outline core principles for school practices that provide effective and inclusive support for young people from refugee backgrounds. The paper discusses key implications for cross-cultural and inclusive teaching and learning amongst students, teachers and families.

4092 “Awakening to Languages” in school environment: The change of teacher role

Mayo Oyama *Ritsumeikan University, Japan*

Research in neurolinguistics and psycholinguistics have shown that foreign language education with a frequency of several hours per week is not sufficient to develop oral communication skills in the target languages (Netten and Germain, 2012; Grosjean; 2016).

Recent research on multilingualism has proposed a holistic model of language competence (Herdina and Jessner, 2002), and a new teaching measure called “Awakening of Languages” (Candelier, 2003) approach has been proposed in order to develop this competence in the school environment in Europe. Our research question is how this teaching method is experienced by learners within the limited class period and learning frequency, in a highly linguistically homogeneous environment like in Japan. This paper reports the results of action research exploiting the “Awakening of Languages” approach practiced at two Japanese elementary schools over one school year, involving 65 pupils. The learners seemed to actively reconstruct the meta-knowledge as well as their strategy by reflecting their idea on languages already acquired. The approach also seemed to enhance the attitude and interest to acquire linguistic knowledge, which cannot be achieved with the classical pattern practice of foreign language learning. Through the analysis of teacher-student interaction, it was suggested that the teacher role is crucial in introducing learners into active learning. We then discuss that the teacher is an important environment in this teaching method, which suggests, the teachers' language awareness is the key.

3915 Detecting and promoting inclusive processes involving parents in their children's pre-school life

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The complex scenarios that characterize today's societies increasingly require a research effort to read and effectively translate emerging needs of boys and girls in a society that ensures equal opportunities for all, in particular for children and migrant parents, children with special needs and in a situation of psycho-social fragility. Many studies show that children from disadvantaged backgrounds have more learning difficulties and, as a result, fewer chances of school success than children from favorable backgrounds. School alone cannot do much (Maschino, 2002), families in difficulty, isolated, are unable to escape the determinism that awaits them (Beljonne, 2015). Several studies agree that the involvement of parents and family members in the children's schooling is a particularly relevant factor for the development of their learning and, therefore, for their school success (Lahaye, Cyrulnik, 2007). Also Pourtois and Desmet (2015), through the results obtained in their recent international research, underlines that co-education (school-family) is the main way to go over this difference in learning (from the preschool), that seems more evident in verbal language that is more lacking in vocabulary in children from disadvantaged backgrounds. With these premises,

we present the results of an action-research carried out in Teviso-Italy (2015-2019), aimed to detect and promote processes of inclusion and school success by identifying the variables in lexical-morphological-communicative learning. Data were collected by using two different methods: video microanalysis and language tests PING and BVL, involving a sample of 81 children of pre-school in highly multicultural contexts. The quanti-qualitative analysis of data has stimulated some co-educational actions to encourage and improve children's learning through the involvement and the training of parents and teachers. The results clearly show that if parents are involved in the educational and schooling process of their children, they also improve their learning and their social inclusion (Pileri, 2017).

3885

A multi-study investigation on academic satisfaction: The promise of emotional intelligence

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Objective: We aimed to provide evidence on the influence of emotional intelligence (EI) on academic satisfaction adopting both cross-sectional and prospective designs in two independent studies with undergraduate students. Methods: In Study 1, we examined the potential mediator role of study engagement dimensions in the relationship between EI and academic satisfaction in a sample of 314 undergraduate students (209 female; mean age = 21 years). In study 2, we sought to test the mediator role of study engagement dimensions in the relationship between EI and academic satisfaction considering a 2-month prospective design and controlling for personality traits. 135 undergraduate students (102 women; mean age = 20.40 years) participated in this study. Results: In Study 1, results indicated that vigor and dedication fully mediated the association between EI and academic satisfaction. Findings from Study 2 showed that dedication fully mediated the relationship between EI and academic satisfaction at Time 2. Conclusions: Our results contribute to the understanding of the motivational processes underlying students' EI and academic satisfaction. These findings may help to design EI training programs aiming at the enhancement of study-related well-being and positive attitudes among undergraduate students.

48

Mindful agency coaching and motivational interviewing for developing positive learning dispositions

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The current study details the design, implementation, and evaluation of mindful agency coaching and motivational interviewing

interventions to develop undergraduate students' positive learning dispositions. A quasi-experimental design was employed involving three groups: one control group, one intervention group of mindful agency coaching only (MA group), and another intervention group of mindful agency coaching plus motivational interviewing (MA+MI group). The main findings show that compared with the control group, two intervention groups achieved significant improvements in mindful agency, self-efficacy, and emotional intelligence. However, there was no significant difference between two intervention groups in post-tests. Moreover, participants' improvement in mindful agency fully mediated the post-intervention increases in self-efficacy, emotional intelligence, and meta-cognition. It can be concluded that mindful agency coaching and motivational interviewing are promising facilitative approaches for undergraduate students to become mindful, resilient, and self-determined learners.

3845

Students' creativity and functional literacy

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Among the common abilities, most researchers single out general intelligence and creativity. The relationship of general intelligence with learning success and functional literacy has been proven in numerous studies, while the relationship between creativity and functional literacy is less obvious. Sternberg and Grigorenko point to an important social aspect of schoolchildren creative development. The practical application of creative methods for solving problems, for example, in school, is important for children. The creativity development in childhood is unstable, there are age related periods of ups and downs. Druzhinin, Torrance, Yurkevich and others note a decline in creativity in primary school, caused by new stressful situations and new requirements. But our experiments have confirmed that it is possible to remove the decline in creativity development. We have shown that first-graders' creativity contribute to their adaptation to school (Leonova, Shatova, 2010). The present study the relationship between creativity and functional literacy in primary school students has been examined ($N = 250$ pupils age 7–11, grade 1–4). Pupils' creativity was assessed by Torrance test, and functional literacy was assessed by test, includes practical items. As expected, an inverse relationship was found between creativity and functional literacy in the whole sample. But in the samples of third and fourth graders no statistically significant differences in functional literacy were found between pupils with high and low creativity. Moreover, it was found that the proportion of pupils with high creativity increases from grades 1 (37%) to 4 (56%).

After entering the school, the child learns and socially verified ways of activity and behavior. This causes a loss of natural, naive creativity. At an older age, creativity requires active overcoming of stereotypes – mature, cultural creativity appears. Mature creativity contributes to functional literacy. Acknowledgments: The reported study was funded by RFBR, project number 18-413-400001.

3752

Parent & teacher ratings on “Steps for Life” programme's effectiveness for Greek elementary students

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During the last decades multiple studies concerning social emotional learning (SEL) programmes, conducted mostly in high-income countries, have shown positive effects on students' psychosocial skills' development. However, WHO suggests that such studies should be conducted in different settings, as well. The experimental study was conducted in 2.691 elementary students in Greece, through anonymous teacher and parent rated questionnaires, which investigated the frequency of children's behaviours in order to assess the effectiveness of the “Steps for life” programme. The questionnaires administered pre and post intervention included demographic information and the Personal and Social Skills Scale for Students aged 6–8, teacher and parent versions. The scales consisted of eleven 7-point Likert-type sub-scales with Cronbach $\alpha > 0.8$: Attention concentration, cooperation, self-esteem, emotions' identification and management, empathy, avoidance of physical aggressiveness, avoidance of verbal aggressiveness, avoidance of victimization, friendship skills, problem solving, and responsibility undertaking. Teachers' data analysis showed that the 1.655 experimental group students improved ($p < .001$) all these domains, in a significantly higher degree ($p < .001$), while the 1.036 control group ones did not show any improvement in five of them, namely concentration of attention, avoidance of verbal and physical aggressiveness and victimization, and problem solving. Parents' data analysis of the 1.497 completed questionnaires showed that the 964 experimental group students improved ($p < .001$) most of these domains except self-esteem and victimization avoidance, while the 533 control group students did not show any changes in self-esteem, victimization avoidance, problem solving and responsibility undertaking. Teacher and parent ratings concerning the students' improvement of personal and social skills appeared to differ significantly concerning performance in self-esteem and victimization avoidance. It is equally important

for teachers and parents that evidence-based approaches should be implemented in order to enhance students' social-emotional learning, so that they can achieve the highest possible success both in school and in life.

3496 Students' Adjustment to an Urban-Complex University Environment: The Role of Psychosocial Education

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Adjustment may be reckoned as an inevitable part of life. Literature on students' adjustment tend to largely focus on academic. The peculiarities of an African University and respective students require that scholars be interested in the sociocultural dynamics in the adjustment process of university students to their environment. The present study was conducted in a major public university situated in the southern part of Ghana and sought to investigate the effects of psychosocial education on the adjustment of students to an urban-complex university environment. A total number of 257 participants (largely new entrants) were purposively sampled for the study using. Using students' involvement and attachment theories as the theoretical lens of the discussion, the finding of the study revealed that individual factors such as upbringing uniqueness, belief systems, socio-cultural norms affects the level of adjustment of the new university student. Notwithstanding, the knowledge of students about campus security is greatly enhanced after receiving psychosocial education. It therefore positively affects their adjustment to the university environment. Moreover, it was established in the study that psychosocial education helps students manage stress in a healthy ways which in turn enhances their adjustment to the university environment. Finally, psychosocial education prepares students to successfully deal with fear of failure, suicidal ideation and uncertainties in their lives. An Indi-Community Centered (ICC) Model of psychosocial education is thus discussed as a viable alternative to providing a more responsive support to new students.

3472 Thai secondary students' academic achievement: Role of sex, sexual orientation and gender identity

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Many countries have a reverse gender gap in education, including Thailand. However, disaggregation by gender alone may conceal differences based on sexual orientation and gender identity. The objective of the present analysis was to compare Thai secondary students' educational performance between groups categorized by birth sex, gender identity, and sexual

orientation. The analysis used secondary data from a computerized, self-administered survey with a cluster sample of 8,603 students, age 13–19 years. Students were divided into heterosexual boys ($n = 3,307$), heterosexual girls ($n = 3,973$), gay boys ($n = 213$), lesbian girls ($n = 171$), bisexual girls ($n = 127$), bisexual boys ($n = 67$), trans girls ($n = 520$), and trans boys ($n = 225$), assuming cisgender identity unless otherwise stated. Grade point average (GPA) was categorized into low (0–2.00), medium (2.01–3.00), and high (3.01–4.00). Over 10% of students had low GPAs among bisexual boys (22.4%), trans girls (19.8%) and heterosexual boys (13.6%). In reverse, over 50% of students had high GPAs among bisexual girls (71.7%), heterosexual girls (64.0%), gay boys (58.2%), lesbian girls (57.9%) and trans boys (50.2%). Thus, students of male birth sex are over-represented among those with low GPAs, unless they identify as gay. Lower academic achievement among Thai secondary students seems to be associated with being male and having a masculine gender role (shared by bisexual and heterosexual boys) or being a transgender girl. Social lenience with deviant behaviors in masculine boys, and bullying faced by trans girls might influence these patterns.

3164 Development of students' values and their relations to academic motivation

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We examined child and adolescents' values more systematically and developmentally by exploring how the value structure and characteristics differ in different developmental periods. We also explore the relations between values and academic motivation. The sample include 300 elementary school students, 300 middle school students, 300 high school students, and 300 college students in South Korea. The 19 values were measured by a 57-item self-report instrument called the Revised Portrait Values Questionnaire (PVQ-RR; Schwartz et al., 2012). PVQ-RR were scaled and analyzed according to the standard of Schwartz et al., (2017). We measured including mastery goal orientation, self-determination, self-efficacy, test anxiety, growth mindset, grit and cooperativeness. The data from the study were analyzed using the descriptive statistics, multiple regression, and the ANOVA. First, 'hedonism' is the highest-ranked value, while 'tradition' is the lowest-ranked value for all group. 'benevolence' of 'self-transcendence' is ranked higher for elementary/middle/high-school students, and 'universalism' of 'self-transcendence' is ranked higher for college students. Second, the value structures was more distinct for older

students. This was consistent with previous studies (Bubeck & Bilsky, 2004; Seo & Jung, 2012) that showed different value structure with age. Third, we found significant relations between values and academic motivation. The 'self-direction: thought' was the strongest predictor of adaptive academic motivation for all groups. A noticeable difference among the groups was that the 'benevolence: care' predicted adaptive academic motivations only for middle school students, but not for older students. Fourth, 'self-enhancement' is the negative predictor of adaptive academic motivation. Specially, the 'power: resources' and 'face' positively predicted maladaptive academic motivation for all groups. Both values, being adjacent in circular continuum of 19 values, focus on oneself and are characterized as self-protection. In summary, these results suggested that values affect adaptive academic motivation when one's value is social focus and self-growing rather than personal focus and self-protecting.

2939 Teachers' beliefs on sustainability Sören Schütt-Sayed (1), Burkhard Vollmers (1) 1. Universität Hamburg, Germany

The UNESCO Roadmap for Implementing the Global Action Programme on Education for Sustainable Development emphasises that teachers must be professionally qualified for sustainability (UNESCO, 2014, p. 20). In this context, the research aims to examine the professional competence of teachers. It has combined more than two methods in a mixed-method design (Greene, Caracelli, & Graham, 2008). First, a quantitative survey of teachers ($n = 234$) was conducted in the form of an online questionnaire. This was followed by the evaluation of a teacher-training course to promote sustainability-oriented action competence. Finally, semi-standardised individual interviews ($n = 12$) were conducted to deepen the results. The contribution will focus on the beliefs. Teachers should be as positively and strongly convinced as possible of the sustainability idea. The beliefs of teachers influence competent teaching. This is confirmed by the generic model of professional competence by Baumert and Kunter (2011). In addition to professional knowledge, motivational orientation and self-regulating skills, it also takes into account the beliefs. In the quantitative study, teachers therefore received six statements on which they had to position themselves in terms of strong or weak sustainability. In the individual interviews, both general beliefs (e.g. consumer behaviour) and job-related beliefs (e.g. sustainability-oriented educational aspirations) were asked. The theoretical points of reference refer to subjective theories and epistemological beliefs (Dann, 1997). The results show that teachers in the context of sustainability can only act professionally if they have critically and constructively dealt with their subjective

theories in relation to their own understanding of teaching and learning.

2608 – Perceived work conditions, self-determination and the job satisfaction paradox

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While workers in some professions face a range of challenges and problems, they may simultaneously also report relatively high job satisfaction. We address this “satisfaction paradox” by exploring the perceived work conditions of Czech academics based on their own reports. The data for this study included academics’ ($N = 1202$) qualitative responses to open-ended questions and results of qualitative semi-structured interviews ($n = 120$) regarding the main problems and benefits of their current academic work and workplaces. Content and thematic analyses were used to categorize the respondents’ answers. Academics reported high workloads, a lack of financial resources, low-quality leadership, excessive administration, and job insecurity as the most problematic aspects of their workplaces. In contrast, academics reported that good social relationships in the workplace, autonomy of academic work, the possibility of self-actualization, and work/contact with students were the aspects of their workplaces they valued most. These positive features appear to be prevalent, as a large majority of academics reported overall satisfaction with their work. In the discussion, we draw on job demands-resources theory to suggest that the relatively high satisfaction level is due to high levels of key job resources that facilitate the intrinsic motivation of academics despite an environment that can be considered suboptimal in some aspects.

2564

Structure of professional activity of university teachers

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In current conditions of modernization of the education system professional activity is a significant characteristic of university teachers’ professional development. The purpose of the study is to research the structure of university teachers’ professional activity. Methods: simple visual reaction, tapping-test, achievement motivation test by T. Elers, E. Shane’s “Career anchors”, M. Seligman’s SASQ, test of temperament by B. Smirnov, test of self-control by V. Morosanova, test of self-realization by S. Kudinov, values questionnaire by I. Senin, professional activity questionnaire by V. Musina. The sample includes 141 Ekaterinburg university teachers: 50 men and 91 women, between

the ages of 25 and 80. Results. Factor analysis and multiple regression method revealed the substructures of professional activity and their contribution to the general structure of activity. The greatest contribution to the structure of activity is made by substructure “Focus on the world around” (A) (estimate 5.58; t -value 5.34; p -value .00), reflecting the teacher’s ability to respond flexibly to the challenges and opportunities of the professional environment, creatively transform their profession. Substructures “Focus on stability” (B) (4.83; 4.61; .00) and “Focus on functionality” (C) (4.16; 3.94; .00) contribute approximately equally to the structure of activity: the first reflects the teacher’s need for predictability and regularity in professional life, the second implies teacher’s orientation to passively do their professional duties without the aspiration for professional development. Substructure “Focus on inner life” (D) (3.65; 3.48; .00) is least represented in the structure of professional activity and it is the teacher’s aspiration to keep his identity and to develop his potential. Substructures A and D facilitate professional activity, substructures B and C are the reasons of professional destructions. Conclusions. These substructures of professional activity determine its structure by 68%, this allows to speak about the possibilities for application of the model in professional diagnostics and consulting.

2480 – Psychological resources of first-year university students: Student-profiles and their relationship

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 University drop-out is a serious problem. It may be harmful to the individual and may also cause problems at institutional level. Models on causes of dropout in higher education increasingly emphasize the role of non-cognitive psychological competencies in the success of studies (Richardson et al, 2012). Our research aimed to investigate the psychological characteristics of first-year undergraduate students. We applied person-oriented approach to create unique patterns of psychological resources for studies, and to examine their relationship with academic performance. 979 first-year undergraduate students participated in an online questionnaire study at the start of their studies. We assessed their procrastination, growth and fixed mindset, motivation, coping strategies, self-efficacy, test anxiety, and self-esteem. Principal components analysis of these variables identified four key components of psychological resources: Achievement focus, Positivity, Future orientation and Present hedonism. Next we performed hierarchical cluster analysis using the four components. Based on the Xie-Beni index we found 8 well-distinguishable clusters of students representing 8 distinct patterns of resources. One-way ANOVA revealed that each student clusters differed from each other

in their academic performance at the end of the semester. We could identify two vulnerable subgroups with significantly lower academic performance: one of these at risk groups can be characterized by strong achievement focus, low positivity, low future orientation, and low hedonism. In contrast, the other vulnerable group had weak achievement focus, but also low positivity, with moderate future orientation and high level of present hedonism. Our analysis has shown that psychological characteristics have an impact on academic performance, but not as distinct factors, rather as part of organized patterns. Based on our results, it is possible to develop targeted development training for at risk students and help them to improve their psychological resources. The study was funded by the European Union (EFOP-3.4.3-16-2016-00014 project).

2054

Procedural or conceptual based training for the development of fluency with number combinations

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The present study is founded on the notion that it is important with fluency with basic number combinations (NMAP, 2008). However, it is debated if you should use timed drill and focus on memorization as a way of training number combinations (NCTM, 2014). It is therefore important to empirically investigate the effect of procedural based training compared to conceptual based training. What is the effect of two training methods in develop fluency with number combinations compared to each other and a control group? Does the effect transfer to multidigit mental combinations? Does the procedural focused training affect intrinsic motivation in a negative way? We obtained written consent from 877 children (408 girls) in second grade. Each of the experimental conditions used 15 minutes at the end of three math lesson every week. The main features of the intervention were explicit instruction from the teacher (5 minutes) and individual exercises using the exercise booklet (10 minutes). Growth curve analysis showed a positive effect of procedural focused training compared to conceptual focused training and the control group. The effect did also transfer to multidigit mental calculations and tended to indirect transfer to a better development of intrinsic motivation. The present result shows that it is a clear advantage to add a procedural focused training instead of a conceptual focused training. We found no evidence of negative impact of adding timed drills and focusing on “remembering” the number combinations.

1933

Supervisor’s influence on graduate students’ thriving at work: A serial mediation model

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The well-being of graduate students has become a pressing issue globally. Based on the Socially Embedded Model of Thriving at Work, we aimed to test the role of supervisor's academic supervising behavior on graduate student's thriving at work, and the separate and serial mediation of students' admiration for supervisors and their task focus. A total of 1792 graduate students from prestigious universities in China participated in the study and finished the questionnaire. The results obtained using structural equation modeling supported our hypothesis and showed that: (1) the academic supervising behaviors positively predicted the graduate students' sense of thriving at work; (2) the mediation roles of both admirations for supervisor and task focus have been established, including the sole mediation of admiration, the sole mediation of task focus and the serial mediation of the two mediators. It suggested that the engagement of supervisors is critical to students' psychological thriving. The current study expanded the scope of research on mechanisms underlying individuals' thriving at work and provided the empirical support for policies and practices that could improve the positive learning and mental health of graduate students.

1859

It isn't a cop-out! invisible disabilities, challenging misperceptions

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Learning and attention deficit hyperactivity disorders (LD/ADHD) are highly prevalent neurodevelopmental disorders among college students. Students with LD/ADHD comprise about fifty percent of students in postsecondary education who report a disability, making it the largest subgroup of those registered with campus disability offices. These disorders are categorized as learning disabilities in academic settings, as they typically affect students' speaking, spelling, reading, writing, computing, and/or attention in negative ways and can therefore significantly challenge students' learning. Though students with LD/ADHD enroll in college at rates equal to the general population, they graduate at lower rates than those without a disability. Students with LD/ADHD very often struggle academically, because classroom instructions are not always delivered in the ways that match

their needs or learning styles. Worse, students with LD/ADHD have to frequently combat misunderstandings and negative perceptions from instructors, peers, and even family members. These misperceptions cast a shadow on students' strengths and fundamentally call into question the legitimacy of needed academic supports. As such, misconceptions experienced can adversely affect students' well-being, self-perceptions, and social lives. However, many students with LD/ADHD can and do have successful careers, especially for those whose needs are understood and accommodated, and talents appreciated and nurtured. This study aims at taking a closer look at the challenging misunderstandings that students with LD/ADHD are often confronted with and explores important implications for educators, student service providers, peers, and family.

1550

Research on students' attitudes towards creativity development through e-learning at universities

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Nowadays, the subject of developing students' creativity through e-learning is becoming increasingly popular in psychological and pedagogical studies: (Barabash et al., 2019; Glăveanu et al., 2019; Sica et al., 2019). Indeed, university e-learning environments provide opportunities for developing wider range of students' competences and constructing new teaching methodologies for students' creative development. However, the problem lies in the readiness of both students and professors to use their potential for creativity development. The objective of our research is to learn students' attitudes towards e-learning and compare their evaluation of the traditional and e-learning environments through the lens of creativity development. Methods: a questionnaire survey including open and close-ended questions, content analysis of the responses. The sample included 92 3 and 4-year bachelor students of 19–22 years old majoring in socio-humanities (history, archaeology, philology, Oriental studies, cultural studies, psychology, public relations). The results showed contradictory attitudes towards e-learning environments, even though 77.5% of the respondents claimed to make active use of them. However, 65% do not consider them effective for creativity development, preferring extracurricular activities (36.8%) such as: intensive project and research activities, group work, interest circles. According to the respondents, online courses lack creative tasks, individual and interactive activities, discussions. In some cases, they mentioned problems with: technical support and organization of e-learning (30.3%), interface layout of online educational resources (16.7%), means of online communication between professors

and students (9.1%), creative tasks development (9.1%). The results demonstrated that despite active implementation of digital technology in the educational process, it does not abolish the need for traditional ways of students' creativity development. Thus, to enhance students' creativity through e-learning it is necessary to develop effective methods of combining digital and traditional educational technologies aimed at students' creativity development and reinforce faculty members' professional training.

1043

The relationship between parenting style, psychological capital and students' academic achievement

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Senior students in high school, as the group of students who are the most stressful and study most tensely during their academic career, have always been paid close attention by the society. Their academic achievements are influenced by multiple aspects, including parents, schools, environment and their own psychological state. Among them, their own positive psychological capital plays an important part. This research takes the senior three students as the research object and the psychological capital as the mediating variable to explore how the parenting styles produce an effect on the academic achievement of senior three students. This research takes totally 606 senior three students (valid samples), using the Simple Parenting Style Scale (s-EMBU), and the Positive Psychological Capital Questionnaire (PPQ). Taking scores of College Entrance Examination as the academic achievement index, using SPSS22.0, AMOS20.0 to explore the relationship between parenting styles, psychological capital and academic achievement of senior three students. The main research results are as follows: (1) Father's refusal or denial and mother's refusal or denial have significant negative correlation with academic achievement, while parent's emotional warmth and mother's emotional warmth have very significant positive correlation with academic achievement. (2) There is a significant positive correlation between the three dimensions of self-efficacy, hope and optimism of psychological capital and academic achievement. (3) Psychological capital plays an incomplete mediating role between father's emotional warmth, mother's emotional warmth and academic achievement.

875

Developing self-regulated learning (SRL) for psychology students: Methods and effects

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Self regulation which plays important role in students' learning behavior has drawn much more attention in field of educational psychology. This study aims to investigate how

learning context and social interaction influence students with different self-regulation (SR) level on their learning behavior. The experiment was separated into two stages (sixteen weeks in total). The first stage is from the first to the sixth week, the second stage is from the seventh week to the sixteenth week. At the same time, two different learning environments—one online problem-based learning (PBL) and one online normal learning, were developed in which social interaction as a factor was imbedded equally. The methods were adapted to second year university students for one subject matter – cognitive psychology. During an entire semester, total 73 second year students at the Faculty of Applied Psychology participated in this experiment. The experimental results show that, in the first stage, there is no significant difference in the effect of social interaction on students with low and high-SR. However, in the second stage, social interaction influence high-SR students but had no apparent effect on low-SR students. PBL environment has significant effect on students' learning behavior by activating their interest and inspiring their thinking in face challenging tasks. The effects of social interaction vary by duration (i.e., temporary or sustainable effect) on different SR-level students. There may be some interaction between learning environment and social support in light of changes of students' learning behavior.

840

A comparative study of self-directed learning between users and non-users of LMS in Indonesia
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In the 21st century, Self-Directed Learning (SDL) becomes a skill needed in life, including in education. Technology developments make SDL has the opportunity to be developed during learning process. In Indonesia, learning management system (LMS) applications have been developed, for example Ruangguru. This study used the SDL theory from Garrison (1997) which consists of three dimensions; motivation, self-monitoring, and self-management. This study aims to see the differences of Self-Directed Learning between users and non-users of Learning Management System (Ruangguru) application among secondary school students in Indonesia. The respondents of this research were 344 secondary school students in Indonesia (104 Ruangguru active users and 240 Ruangguru non-users). The data were collected using online questionnaire. The respondents come from several provinces and ethnicities in Indonesia. The research method used was quantitative-comparative by using convenience sampling. Data was analyzed using Mann-Whitney U test with confidence interval of 95%. The results showed

that Self-Directed Learning (SDL) score of Ruangguru Users was significantly higher than Ruangguru Non-Users secondary high school student ($p < .05$, effect size = 0.51). The results of demographic data showed that there were not significant SDL differences in terms of age, gender, school province, ethnicity, and students' grade level. Therefore, it can be concluded that Ruangguru LMS application could support the development of SDL.

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Getting sexual and gender minority health “Into the Brick and Mortar”:
A mixed methods implementation
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Sexual and gender minorities (SGM) have unique health risks and health care needs, but medical students receive little training on SGM health (Obedin-Maliver, et al., 2011). This mixed methods study sought to learn from curricular champions in diverse settings to apply lessons learned at the George Washington University (GW). Exploratory models that included eight potential predictor variables for six criterion variables were tested using multiple linear regression. Criterion variables were: knowledge, attitudes, and clinical preparedness measured by the Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS; Bidell, 2017); attitudes measured by the Attitudes Toward LGBT Patients Scale (ATLPS; Wilson et al., 2014); and beliefs and behaviors measured by the Gay Affirming Practice Scale (GAPS; Crisp, 2006). Models were reduced for each criterion variable until all independent variables in the model explained >2% variance in the sample. Reduced Models explained approximately half of the total variance in the sample for three of the six criterion variables. All independent variables that were tested were included in at least one Reduced Model—suggesting that sociodemographic factors and lived experiences influence medical student competency in caring for SGM patients. Qualitative findings emphasized the importance of empowered, motivated individuals; institutional support; and inclusive planning and implementation processes. Engaging key stakeholders at GW to improve coverage of unique SGM health along with enhanced experiential opportunities would strengthen GW medical school student preparedness to care for SGM patients.

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Prevailing interaction style of teachers of physical education in different types of school

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 Objective: The paper occupies with prevailing interaction style of teachers of physical education in Czech Republic. Specifically, the paper defines the shape of prevailing interaction style of teachers of physical education and compares

teachers from different types of school from this point of view. Further, the paper occupies with the description and consequent analysis of prevailing interaction style among PE teachers. Methods: Basic method is the Questionnaire on Teacher Interaction, namely the version which was translated and tested by Lukas (2010). The research sample was gained through a two-level stratified selection. In the first phase, there were choosed regions by a drawing lots and then concrete schools by the same way. Then, data were processed by SPSS and their interpretation went through the method of comparison and analysis in the form of abduction. Results: Results shows that we can determine prevailing interaction style of physical education teachers in each investigated type of school (primary school, comprehensive school and vocational school). Among physical education teachers from all types of school as well as among other investigated partial groups of those teachers there were almost no significant differences. Conclusions: Because of minimal differences among prevailing interaction style of physical education teachers in all investigated schools, we can presuppose the probable uniform professional profile of physical teachers. Because all questioned teachers were fully qualified, we can also presuppose that Czech universities produce very similar absolvents.

705

The academic procrastination scale: Initial Indian validation

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The Academic Procrastination Scale (APS; McCloskey & Scielzo, 2015) consists of 25 items aiming to assess academic procrastination in university students. This research intends to develop an Indian adaptation of the APS (APS-Hindi Version [APS-H]), to explore its psychometric characteristics, and to investigate initial issues of validity. Further, the research explores the structural relationships between academic self-efficacy, short-range planning, and procrastination. The questionnaire was administered to 325 students belonging to different faculties of an Indian University. The factorial validity results obtained employing Confirmatory Factor Analysis sustained the original scale's mono-dimensional factor structure for the adapted version (APS-H) as well. Furthermore, the APS Indian version (APS-H) showed an acceptable level of internal reliability and a satisfactory convergent, divergent and concurrent validity. Results indicated that self-efficacy positively and short-range/daily planning negatively predicted procrastination towards academic tasks and activities. Although in need of further validation studies, APS-Hindi Version can be useful in the Indian academic context. The implications and limits of the study are discussed.

152

Subjective position of a student in professional education

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The success of the training of the future professional largely depends on the position of the student himself as a subject of educational interactions with the participants of the educational process. However, not all students take productive position. Objective. Determination of the types of positions from which students engage in educational interaction, identifying the causes and ways of overcoming those positions, which impede the successful preparation of the future professional. Methods. The study was conducted in 2003–2016 with students of Yugra State University. More than 700 students participated. Carried out: observation, survey, qualitative analysis of students' texts (essays, reflective self-reports), testing. Results. Non-productive ("subject of educational interactions", "subject of problem solving") and productive ("subject of educational activity", "subject of professional education") types of subject positions have been revealed. The reasons of unproductive positions are: low level of cultural development, lack of interest in mastering the profession, lack of ideas about their professional future. Conclusions. The dynamics of changes in the subjective positions of students shows that the main resource for the development of the subjective position of the student is the position of the teacher, his creative personality, demonstration of his own attitude to the profession. Also important: the emphasis of communication training and professional activities; promotion of the reflection of success in the development of the profession, expanding the repertoire of ways of updating of a subject position in the organization of independent work and practical training.

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Unpacking contributors to teachers' perseverance

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An alarming increase in teacher turnover in the United States and associated societal consequences in recent decades are well documented. Such teacher turnover significantly contributes to chronic teacher shortages and limits opportunities for students to access quality education. Extant research has predominantly focused on the various motives that lead teachers to leave their schools or the teaching profession. Little attention has been given to possible contributors to teachers' perseverance. The ability to persevere, to adapt and cope with various challenges or setbacks despite attractive alternatives, is critical for the successful pursuit of long-term goals for teachers, especially those who teach in historically underserved communities. This research seeks

to address this gap in teacher retention literature by investigating the motivational and self-regulatory constructs underlying teachers' perseverance. The main hypothesis is that passion for teaching is an indirect antecedent of teachers' perseverance, with its effects mediated by the self-regulatory mechanism — locomotion, the cognitive and behavioral orientation towards continuous progress in goal pursuit. Participants are in-service teachers in a south central state in the United States identified through public listservs. All identified participants are forwarded a link to an online questionnaire comprised of measures designed to assess passion for teaching, locomotion, and perseverance. Through clarifying the antecedent and mediating process, this research advances a deeper understanding of persevering teachers' unique sources of sustained motivation, why and when certain teachers persevere while others quit or change course, and provide policy-makers and school administrators with potential incentives and strategies to effectively support in-service teachers.

POSTER PRESENTATION

9134

A short online hope programme for college students

Angel Nga Man Leung *The Education University of Hong Kong, China*

Hit by the pandemic, it is important to raise the hope level among college students. Past studies have showed that short hope intervention workshops, and smartphone app-based hope interventions, increased hope among college students (e.g., Daugherty et al., 2018; Davidson et al., 2012). Integrating and localizing past successful hope intervention programmes, a hope programme was designed to increase students' hope level and perceived life satisfaction. The programme consisted of one online lecture, together with six online e-learning modules were designed. Students attended the online lecture which lasted about 40 minutes, they then accessed to six modules on Moodle over a few-week time, which covered the following topics: (1) Structuring Hope; (2) Developing a positive and specific goal; (3) Visualization; (4) Hope Reminding; (5) Reflection; and (6) Applying Hope for Future. Each module took about 10 to 15 minutes to complete, therefore, the whole hope programme took about 2 hours to be completed. Student's hope level in relation to academic domain, and their life satisfaction were measured by the domain specific hope scale (Sympson, 1999), and the satisfaction with life scale (Diener et al., 1985), respectively. A total of 117 college students ($M_{age} = 18.49$, $SD = 1.46$) from a University in Hong Kong, China, completed a pre-test questionnaire before attending the lecture, and a post-test questionnaire a few weeks after finishing all the online modules. There was a

significant increase in student's life satisfaction: pre-test: $M = 23.92$; post-test: $M = 25.27$, $t(116) = -2.675$, $p = .009$; and their academic domain of hope: pre-test: $M = 44.46$; post-test, $M = 46.32$, $t(116) = -2.59$, $p = .011$. Despite the programme being short, it boosted academic domain hope and life satisfaction among college students effectively. Findings provided implications for school policymakers to consider embedding hope programmes to boost students' positive psychological well-being for future curriculum pedagogical design.

9126

Adaptation of university students to distance education

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In the research study, we focused on identifying risk factors for failure during distance education in the COVID pandemic at the University of West Bohemia. The subject of the investigation was a comprehensive mapping of factors related to failure in distance education with respect to the motivational volition and self-regulatory aspects of the university student's personality. Aims of the research 1. In the analyses, we examined the risk factors related to failure at the university during distance education. 2. Identify factors related to the adaptation of students to the distance form of education and describe the positives and negatives of distance education. 3. Compare changes in students' study habits in contact and distance education. 4. Describe the ways of adaptation to distance education related to motivational-volitional characteristics of student's personality. Statistical analyses A total of 1006 students participated in the questionnaire survey. The data was processed by the Student *t*-Test, the repeated measure ANOVA analysis, Kruskal–Wallis test, Pearson's correlation test. Results We identified possible risk factors related to the unsuccessfulness of the studies in distance education. We point out the advantages and disadvantages of distance education from the students' point of view. Furthermore, we analyse the connection between the student's personality (motivational-volitional characteristics) and his/her adaptation to distance education. The research identified weaknesses and strengths of distance education and opens up new areas for further researches.

8275

Student motivation in choosing teacher's career

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Improving and emphasizing the prestige of teacher's career is one of the main objectives of the EU's educational policies. To achieve this goal, deeper consideration and knowledge of the motivation of students to start a career in the field of school education is needed. The aim

of this study is to present a scale for measuring the factors influencing the choice of educational studies. This article presents a study of attitudes of students with a pedagogical focus on teaching career. 85 students from pedagogical majors have been studied and motivational characteristics presented as predictors of choice for the teaching career. The results of the psychometric scale, correlation and cluster analysis are discussed, and comparisons are made by gender, specialty, stage of work at school. What makes the teaching profession for young people at the moment are working hours, vacations and, in most cases, offering a secure job. In the present study, it was found that the choice of the teaching profession is predominant among women, i.e., the profession is strongly feminized in Bulgaria. The most preferred educational stages for realization are primary school and kindergarten. There are fewer people willing to realize it among the older students. More efforts can be made to improve the social status of teachers. It was found that the most important factor for this is the increase in teachers' salaries. The improvement of the social status and the payment of the teachers will lead to a greater demand for specialties with a pedagogical profile.

8229

Role of Social Support on Academic Resilience of Undergraduate Students During Pandemic in Indonesia

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The COVID-19 pandemic has been going on for about a year. The pandemic that occurs certainly affects all aspects of human life including in the education setting. The whole academic activity turned into an online system and it requires students to adapt to this situation. In this case, academic resilience becomes important for students. The aim of the study is to investigate the correlation between social support and academic resilience of undergraduate students during the pandemic in Indonesia. There were 167 undergraduate students with 43 male and 124 female aged 17–23 years that participated in this study. The participants filled out the social support and academic resilience scale. The result of this research showed a positive and significant correlation between social support and academic resilience of undergraduate students during the pandemic in Indonesia with a medium correlation's coefficient score. Two domains within social support such as support from family and support from a special person were positively correlated with academic resilience at medium level, then support from friends was at a weak level. Thus, social support may act as a promotive factor in academic resilience, especially support from family and support from a special person.

8205

The effect of self-regulation on procrastination during online learning of undergraduate students

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The Covid-19 pandemic has changed student learning models, from offline to online. With this online learning, if a person does not have good self-regulation, it can cause tasks to be delayed and eventually will accumulate. This study aims to find out the role of self-regulation on procrastination. We administered online questionnaires to 167 undergraduate students in Indonesia were 124 females and 43 males, aged 17–23 years who had online college learning in Indonesia. All participants filled out the Self-Regulated Online Learning Questionnaire and Procrastination Scale. Overall, results showed that Self-Regulation is negatively correlated with procrastination. Some self-regulation subscales such as goal setting, self-evaluation, strategic tasks, and time management are negatively correlated with procrastination at a moderate level, but the environment and help-seeking were not correlated with procrastination.

8120

Educational program for informal and formal carers: CT4 silver caregivers project

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Objective: The main aim of this project is to create a new curriculum and modules on active & healthy ageing within the European Qualifications Framework (EQF), to train those professionals (in the profile of Healthcare for Dependant Persons in Social Institutions) who work as informal carers for elderly people and to promote silver economy employability. Methods: "Certified Training for Silver Caregivers" is a 24-month partnership (2020–22) funded under the Key Action 2 of the Erasmus+ programme, coordinated by Diputación of Zamora (Spain) and with the support of the AFGE (France), Dafni (Greece), Rural Hub (Ireland), TREBAG (Hungary), IPCB (Portugal) and University of Almeria (Spain). All resources and material delivered will be created combining non-formal education, theoretical contents and flexible techniques that will make possible to adapt them to different contexts or areas out of the ones on which the project will be originally implemented. Results: The project will provide training in active & healthy ageing to generate and promote service-learning opportunities while raising awareness about global issues (silver economy

and community social services). It will also allow that young people, low-skilled women and immigrants or rural areas inhabitants develop skills (or reskill) for their personal growing and employability as informal silver caregivers. Conclusions: With regards to training, we deal with needs of people in integration either for upgrading, pre-qualifying training, qualifying or certifying training, in response to the need for continuity and revitalization of their training, when the main systems do not provide an individually adapted response and a job in economic reinsertion structures with specific socio-professional support.

8040

Prevalence and development of neuromyths in psychology students and teacher training

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The popularity of neuroscientific research findings and their often-simplified presentation in media as well as a misinterpretation by readers resulted in the widespread use of neuromyths among those working as teachers and headmasters in the education system (Janati Idrissi, Alami, Lamkaddem, & Souirti, 2020; Krammer, Vogel, Yardimci, & Grabner, 2019; Macdonald, Germine, Anderson, Christodoulou, & McGrath, 2017; Zhang, Jiang, Dang, & Zhou, 2019). Furthermore, previous research has been limited to examining "neuroknowledge" among student teachers and those already working in schools (Zhang et al., 2019). Data about the progression of agreement with neuromyths within the same groups over the course of their studies is still missing. Additionally other groups within the educational system have not been included so far in research. Although psychology students are future employees in the care and counselling of children and adolescents they have not been under investigation on that point. Here, a comparison between these groups will show the impact of neuroscience literacy on the belief of neuromyths as psychology students receive formal training in neuroscience. The current survey – that started in winter term 20/21 – has two aims: first to investigate the prevalence of neuromyths among student teachers and psychology students; second, to find out whether the belief in neuromyths changes through their studies, is influenced by courses on neuroscientific topics, topics concerning learning or private interest in and exposure to the theme. The study is a longitudinal quantitative research design with two independent groups. Data is collected with an online questionnaire that includes 40 questions about learning and the brain. They are asked to answer the items about their "neuroknowledge". First data analyses shows that certain prevalent neuromyths that were found in previous studies, can be confirmed as prevalent in the first semester psychology students too.

8039**Why teachers struggle to feel rewarded and self-confident: A study of associated factors***Saori Beppu Japan*

Owing to the mass retirement of teachers and the existing ones becoming busier in recent times, teachers have less time to learn, face difficulties in learning through collegiality, and lower satisfaction from and attraction toward the profession are concerned. The purpose of this study was to explore the factors related to the difficulty in feeling rewarded and self-confident among teachers involved in education for intellectual disabilities. A total of 1,830 special school teachers filled out the questionnaire. It was found that among these, 113 had never felt rewarded or confident during the course of their work (the no-rewarding group), while 1,605 had (the rewarding group). Subsequently, the following was noted: 25.7% from the non-rewarding group had no time for self-training, compared with only 10.7% from the rewarding group; from the non-rewarding group, 38.4% answered "I am motivated to engage in collaborative research at my school" and 44.6% answered "Collaborative research helps me build my abilities," compared with 61.7% and 68.2% from the rewarding group, respectively; regarding the factors that helped them solve problems and difficulties, 27.5% from the non-rewarding group cited "advice and encouragement from colleagues" and 39.1% mentioned "having someone to talk to," compared with 87.7% and 64.2% from the rewarding group, respectively; furthermore, 95.4% from the non-rewarding group reported that "nothing was useful to solve problems and difficulties," while only 1.1% from the rewarding group reported the same. These results indicate the following as the characteristics of the non-rewarding group: less time to learn, a negative attitude toward collaborative research, and less likely to receive support from colleagues or people they can consult. Appendix: This study was approved by the Tokyo Seitoku University Research Ethical Review and supported by the discretionary expenses of the President of Tokyo Seitoku University in 2018.

7916**Attitudes and perceptions of teachers towards teaching deaf children**
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Due to the rising focus on inclusive education, teachers' workloads have increased as they must meet both the needs of children with special educational requirement and of typically developing children. Thus, the need for improving teachers' knowledge on teaching children with special educational needs has gained a place in the research agenda. Although

deafness is considered a low-incidence disability, most of deaf children are being educated in mainstream classrooms, meaning that teachers are also responsible for facilitating the individual needs of deaf children. Providing insufficient teaching in a classroom can create cascading effects in a deaf child's development. To prevent this, teacher training is helping to prepare them to be effective educators, but do teachers receive effective education on teaching deaf pupils? An online survey was used to examine this inquiry, which was completed by 96 teachers from a variety of backgrounds. The survey focused on the experiences of teachers regarding familiarity with hearing loss and their enthusiasm, attitudes and perceptions towards teaching deaf children. Opinions were also gathered on which educational system deaf children should be educated in. The results indicate that teachers are really under-prepared to teach deaf pupils, and they start their careers without receiving education/training on teaching deaf pupils. The research would be of use regarding training teachers before they start their careers and the ideal world for deaf children according to teachers' thoughts.

7865**Self-development, personality psychology and heutagogy: Integrating practice***Nurtang Assilbek Al-Farabi Kazakh National University, Kazakhstan*

The pandemic increased demand for psychological research and created new opportunities for the development of educational psychology. The objective of this study is revealing self-development problem and designing directions for enhancing intrapersonal intelligence (Gardner) through developing MOOCs for personality psychology. Methods. We diagnosed students' self-development in comparison with their self-esteem; we also studied their relationship with heutagogy and designing MOOCs. The survey and diagnostics (Maralov) involved 70 magistrates and doctoral students in Kazakhstan. Results and conclusion. The history of personality psychology shows that the Eastern tradition of self-cognition is linked to contemplation values, introspection and acquiring inner experience. Self-cognition traditions laid the basis for ethnic psychology in finding the meaning of life and happiness in Kazakh philosophy (Al-Farabi, Korkyt), and in Kazakh literature and enlightenment (Abay, Shakarim, Altynsarin). Western tradition studies self-cognition by defining it as increased autonomy and self-determination, self-actualization and self-realization for the individual. Virtual reality has allowed modern students to integrate such opportunities. According to the survey, 95.5% look to the future positively, 85.1% work on personal development constantly, 13.4% work on personal development some,

but not systematically. Self-assessment of personal development level on a 10-point scale was 5–6(25.3%), 7–8(69.7%), 9–10(12%). 52% of students approve the well-known principles of heutagogy, while others challenge or suggest improving them. However, only 11% of students indicated that they are engaged in MOOCs. According to the personal development test, 94% of students "actively realize their needs for personal development". The study was supported by the Science Committee of MESRK, AP0885622.

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7570**Prevention of difficulties in the socialization of gifted children in the context of an existential***Olga S. Shcherbinina Kostroma State University, Russia*

Objective. A gifted child is likely to experience the problem of misunderstanding from peers leading to his social isolation. Outwardly successful, a gifted child does not communicate with peers, lacks communication skills, struggles while presenting his achievements along with adequate self-esteem against these achievements. The ideas of the existential approach oriented us toward creating the conditions for a gifted child in his throes of an identity, the purpose and the way of living in a complex world, the properties of his unique personality which were implemented in the content of the program of working with gifted students "Self-development – the gateway to success". Objective: to characterize the content and effects of the application of the program for the prevention of difficulties in the socialization of gifted children, based on an existential approach. Methods. Evaluation of the effectiveness of the program was carried out using the methods of questioning, testing, interviewing gifted children ($n = 155$). Results. During the implementation of the program's activities, gifted children build the project of life or a "life scenario" where the child learns to identify problem milestones in his path that are vital to overcome. The immediate results of the program are expressed in the mastery of communication and interaction skills. Conclusions. The results of three years' work with gifted students indicate the relevance of the presented activities both on the basis of schools and in the system of additional education, allowing to create conditions for the successful solution of socialization tasks by gifted children. The study was carried out with the financial support

of the Russian Federal Property Fund, project No. 20-013-00656

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7402

Social and Emotional Education and identity development: suggestions from p.s. SMILE project

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In an increasingly fast-changing, complex and diverse world, social and emotional skills are becoming ever more important. Recent literature describes the nature and structure of these skills, their development and relevance for a wide range of individual and societal outcomes (Durlak et al. 2015; Nagaoka et al., 2015; Hart et al., 2014; Flanagan & Levine, 2010). With this in mind, the poster will first of all highlight the contribution of research studies and projects conducted in Europe as emerged from the national and transnational report carried out by partners of the project on Socio-emotional Capacity Building in Primary Education (PSSmile.emundus.eu). The numerous challenges children and school may face in contemporary Europe came out as well as their relevance for learning and psychological well-being, especially for those who present vulnerabilities. Similarities and differences were also identified together with strengths and opportunities, challenges and threats for research and practice efforts across diverse cultural contexts. Moving from this analysis, the conceptual and methodological framework developed will be described that takes into account recent directions in psychological approaches to positive development as well as inputs from Sustainable Development literature. Emphasis is then set on the competences and resources which combine not only to facilitate school education, to enhance the ability to deal with everyday life challenges, but also to facilitate lifelong learning thus contributing to a positive identity development, where both personal and community future construction are considered. Finally, the derived issues and goals relevant for policy, and for the integration of Social and Emotional education in current school practices will be described.

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7248

Effects of social skills education in universities using lectures that focus on knowledge

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Objectives Many university students have problems with interpersonal relationships and desire to improve their social skills (Kukiya, 2005). Previous studies have suggested that Social Skills Training (SST) is effective for improving university students' social skills. University classes often consist of lectures for many students. Therefore, it is difficult to conduct group SST in these classes. This study examined whether social skills education using lectures, without actual training, might be effective for improving students' social skills. **Methods** University students enrolled in a teacher training course participated in the survey ($N = 126$; 121 3rd-year and 54th-year students). The social and Emotional Learning of eight Abilities for Teachers (SEL-8T; Yamada, Koizumi, & Takamatsu, 2014) was conducted to assess the social and emotional skills required by teachers. Moreover, social skills were assessed using the Kikuchi's Scale of Social Skills (KiSS-18; Kikuchi, 1988). Furthermore, emotional competence was assessed using a 16-item Emotional Competence Scale (Nozaki, 2017). The survey was conducted before and after 10 lectures on knowledge and attitudes related to the social and emotional abilities required by teachers. Results and Discussion Differences in mean sub-scale scores of the three scales before and after lectures were analyzed by using a paired t-test. The results indicated a significant increase in the three SEL-8T sub-scales scores as well as the four sub-scales of the Emotional Competence Scale. On the other hand, significant differences were not shown in KiSS-18. These results suggest that social skills education using a lecture-style focusing on providing knowledge might be effective for improving social skills related to the self and emotions, although KiSS-18 scores did not increase by the lectures. It is suggested that future studies should examine effective education methods for improving other types of social skills that do not depend on training programs.

6912

Written expression from 3rd to 5th grade of elementary school in the Czech Republic

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In Czech elementary schools there is a strong emphasis on the legibility and orthographic skills. Teachers observe writing acquisition (handwriting, orthography) during elementary education (i.e. 1st to 5th grade). In a case of learning difficulties there is a diagnostics performed in the counselling centre and dysgraphia/dysorthography diagnosis determined. But the diagnostic process frequently forgets evaluate another stage of writing skills – “written expression” (DSM 5), the ability of the students to properly organise their thoughts and express them effectively. This

project describes the expressive writing skills from 3rd to 5th grade. In our study participated 80 children with poor handwriting or spelling (dysgraphia, dysorthographia) We created the test of written expression and verified the predictive value of the proposed written expression test from 3rd to 5th grade pupils and to compare pupils' performance in terms of gender and the presence of specific learning difficulties. We administered a battery of tests assessing writing skills and language skills which are related to the writing development. The results of our study showed significant differences in the area of the expressive writing in every grade. The gender differences the results reveal that girls have better expressive writing skills. The size of written expression deficits in group of children with learning disabilities is discussed in more details.

6782

National-psychological features of the motivation for higher education in different cultures

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We put forward the hypothesis that students of different countries are driven by different motives for getting higher education, and their formation depends on the national psychological characteristics and differences in the culture of societies of different countries. Russian students tend to explain academic success by the presence of abilities or the presence of an experienced teacher, which is less controlled by students, while Chinese students look for an explanation in internal components, for example, the degree of effort that is more controlled by students. Western teachers often have to think about how to form and maintain motivation of their students and how to make the learning process more attractive so that students become aware of the meaning of these tasks. Teachers in China do not often have to stress the need for training. Even if the assignment does not seem interesting, the student will do it. The formation of teaching motifs depends on the national-psychological characteristics (a form of manifestation of an ethnic community's psychology). The peculiarity of the motivating forces of activity as well as the specificity of motivation and behavior will determine the motivational-background of national psychological characteristics. Accordingly, we can assume that the formation of motives depends on the features of motivational background national psychological features. In the study we used: – Methods of studying the motivation of learning at the university by T. I. Ilina. Method of determining tolerance for uncertainty by S. Badner, G. U. Soldatova's version (Budner's Scale of Tolerance – Intolerance of Ambiguity). Students' age was from 18 to 23 years. The study involved 361 students, of which were 200 Russian students. Also, we surveyed 27 Chinese students studying at Moscow and 34

Chinese students studying at various educational institutions of China, and 100 African students.

6705

Psychological aspects in working with gifted students in specialized schools

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The basis of the program of psychological and pedagogical support for working with gifted children in a specialized school is based on the leading methodological principles of modern pedagogy and psychology: systemic, personal, individual, integrated, holistic. In the educational process of the specialized school called "Zerde" diagnostics of the holistic development of gifted students as a result of the implementation of the supportive program was carried out; the development of psychological and pedagogical competence of teachers and psychologists were realized for working with gifted children. The essence of the experimental work was to verify the developed program, which is based on a set of approaches, forms and methods of working with gifted children, sufficient for their holistic development. Thus, we determined average indicators reflecting a quantitative assessment of the growth in the level of holistic development of students at the beginning and end of the school year. At the beginning of the year was 2.3. At the end of the year was 2.6. Then $To\ efficiency = 2.3 : 2.6 = 0.88$ (in terms of a module it turns out to be close to 1, this shows the effectiveness of the educational process of the specialized school "Zerde").

6703

Formation, motives and senses attributed to ontopsychological method by higher education professors

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This article presents contributions of formation, motives and meanings attributed to the ontopsychological method by higher education professors. It aims to report the meanings and senses attributed to formation in Ontopsychology by professionals who understand and apply it in classroom activities. The research methodology is based on the phenomenological-hermeneutic approach and the participants were six university professors from different areas of knowledge, with varying ages and years of service. Data collection was carried out through in-depth interviews, of a narrative character. The results are expressed through a conceptual map and contextualized with fragments of the interviewees' statements.

The results point to the existential search as the basic reason that led them to the formation in the method under study and show the personal dimension of the professor as a basis for the quality of their work. It turns out that the applicability of the method allows the professor to expand the awareness of himself and understand the dynamics of the class, through reading the semantic field. For the professors surveyed, continuing education implies continuous changes in their practice, moment by moment in all spheres of life. The professor who achieves his autonomy, becomes an authentic professional and, as he externalizes what he is, in love with his "work", he contributes intensely to the social order in a natural way.

6695

The development and validation of the instrumental practice-related affect measure

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Learning to play musical instrument is accompanied by affect, consciously accessed feelings and moods. Although affect plays important role in music education, research mostly focus on performance anxiety and rarely take into account various affective states experienced in this context. We constructed the Instrumental Practice-related Affect Measure (IPAM), based on the Russell circumplex model of affect. Initial item pool consisted of the 25-items for assessing four types of affects felt in the context of instrumental learning: enthusiasm, comfort, anxiety and depression. Two studies were conducted to develop and validate IPAM. In Study 1, IPAM along with other theoretical relevant scales (scales of trait affectivity and liking to play musical instrument) were administered to 171 piano students. Study 2 was conducted on 235 students learning to play various musical instruments. The set of 14 items with highest factor loadings (all above $\lambda = .70$) was selected for the final version of the measure. Results of both studies confirm the four-factor model and provide evidence for good reliability and validity of IPAM scales. Researchers and school practitioners may thus use IPAM to assess affect experienced by musicians when they practice their musical repertoire. Knowing how musicians feel when they learn to play is necessary for understanding their psychological functioning, being the same important step in the development of theories of learning, planning school programs, or psychotherapy interventions.

6681

Communication skills in the social interaction of graduates

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Modern experts are moving away from local skills and prefer global ones. Communication skills are an essential part of global socialization skills. The study involved students of L.N. Gumilyov Eurasian National University. 4th-year undergraduate students consisted of 291 people, 2nd-course undergraduates included 111 people. According to the developed questionnaire, communication skills are divided into 5 main interaction abilities: the ability to express information clearly and easily; ability to concentrate attention while listening and reading information; ability to analyze heard speech. After the implementation of the program for the development of communication skills of undergraduates of the Faculty of International Relations, the Faculty of Economics and Law, positive dynamics were revealed from 80% of the average level (with a 20% high level), the results of the second cut showed that high-level indicators rose to 35%. Thus, it is necessary to change the directions in the self-development of students and undergraduates concerning not only their special competencies but also social skills in building interactions.

6563

A study on dietary education in Japanese preschool facilities

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Objective. In Japan, guidelines for dietary education in early childhood are being developed, because dietary education before school is important for the promotion of lifelong health. The objective of this study was to reveal the important criteria of dietary education in Japanese preschool facilities that are known for several good practices in dietary education. Methods. We identified 11 preschool facilities that promote good practices in dietary education. Semi-structured interviews were conducted from September 2017 to March 2018 on 25 participants who have been promoting dietary education in their preschool facilities. Results. We asked questions on (1) practices in dietary education, (2) partnership with parents, and (3) the dietary motto. The contents of the interviews were analyzed using the modified grounded theory approach. The results of the analysis identified 12 categories: the first relates to a human factor, 'core person who acts as dietary promotor'; the second concerns the environment surrounding the dietary education and is divided further into four categories: 'social resources', 'cooperation with the community', 'collaboration within multi-professionals in the facility', and 'general improvements in the facility'; the

third is about warm interpersonal relationships, divided further into seven categories: 'relationship with each child respecting one's voluntary activities', 'cooperation with parents', 'dealing with unbalanced diet', 'dealing with allergic children', 'gaining a healthy lifestyle', 'creating a secure environment', and 'rich dietary experiences'. Conclusions. To promote good practices in dietary education, facilities must have a designated person who is actively involved in dietary education. Further, it is necessary to ensure cooperation within facilities. Moreover, staff in preschool facilities should supervise children with warmth and understanding. This study suggests that it is important to have the aforementioned 12 categories to promote good practices in dietary education in preschool facilities.

6540

Does the number of friend buffer negative effect of avoidance strategy on academic performance?

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The purpose of the present study was to provide suggestions on the viewpoints that teachers should consider in improving students' academic performance, which is a factor influencing their psychological adjustment. In the present study, we investigated whether the influence of test coping strategies on academic performance differed according to the number of friends of the students. The women's junior college students ($N=108$) answered scales assessing their test coping strategies (i.e., approaching strategy, avoidance strategy, and help-seeking). Then, they were asked to write down the initials of those students to whom they often talk in the college. We counted the number of initials to use as their number of friends in the analysis. In order to examine the interact effects of test coping strategy and the number of friends on academic performance, we conducted hierarchical multiple regression analyses of the students' actual scores of the examination. The predictors were the scores of each strategy and the number of friends. As a result, two-way interaction of avoidance strategy and the number of friends was significant. In the analysis of the simple slope, the avoidance strategy was related to the low grade in the student with small friend number, but this relation could not be recognized in the student with large friend number. This suggests that avoidance strategy may lead to lower academic performance, especially in students

with fewer friends, i.e., fewer interpersonal resources.

6539

Explicit teaching of collocations – The way to fluency and naturalness

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1. Czechia; 2. Charles University, Czechia

The prevalent English language methodology does not result in fluency and naturalness of language production, as supporters of lexically oriented approaches to teaching tend to claim. What is highly criticized is the undue emphasis which is placed on explicit teaching of grammar rules and meanings of individual words. The critics suggest refusing the traditional division into grammar and vocabulary. Instead, the focus should be on raising awareness to collocations and explicit teaching of these word partnerships, since naturalness and fluency seems to lie in collocational competence. Our study was conducted to determine whether this method would lead to acquiring collocational knowledge, and therefore enhance fluency and naturalness of language production in university students in the Czech Republic. The research reflects a 10-week experimental teaching in the summer semester in 2020 addressing the question of which types of students would benefit from this method most in terms of foreign language aptitude, motivation, learning styles and strategies, and personality traits. The main aim of the paper is to present the design of the project, describe in detail the test battery and define the differences in the lesson plans for the experimental and the control group. The paper also presents findings from preliminary analysis of pre-test assessment of students' English proficiency and individual difference measures.

6443

The DYL intervention for career indecision among university students: A quasi-experiment

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The current thesis is an attempt to review previous research on the topic of career indecision, and to examine the effects of a new, progressive career development intervention ("Designing Your Life") on anxiety, career-related dysfunctional beliefs, meaning, purpose, and career-related decision status in university students. The current study was a quasi-experiment in which 33 undergraduate students from the University of New York in Prague were recruited to take part in the Designing Your Life (DYL) intervention. The intervention consisted of five weekly 45-minute sessions in which the students participated in a variety of DYL activities.

The students completed five self-report questionnaires immediately before and after the intervention in order to test the hypothesis that participants would report improvements in anxiety, career-related dysfunctional beliefs, meaning, purpose, and career-related decision status from pre- to post-intervention. The hypotheses of the study were tested with a series of paired samples *t*-tests and Wilcoxon signed-rank tests. An exploratory correlational analysis was also conducted to examine the potential interrelationships between the pre-intervention variables. The statistical analysis revealed that no statistically significant pre- to post-intervention differences emerged on any of the outcome variables, therefore all of the primary hypotheses were rejected. However, several statistically significant results emerged in the exploratory correlational analysis. For example, higher levels of state anxiety were correlated with lower levels of purpose. Despite the fact that the primary results of the present study did not show significant changes after incorporating the DYL intervention, several trends emerged in which the pre- to post-intervention means changed in the expected direction. These results may have reached statistical significance with a larger sample, a longer intervention and/or a more highly trained instructor. Future researchers are encouraged to implement these suggestions when studying the DYL intervention.

6427

A study of career choices of technical training trainees of alternative school

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The current study is to investigate the impacts of technical training to the career abilities' development and career choices of students contestants in an alternative school. The alternative school is a boarding type middle school, sponsored fully by the government, primarily assist dropout students who come from poor and disruptive families to continue their education. Very often, the career development of students in this kind of alternative schools is unstable for the financial strains of the students themselves and their families. Each year, the students who were perform well in technical courses are chosen by school teachers to receive technical training for two months and participating in technical contests. Most students who were trained for technical contests would be eligible for studying in better high schools in the district. The participants of the current study are 7–9 trainee graduates who has stabilized in high schools for at least two years. This qualitative study adopts social learning theory as guiding framework for interview outlines. The participants are asked about their learning experiences in

training, their self-efficiency and career interests generated from technical training process, and their outcome expectations for pursuing related careers. Through data driven and bottom-up approach analysis process, the researcher intends to generate understandings about the factors that contribute the career ability development and career choices of the young student-contestants; in addition, how the training process they sustained impacts on their choices of career.

6270

A comparative study of Japanese and Chinese students about the lecture note-taking strategies

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The present study explored the effective Lecture Note-taking strategies from the perspective of cognitive psychology, and examined the effects of students' beliefs about learning, learning motives, and teachers' teaching strategies. In addition, the similarities and differences of strategy usage and its effects were compared and examined by conducting a cross-cultural study of Japanese and Chinese students. First, a semi-structured interview (I-1) was conducted with 10 experts in the field of teaching and learning psychology to categorize the strategies, and categories were extracted by utilizing the KJ-Method. Then, the use of strategies was investigated through an interview survey (I-2) of high school students from Japan ($N = 10$) and China ($N = 10$). Last, a questionnaire survey (QS) was conducted for 340 Japanese and 410 Chinese high school students, and a multi-population analysis was performed. As a result, a new framework for effective Lecture Note-taking strategies was obtained and the validity has also been demonstrated. Additionally, between the Japanese and Chinese students, the characteristics of the use and the perception of Lecture Note-taking strategies were observed. Last, the results of the multi-population analysis showed that student's beliefs about learning, learning motives, and teachers' teaching strategies, influenced the use of Lecture Note-taking strategies both in Japanese and Chinese groups. On the other hand, though there exist a positive effect in China, teachers' instruction about strategy has shown a strongly negative effect to students' use of effective Lecture Note-taking strategies both in Japan and China. Finally, these results suggest that in order to use the effective Lecture Note-taking strategies initiatively for students, teachers' strategic instruction should be reconsidered, and further experimental studies or longitudinal studies with educational intervention on the effective Lecture Note-taking strategies need to be conducted.

6251

The seeds of purpose in life

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Recent research has revealed that identifying and pursuing meaningful central goal(s) in life are valuable assets for positive youth development. Yet few empirical studies have investigated whether – and if so, how – extracurricular activities might influence the formation of early adolescents' sense of purpose in life. Therefore, in this study, we explored South Korean early adolescents' purposes and their relationship to students' voluntary club activities. To understand how students' voluntary club activities affect their development and pursuit of early life purposes, in-depth interviews were conducted with middle school students who demonstrated active commitments to voluntary club activities. Using a grounded theory approach to the analysis of interview data, the results reveal that voluntary club activities expand early adolescents' purpose-searching opportunities and intensify existing purposeful goal pursuits. Furthermore, acknowledging the importance of relationships with others and the responsibilities related to group membership through voluntary club activities may be foundations for identifying not only self-fulfilling life purposes but also social and community-oriented purposes in the future.

6244

The development of relationships: The effect of experiences with the child who needs special support

Naoko Tomiyama *Japan*

The purpose of this study is to investigate the effect of experiences with the child who needs special support. In Japan, the inclusive education has been proposed in the elementary and secondary education. In inclusive education, children who need special education support are educated together with children who need no special support in general classes. In this study, factors concerning the continuation of good relationships with children who need special support were investigated. The subjects were 142 college students. As a result, it was revealed that children especially at an elementary school age, could have good experiences with the child who needs special support. Then, the relation between the affirmative attitude to the person who needs special support and the experience of direct contact in the elementary school age, the junior high school age, and the high school age was revealed.

6120

The effect of bodily motions to show wants for a speech on activating turn-taking in group discussion

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The objective: The aim of this study is to examine how group discussion would be effective in learning situations. It is assumed that lively

turn-taking among participants has a key part of the effective discussion. Exchanges of turn can be frequently done when the participants show their needs for turn by bodily motions. Thus, the procedure for visualizing turn was conducted to make frequent and exaggerate bodily motions. It expected that turn-taking would increase in the visualization condition group more than no such condition group. Methods: Three discussions (each including six members) were analyzed in this study. Two discussions were by group A (A1 and A2), one was by group B. A1 was assigned to the turn-taking visualization condition, and A2 and B were no visualization condition. The discussions were conducted by Learning Through Discussion (LTD). LTD is a structured discussion, consisting of eight steps. The amount of time required is around 60 minutes. In the visualization group, the participant who wants to speak must get a ball before speaking. So, they were moved to explicitly show their needs for turn by bodily motion to the one who has the ball. Results: The network analysis of turn-taking indicated that group A1 had the densest network among three groups, which means the participants have frequently exchanged the positions of the speaker and listeners in the discussion. The analysis of the speeches in the discussion suggested that group A1 had shared the private knowledge and experiences among participants and reached a deeper understanding beyond the gist of the textbook. Conclusions: The effect of visualization suggests that the candidate for the next speaker should show the explicit sign for a turn to the current speaker. Knowing how to take turns would encourage the participants to speak more and share new knowledge and viewpoint.

6104

Evaluation of state funded preschools quality of instructional support and STEM curriculum

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Science, Technology, Engineering, and Math (STEM) focused curriculum has gained increased interest and support over the past decade. The increased focus on STEM education has been influenced by the inquiry-based educational trends from the late 1990s (Furtak, Seidel, Iverson, & Briggs, 2012). Both inquiry and STEM curriculum is intended to promote intellectual processes such as predicting, hypothesizing, and analyzing information rather than merely receiving or repeating information (Trundle & Saçkes, 2012). Higher-order thinking processes in children can be stimulated by effective questioning by teachers, precisely, open-ended questions. However, classrooms ranging from preschool to advanced high school courses consistently lack open-ended questions that

promote thinking (Walsh, Bowes, & Sweller, 2017). Using this knowledge, 13 preschool classrooms in Los Angeles, California, with curriculum focusing on STEM, in low socioeconomic status areas, were evaluated using the Classroom Assessment Scoring System (CLASS) and STEMPTERS. Quantitative data collected on classroom materials, concept development, quality of feedback, and language modeling. The data indicate that all 13 preschool classrooms are performing below the national average for every measure. Thus, increased teacher-education is needed in regards to intellectual growth in children in early childhood education, specifically by asking questions that promote higher-order thinking and responses from children.

6024

Gifted students' perception of creative climate in enrichment activities

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Objective: Creativity is one of the four key competencies for the 21st century skills, which are important for personal and professional development of students. Recent studies underlying socio-cultural theoretical background on the development of creativity have highlighted the impact of supportive learning environments. The purpose of this study was to examine how gifted students perceive creative climate in different activities (e.g. science research projects, STEM camps, academic contests, performing arts, debate club, etc.). These are implemented in the framework of three-year evaluation project PROGA of enrichment activities for gifted students in the Slovenian upper secondary school. Method: Using the mix-method research design students ($N = 672$; $M = 17$ years; 56% female) filled-out self-report questionnaire about creative climate on a 5-point Likert scale. Additionally, the respondents reported also about key elements and overall evaluation of the activity performed. Results: The results showed that students perceived a highly creative climate in the enrichment activities performed ($M = 4.16$, $SD = .73$). Regression revealed that two key elements of activity explained 55% of variance in the creative climate ($R^2 = .55$, $F(2,669) = 99.401$, $p < .001$). It was found that good interpersonal relationships and cooperative atmosphere predicted creative climate ($\beta = .56$, $p < .001$), as well as the encouragement of students' initiative and critical thinking ($\beta = .30$, $p < .001$). The creative climate was significantly correlated with students' overall evaluation of the activity ($r = .56$, $p < .001$). Conclusion: The findings indicate that flexible learning environments are positively related to students' perception of creative climate. Especially important aspect reported by respondents is the quality of relationships followed by other

cognitive aspects such as complexity of the activity and the level of difficulty.

5961

How extracurricular activities inhibit problem behaviours in young children: Further analysis

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Background and aims: Recently, extracurricular activities have become popular in Japan. Prior research in Western countries has shown benefits for children who participate in extracurricular activities, but there is little research about what mechanisms cause the inhibition of problem behaviours. Aburakawa (2017) suggested that socialization with friends during extracurricular activities may inhibit problem behaviours, as it motivates children to participate in these activities within structural equation modelling (SEM). However, Aburakawa provided a general model rather than a detailed analysis of these factors. Prior research suggests that girls have more self-regulations and fewer problem behaviours compared to boys, and that children from upper-income groups have more self-regulations and fewer problem behaviours compared to low-income groups. This study aims to further analyse the model put forward by Aburakawa regarding behavioural differences between genders and social economic status (SES). Methods: (1) Participants: parents of pre-schoolers ($n = 624$, $M = 289$, $F = 316$, unknown=19, age ($M = 5.52$, $SD = .58$)) in Japan. (2) Questionnaire: The items explored six areas: (a) children's extracurricular activities, (b) parents' subjective interpretation regarding the effect of extracurricular activities on their children, (c) the frequency of socializing with friends during extracurricular activities, (d) specific problem behaviours, (e) self-regulations, and (f) control variable. (3) Analysis: Multiple-group analyses by gender and SES were performed after controlling for 5 elements: (a) the respondents' educational background, (b) the respondents' child rearing style, (c) the age of pre-schoolers, (d) whether the child was in a single parent household, and (e) the number of siblings. Results: It was found that boys were more motivated than girls when socializing with friends during the extracurricular activities. Additionally, low-income children were more motivated than middle or high-income children when socializing with friends during the extracurricular activities. The results indicate the heightened importance of socializing with friends during extracurricular activities for boys and low-income children.

5934

The effect of mindfulness on PTSD symptoms measured through negative cognition and avoidance coping

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Objective: Studies have been conducted on the effects of therapies which combine cognitive-behavioural therapy and mindfulness. However, there is lack of data on the effects of mindfulness on PTSD symptoms measured through negative cognition and avoidance behavior targeted by conventional cognitive-behavioural therapy. The purpose of this study was to clarify the utility of mindfulness in the treatment of PTSD by examining its effects on PTSD symptoms by observing cognitive behavioural factors. Methods: A questionnaire survey was conducted with 885 university students using the Trauma Experience Questionnaire (Sato & Sakano, 2001), a brief version of the Posttraumatic Cognitions Inventory (PTCI; Wells et al., 2019), a revised version of the Ways of Coping Checklist (WCCL-R; Osawa & Sakano, 2007), the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2013), the Cognitive Fusion Questionnaire (CFQ; Gillanders et al., 2014), and the Post-Traumatic Stress Disorder Checklist (PCL; Weathers et al., 2013). Data from 254 students who experienced trauma with posttraumatic stress were analyzed. This study was approved by the appropriate ethics review board and informed consent was obtained from the participants. Results: First, hierarchical multiple regression analysis with PTCI and WCCL-R was conducted. Then, MAAS and CFQ was performed. The results showed a significant increase in the multiple regression coefficient. PTCI and WCCL-R were found to positively affect PCL to a significant degree. MAAS was found to have a significant negative effect on PCL, while CFQ had a significant positive effect on it. Conclusions: The results suggest that combining conventional cognitive-behavioural therapy with mindfulness might be useful.

5932

Psychological constructs predicting academic performance

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A variety of studies in the area of psychology of foreign language teaching indicate that a great majority of language learning barriers result from deficiency in learners' self-esteem, empathy, emotional intelligence, and achievement motivation. If we remove these obstacles by enhancing these psychological constructs we can receive higher risk-takers, more autonomous, fluent, and achieving language acquirers. The purpose of the current research is to examine interdependence of psychological factors influencing academic performance of foreign language teacher candidates. Hence,

the objectives were put forward to study achievement motivation, emotional intelligence, and empathy of student-teachers with higher, moderate and lower self-esteem; to explore emotional intelligence and empathy of participants with low and high achievement motivation. A random sample of 153 student-teachers from Two Foreign Language Department of Suleyman Demirel University were administered to complete Self Esteem Inventory by Coppersmith, Interpersonal Reactivity Index by Davis, Emotional Intelligence Quotient by Goleman, and The Thematic Apperception Test 1 (TAT) measuring achievement motivation. Conclusions: Multiple Regression Analyses revealed that all four psychological constructs such as self-esteem, emotional intelligence, empathy, and achievement motivation are found in a certain degree of interdependence. The closest relationship was identified between self-esteem and emotional intelligence. Higher emotional intelligence leads to higher self-esteem. The least related constructs are empathy and self-esteem. Empathy does not affect achievement motivation. Self-esteem and emotional intelligence can fairly contribute to achievement motivation. Improving students' motivation to study successfully means enhancing their emotional intelligence and self-esteem level.

5911

Examination of interpersonal benefits of critical thinking: Relation to the empathic accuracy

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Critical thinking (CT) is defined as logical and unbiased thought based on appropriate standards and evidence. Although previous studies have suggested that CT may be beneficial for interpersonal relationships, no empirical studies have investigated this effect. To investigate whether CT improves empathic accuracy, we focused on empathic accuracy as an index for establishing interpersonal relationships. Empathic accuracy is the ability to accurately infer the feelings and thoughts of others and is crucial in establishing good interpersonal relationships. It is expected that demonstrating the effectiveness of CT about an interpersonal perspective will also encourage people to obtain CT. Through a crowdsourcing service, 143 individuals participated in our web experiment and survey. We investigated the relationships among CT ability, CT orientation, and empathic accuracy. We also focused on systematic thinking as a relevant variable in CT and investigated its relationship with empathic accuracy. Results showed that CT ability significantly predicted empathic accuracy ($\beta = .176, p < .05$), but CT orientation ($\beta = .107, ns$) and systematic thinking ($\beta = .163, ns$) did not. These results suggest

that CT ability may be important in increasing empathic accuracy and contribute to emphasizing the benefits of interpersonal relationships in future CT education.

5758

How reflection papers affect students' approach to learning

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Research has shown that reflection papers (RP) is an effective method of active learning that facilitates deep learning. The aim of this study was to examine the implications of active learning by investigating the effect of beliefs about RP on students' approach to learning (i.e., deep approach to learning and surface approach to learning), focusing on students' types based of beliefs about the purpose of writing RP. Self-report questionnaires and reflection papers was obtained from 129 university students when the course ended. Cluster analysis (Ward method) revealed that 4 clusters were identified in terms of combination of memorizing, practicing writing, reporting self-understanding level and communicating informally in which measure learners' beliefs about the purpose of writing RP based on Onoda and Sinogaya's (2014) framework. One-way ANOVA revealed that the high perceived benefit cluster reported the highest scores for deep approach to learning test. Surface approach to learning test score did not differ significantly between the other clusters. In addition, the relation between each cluster and characteristics of RP in students was examined. The results suggested that students belonging to the high perceived benefit cluster were associated with the characteristics of the description of RP. The discussion dealt with utilization for higher education of the results.

5757

The role of peer interaction in the effectiveness of gamification in learning performance

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Gamification, as defined by Deterding, Dixon, Khaled and Nacke (2011, p. 9), refers to "the use of game design elements in non-game contexts", usually with the aim of engaging people in various tasks. Gamification has gained rapid popularity, especially in education, since the last decade due to its potential to foster motivation, behavioral changes and users' interactions (Dicheva & Dichev, 2015). Students who have used gamification in their curriculum praised that gamification integration can improve learning outcomes (Kim, Rothrock, & Freivalds, 2018) and ample evidence has demonstrated increased students' learning performance in gamified learning (e.g., Zainuddin, 2018). Although some researchers have identified some risks associated with gamified learning (Blohm & Leimeister, 2013) and

speculated attractive game design elements might distract users from the main purpose of activities such as students' learning (Tay & Lim, 2012), the majority of recent findings in gamified learning have shown that gamification has somewhat a positive impact on learning outcomes, with varied effect sizes (Clark, Tanner-Smith, & Killingsworth, 2016). While cognitive and motivational learning outcomes of gamification have been researched, no meta-analysis has yet been conducted in school contexts to examine the effectiveness of gamification in students' learning performance. Yet, the distinctive features of school contexts might contribute to a different degree of effectiveness of gamification. Therefore, the current study aimed to examine the overall effectiveness of gamification in learning performance in educational settings when compared with non-game conditions, using a meta-analytical approach. More importantly, we should move beyond the question "Can games enhance learning performance?" and further examine the design of games: "What types of games are better?" and its implications on students' learning. Hence, subgroup analyses were conducted to investigate whether there existed a moderating effect of peer interaction in the relationship between gamification and learning performance.

5581

The relationship among the brain knowledge, learning route, and growth mindset in Korean students

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As the importance of neuroscience and people's interest in brain-based education grow, people gain knowledge about the brain through diverse routes. However, with the widespread of unverified information, people often misinterpret how the brain works. In this study, 312 college students participated and we examined their brain knowledge level, key learning routes, and how the certainty of inaccurate knowledge changed according to their learning route. Besides, we examined the relationship between the level of brain knowledge and the growth mindset (i.e., the belief that intelligence is adaptable). Results showed that, first, Korean undergraduates had a low level of brain knowledge, only 14.9% (neuromyth), 37.4% (general brain knowledge) and 51.1% (plasticity) of the participants could correctly identify accurate statements. More interestingly, people with inaccurate beliefs about the brain showed higher confidence in their knowledge than those who answered the correct answer. Among the neuromyth items, VAK learning style myths had the highest percentage of incorrect answers (e.g., 91.3%). Second, students reported that they acquired brain knowledge mainly from TV, the Internet, books and the people around. In addition, they gained

false knowledge of the brain mainly from TV and the Internet, books and people around them. Third, the level of brain knowledge did not predict students' growth mindset, but the level of neuromyths significantly predicted students' beliefs in effort. As a result, Korean undergraduates have not only low levels of brain knowledge but also high certainty about incorrect beliefs about the brain. Thus, it is important to suggest students use trustworthy learning routes to learn about the brain and supply well-organized education to them so that they can get exact knowledge about the brain.

5153

Psychological analysis of the critical student's personality of the university

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In the research study, we focused on identifying risk factors for failure during studies at university. The subject of the investigation was a comprehensive mapping of factors related to the motivational volition and self-regulatory aspects of the student's personality and the analysis of sociocultural determinants related to the early completion of studies at higher education. The aim of the project was to create a profile of a student at risk of failure. Hypothesis In the analyses, we examined the risk factors related to failure at the university, and looked at the extent to which the success of studies influences motivational volition and self-regulatory characteristics of the student. Furthermore, we tried to identify obstacles to successful completion of university studies. Research file and tools the research was conceived of mixed methods. An interview with students of the University ($N = 53$) was conducted in the first phase. The data was analysed in content categorical analysis and the obtained codes became the basis for the creation of a questionnaire, which was used in the second phase of the research. A total of 500 students participated in the questionnaire survey. Qualitative and statistical analyses the data in the qualitative part was analysed in content-categorical analysis in Atlas.ti. The data in the quantitative section was processed by the Student T-Test, the repeated measure ANOVA analysis, and Pearson's correlation test. Results we identified possible personality factors related to unsuccessfulness of the studies and created a profile of a student at risk of unsuccessfulness. It turned out that the overall attitude to studies, the motivational volition qualities of the student, together with his study history, are the dominant factors of successful studies at higher education institutions. The analyses further revealed differences in the concept of success of students and academics and fundamental barriers in studies at higher education.

5054

Effects of mindful somatic psychoeducation at a Japanese University

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Development of generic skills including social and emotional competence has become an important objective in today's higher education. Somatic psychoeducation may contribute to this new endeavor by fostering somatic awareness and trust in the organism that underpin holistic development of the student. The key constructs conduce to the moment-to-moment close intimacy with one's experience, which connects to the innate propensity of an organism to self-regulate and helps it become fully responsive to the task at hand. Although the evidence of the benefits of somatic practice is scarce, cultivating somatic awareness and trust in the organism may well overlap mindfulness practice, which has now a well-established evidence base in clinical and educational fields. This research therefore examined the effects of somatic psychoeducation accompanied by mindfulness practice, and was conducted at a national university in Japan. Fifty-nine students participated in an 8-week experiential course in two groups, where a number of well-being measures were employed, including somatic awareness, trust in the organism, mindfulness, stress resilience, interpersonal empathy, responsibility for self-care, and generic skills for learning and relating. Results suggested positive change in somatic awareness, mindfulness (observing facet), and relating skills, but not in other measures of social and emotional competence. This was possibly due to the absence of explicit activities that aimed at effective promotion of each competence. Future directions are discussed, including the optimal method and content of mindful somatic psychoeducation in higher education toward generic skills development.

4923

The role of the intern-supervisor exchange in the motivation to learn—general learning relationship

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Over the last decades, changes in the economy and businesses have reshaped workplaces and the nature of work. These changes are driving new skill demands. While higher education has traditionally focused on the transmission of functional knowledge, this may not be sufficient to ensure students learn and master these new skills. Internships are among the experiential learning strategies that may enable students to learn the skills they need to thrive in this new environment. While

many institutions are investing in cooperative and internship programs, there is limited research to illustrate whether this strategy has its intended effect. Drawing on the interactionist perspective, this longitudinal study investigates whether interns' motivation to learn before the beginning of the internship predicts the quality of the relationship with their supervisor, or leader-member exchange (LMX) during the internship, and via LMX, general learning at the end of the internship. We also account for aspects of the organizational context, namely the level of autonomy and role clarity interns perceived having. We expected that interns with high motivation to learn would be more likely to develop a high-LMX relationship with their supervisor, leading to greater learning, and that this relationship would be stronger among interns with a high level of autonomy and role clarity. We collected data from students before they began an internship (T1), at the mid-point (T2), and towards the end of the internship (T3). We used online questionnaires, Likert-type scales and previously validated measures. Analyses conducted using PROCESS and bootstrapping suggest that motivation to learn before the internship predicts learning at the end via LMX. This highlights the importance of the relationship with the internship supervisor in contributing to student learning. Autonomy and role clarity did not significantly moderate this path. We discuss the implications of these results for theory, future research and practice.

4869

Demystifying epistemic emotions: Evidences and prospects

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We are continuously exposed to a vast amount of information and knowledge which generates a range of emotions. One of such typology of emotions is Epistemic Emotions. Epistemic Emotions are experienced during knowledge acquisition when the focus of learning is to resolve the alignment or misalignment between new information and existing belief or prior knowledge. The importance of emotions in the generation of knowledge has even been advocated by Socrates, Einstein and Stephen Hawking. Emotions like Curiosity, Surprise and Confusion have been known to play a significant role in students' learning experiences. However, the impact of these emotions is not straightforward. This relationship between Epistemic Emotions and learning is further complicated by various personal and contextual factors. This paper explores, from a review of the literature, various dispositional and environmental factors that lead to experiences of epistemic emotions which further enhances or diminishes learning. A model presenting dispositional and environmental factors will be presented and future prospects of

research in epistemic emotions will then be discussed.

4846

The relation between responsibility, autonomy and deep approach to study: A study with young

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This research has the purpose to investigate if the educational context based on responsibility and autonomy stimulus – which conducts the individual to an excellence mindset and consequently to an active contribution to the job market – causes a deep approach to study on incoming students to Antonio Meneghetti Faculdade, institution in which the Ontopsychological pedagogy is applied. Theoretically, the research is grounded on the interdisciplinary approach of the Ontopsychological science. Regarding the method, the study has a quantitative approach, exploratory, empirical and had as research subjects seventy-six incoming students of the first semester of 2016. After applying two tests – Study Process Questionnaire (by Biggs) and Forma Mentis Test (by Mencarelli) – a correlation analysis was run between them using SPSS Statistics. As main results, it was found that the context that stimulates responsibility and autonomy tends to provoke a deeper approach to study by the student, but still depending on an individual choice. It is also important to mention the role of the autonomy stimulation in this process, which takes part on the relation between teacher and student. The development of this autonomy can become a differential for these youngsters when they act inside a social context in the job market.

4778

Motivational, volitional and attitudinal aspects of boredom coping in educational settings

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Significance of boredom experience for personal development and possible consequences of its long-term malcoping have been still neglected although there exist research findings documenting relationship between boredom and various negative phenomena (depression, somatization, gambling, hostility, risk driving etc.). Boredom is covertly present in number of everyday situations, especially those at school and work. Therefore, school environment seems to be the place where effective boredom coping could be cultivated. So far, school boredom interventions have been focused mainly on changing teaching methods, but students themselves have not been involved in the process at all. The aim of this study was to explore different ways of boredom experience and coping in secondary

school students ($N=460$), evaluate the effectiveness of different types of coping strategies employed by students and examine the relationship between the preference of certain types of coping strategies and students' motivational, volitional and attitudinal characteristics that could be addressed within educational interventions to cultivate boredom coping skills. Data were obtained using the BPS, MSBS, BCS, LMI, VCI and SAI methods and closed questions. Quantitative methodology was used at various levels of analysis. The most effective boredom coping strategies were those of reminding the importance of the topic with facilitating factors such as cognitional and positive achievement needs actualisation, subject importance, motivation, interest, diligence and sense of dutifulness, whereas less effective strategies were those including tendencies to avoid the situation either by cognitive or behavioral escape and the need of interaction with others. As most risk malcoping factors seem to be high levels of volition inhibiting components (e.g. external control need, emotional disturbance and attention intrusion) rather than low levels of volition facilitating components (e.g. initiation control). Presented results have implications both for educational practise and further research. The study was supported by Charles University, project GA UK No. 846119.

4591

School satisfaction, use of digital technologies and subjective well-being of children in Brazil

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This study aims to compare school satisfaction, use of technologies and subjective well-being of Brazilian children, in Santa Catarina state, and to verify whether school relationships are associated with subjective well-being of the sample. The participants are 2,819 Brazilian children aged between 08 and 12 years and 383 children from Santa Catarina. Data were collected through questionnaires applied in public and private schools between May and November 2019 in 5 states of Brazil, they are Rio Grande do Sul, Santa Catarina, Paraná, São Paulo and Rio de Janeiro. Are part of an international investigation organized in Brazil by the Community Psychology Research Group – GPPC/UFRGS in a network of ISCWeb partners, for the survey of the third wave, with more than 30 countries by the project "Children's Worlds", the International Survey of Children's Well-Being – ISCWeB, part of a cooperative and critical perspective related to the contents and instruments of the research. It is intended to investigate personal relationship items and their relationships with school and access to and use of internet, digital devices, games and online applications. It also seeks to investigate which items are predictors of well-being in school-related children.

4476

Students' cognitive states with different levels of self-regulation

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Objective. The research is devoted to the study of self-regulation of cognitive states in students' learning activity. The scientific objectives of the proposed project are in the zone of intersection of the two fundamental areas of world psychology – the self-regulation of human mental states and the management of the educational and cognitive activity of the subject. We hypothesized that the cognitive state of students is connected with the level of the self-regulation. Methods. The study used the questionnaire and testing (The Ability to Self-regulation of N.M. Peysakhov). Statistic data processing included Pearson correlation analysis and Student's t test for independent samples. The sample consisted of 70 students, the average age of 19.6 years. Results. The study showed that the most often experienced cognitive states of students are reflection, thoughtfulness, meditation and interest. States of dullness, bewilderment, distraction and insensitivity are rarely experienced in training sessions. This indicates that students are characterized by active involvement in educational activities. Typical conditions include meditation and thoughtfulness. A statistical analysis of groups with a higher and lower level of self-regulation was carried out. It is shown that states of thoughtfulness, curiosity, inspiration, anticipation and concentration are characteristic of students with a high level of self-regulation. Students with a low level of self-regulation most often experience negative states of bewilderment, stupefaction, distraction and doubt. Conclusions. Thus, the obtained data confirmed our research hypothesis. A high level of students' self-regulation contributes to the emergence of productive cognitive states in learning. And, on the contrary, a low level of self-management ability is associated with negative states that impede cognition and learning. The states of thoughtfulness and distraction are correlated with a general ability of self-regulation most strongly. The research was carried out with the financial support of the RFBR; project No.19-013-00325.

4439

Studying methodological issues of digital learning environment: System-activity approach

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Objective. Digital tools drastically modified modern education and partially substituted

conventional teaching environment. We studied transformations of didactics and teaching methods in order to assess these changes and their influence on learning and education results. Methods. We used theoretical methodology originated from the system-activity approach (Vygotsky, 1982; Leontiev, 1983) which regards education through the process of activity of the subject and recognizes several levels of educational activity: psychophysiological, operational, actions level and level of the activity in general. According to our approach novel digital educational technologies are considered to produce additional requirements and challenges toward cognitive, emotional and motivational processes. The rearrangement of subject activity in the result of the replacement of educational instruments impose elements of the cognition processes. Results. The analysis of changes imposed by digital educational media to separately chosen actions and operations as the elements of the educational activity allowed to evaluate the transformation of motivational and goal-setting processing. Based on these assumptions we developed the system model of education investigation in conditions of modern digital environment improvement. Using this model we defined the system indicators of quality of educational process such as: the level of subject's educational goal formation, the existing of educational actions containing particular operations and motor acts. Conclusion. The obtained results allow to develop new tools and tests in order to access changes in the educational processes under conditions of intensive digital environment implementation. This work was supported by the Russian Foundation for Basic Research (No 18-29-22049).

4419

Cross-cultural study into cognitive underpinnings of individual differences in learning Russian

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The study of the cognitive underpinnings of individual differences in language learning is associated both with basic cognitive characteristics – the processing speed and working memory, and with general characteristics – intelligence. However, the ratio between cognitive development and the academic achievement in language learning can change throughout the entire period of school education and influence by the socio-economic status including the effectiveness of the national education system. In the present study the analysis of the cognitive predictors of academic achievement in Russian is performed on samples of Russian-speaking high schoolchildren from Russia, Kyrgyzstan and Moldova. These three countries have a

very similar organization in terms of the educational system, but differ in socio-economic status. The sample of the study included 545 Russian-speaking students of final year of school education (mean age = 17.42, standard deviation = 0.59, 36.1% males) studying in the Russian language throughout the school age in public schools in Russia, Kyrgyzstan and Moldova. ANOVA, correlation and multiple regression analysis were used. It was shown that in Kyrgyzstan, which includes in the group of countries with an average socio-economic development, and Moldova as a country with a high socio-economical status only non-verbal intelligence is associated with the score of the State exam in the Russian language. In Russia, which includes in the group of countries with a very high level of socio-economic status, – along with non-verbal intelligence working memory is updated. Among the analyzed cognitive characteristics the effectiveness of the national education system is most associated with the non-verbal intelligence, which is directly proportional to the quality of education in the country. It is also associated with the working memory, but to a lesser extent. The study was supported by the Russian Foundation for Basic Research (Project No 17-29-09147).

4257

Effectiveness of a brief mindfulness-based intervention for primary school students in Japan

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Objective: Mindfulness is thought to be one of the most effective practices to teach children to calm themselves in stressful moments, increase focus and attention, and improve mood. While brief mindfulness-based interventions have become popular and may impact positive outcomes, few mindfulness studies have specifically focused on primary school students in Japan. The current study tested whether brief intervention of one component of mindfulness (breathing) for students would reduce their stress level, increase focused attention, and improve subjective mood. Methods: The sample for this study consisted of 96 students in 3 classrooms (fifth grade) in a Japanese primary school. Students attended a 45-minute class which included the breathing practice. Basic didactic information was how to sit and breathe, why to practice, and what to expect from this practice. Baseline stress level, focused attention, and subjective mood were measured at the start of the class using a questionnaire. Students were administered the questionnaire again at the close of the class to quantify the change from baseline. Results: Compared to the baseline, the intervention resulted in significant improvements in stress level, focused attention, and

subjective mood. Conclusion: Results showed that students became more relaxed and attentive after this brief intervention. The findings suggest that brief mindfulness-based interventions can be adapted for children in schools to improve stress level and mood, focus and sustain attention, which might be effective in increasing their well-being and cognitive performance.

4218

The effects of education on how to raise an S.O.S. to get help

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The number of suicides in Japan has been decreasing in recent years, but it still exceeds 20,000. In particular, the current situation surrounding suicide of young people is serious. Suicide is the leading cause of death for people between the age of 10 to 39 and it is the urgent issue in Japan. As a suicide countermeasure for young people, Japanese government is promoting education on how to raise an S.O.S. It is the curriculum for school children that teachers or health care workers use to teach how to seek help and find reliable persons. Because the accumulation of scientific grounds is not enough, we examined the effects of the curriculum. We conducted pre- and post-lecture of education on how to raise an S.O.S questionnaire for 367 elementary and secondary school children, and also interviewed 11 teachers. As the results, we found that the curriculum could (1) help children to find the reliable persons, (2) change the perception that experts are not the only people who provide suicide countermeasures, but any person can also provide help, (3) provide easy-to-use and concrete educational content that can be used at all schools, (4) build strong relationship between schools and communities, (5) break away from a disease model and develop skills based on a health promotion model. The research showed that it is necessary to restructure the relationship between homes, schools, and communities. Furthermore, it is important to improve the social environment for school age children and young adults to grow.

4210

Factors affecting impression formation of children: Comparison of video/text episodes

Yuko Ohgami *Wayo Women's University, Japan*

Nursery school teachers evaluate children based on various information. Video episodes on childcare offer more visual information than reading the same episode in text. However, the students who aim become nursery school teachers may be confused when given too much information. This study was designed to clarify how impressions of children vary

depending on the amount and quality of the video/textual information. Sixty students in a childcare worker training program participated in this study. The Video-First group ($N = 30$) rated their impressions of a particular boy after they watched a brief nursery scene on video (Impression 1). This episode involved inter-personal conflicts among 3-year-old children. Next, the same scene was presented in text, and the group rated their impressions of the boy again (Impression 2). The Text-First group ($N = 30$) was presented with the episodes in reverse order. Scores for the boy's "personality traits", "social skills", and "problematic behaviors" were compared among the two groups. In addition, both groups reported in their assessments where they focused their attention (facial expression, speech etc.). The study revealed that in Impression 1, the Video-First group evaluated the boy as being more cooperative and quiet while the Text-First group evaluated the boy as quiet but more aggressive. Analyses of the scores of Impression 2 (both groups ultimately obtained the same amount of information) showed that scores of "social skills" and "problematic behaviors" among the two groups showed no significant difference. However, differences in personality traits were identified between the two groups. The difference in these impressions and the effect of the presentation order of the episodes (video/text) have been discussed in this study. Findings suggest that the method of presenting the framework to students differs depending on whether the episode is presented through video or text.

4189

Developmental significance of play with stickers in early childhood

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According to the previous study, it has been shown that early children enjoy playing with stickers (sticker-play) and the use of stickers can develop "origami-play" (Bekki, et al., ICP 2016). A sticker is a tool to decorate something, but it can also be a toy for children. It seems that sticker-play enhances fine motor skills of early children, because playing with stickers requires complex operation of using fingers. The purpose of this study is to reveal how the sticker-plays are used in children's play, and to investigate further effects of the sticker-plays on developments in early childhood. The method of this study is divided in the following three steps: (1) pick out various sticker-plays from Japanese educational magazines for children; (2) classify these selected sticker-plays according to the types of the motion or the behavior during the activity; (3) examine the effects of the sticker-plays on the developments using the above classification. The result shows that the sticker-play

enhances not only fine motor skills, but also sense in quantity and figure, imagination, scientific cognition, and language acquisition. This study suggests that the sticker-play can be used to train many important skills in the various developments of early children.

4168

Academic success in native language in middle school: Models of cognitive and personal predictors

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The purpose of the study is to investigate the regulatory, motivational, cognitive and personal predictors of mastering the native language at school. Academic grades and language competences (LC) in spelling, morphology, syntax, semantics, vocabulary and stylistics of Russian language have been assessed. We studied two levels of self-regulation: executive functions (EF) as basic cognitive level and conscious self-regulation as its high level. We hypothesized that two levels of self-regulation, personality and motivation of pupils mediated mastering the native language in school. The study was funded by RFBR research project 17-29-09094 «Conscious self-regulation in the system of cognitive and non-cognitive mechanisms of success in learning Russian at school». A sample of 315 Russian middle school children (aged 13–15 years) performed three cognitive tasks assessing basic EF and two tasks for LC and completed Morosanova's Self-Regulation Profile of Learning Activity Questionnaire, the Academic Motivation Scale for Schoolchildren and the Russian version of Big Five Questionnaire. Analysis of LC components take a step closer to solving the problem of "Language Sense" phenomenon. General factor of LC "Language Proficiency" reflects the general command of Russian, richness of vocabulary, and the ability to apply it depending on the situation. Several structural models of predictors of mastering native language are carried out. Since relationships between LC and some measures of motivation, self-regulation and EF are non-linear, their moderator and mediator effects are estimated. Comparative analysis reveals the gender related specificity of the models: girls are more successful in performing LC tasks. The models differ in the composition of components, nature of connections (direct/indirect), and value of the contribution of different factors to academic grades and LC. Overall, the results indicate that cognitive mechanisms of conscious self-regulation, cognitive activity and motivation of achievement are systematically related to the mastering of one's native language in middle school.

4107

Promoting low-income children's

STEM knowledge and skill through a community intervention program

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Several U.S. government departments have advocated for the Science Technology Engineering Mathematics (STEM) initiative to improve the quality of STEM curriculum, expand access to STEM courses, and address biases in STEM education. To strengthen children's learning in STEM, teachers and parents need the knowledge and skills to encourage STEM-focused conversations (e.g., Haden et al., 2014). Thus, a comprehensive intervention program involving children, teachers, and parents seems advisable. Utilizing best practices and technologies to support young learners, an urban children's museum launched a three-year STEM intervention program in 2017 to support two local development centers serving children from low-income families. Each year, 3- and 4-year-old children ($n = 150+$) from six to eight classrooms participate in the program, which consists of three components: STEM-enriched environments for children, professional development for teachers, and training workshops for parents. To assess yearly program outcomes, quantitative and qualitative pre-post measures were employed, and data from participants were compared to data from matched, non-participating children ($n = 70+$). Results from the second year highlighted the following program-related growth ($ps < .05$) as well as challenges. First, formal observations highlighted increases in STEM materials in children's classrooms and improvements in teacher-child interactions. Second, the teachers reported becoming more open-ended, more creative, and less focused on children's rote recitation and skills, but they did not perceive widespread changes in developmentally appropriate practices. Third, the parents gained awareness of STEM resources and interest in their children's STEM development, and observations of parent-child interactions revealed increases in parents' skills in STEM-focused conversations. However, the parents noted several daily obstacles to be involved. Using a myriad of measures, the present research provided an in-depth assessment of an intervention program. The utility of mixed-methods educational research, the value of a comprehensive intervention program, and the challenges in STEM education will be discussed.

3876

Human agency and legal psychology students' readiness for forensic psychology careers

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The term “agency” is used in philosophy and psychology generally to refer to the ability of individuals to direct their conscious activity to achieving goals. Agency, as a behavioural concept, is an individual’s sense of what they can do and what they think they can do. Skills required to be forensic psychology experts include strong personality and decision-making capability. Only experts with a high level of agency fully use their psychological resources in order to solve deontological and moral problems in their professional activity. The sample included 19–21 year old students ($N=60$). Second-year ($N=30$) and fourth-year ($N=30$) students took part in the survey. The Russian versions of PLT – “Purpose-in-Life Test” (Crumbaugh, Maholick, 1969; Leont’ev, 2000) and WCQ – “Ways of Coping Questionnaire” (Folkman, Lazarus, 1988; Kryukova, 2007) were used to assess agency indicators. We analyzed the results of PLT and WCQ in samples of second-year and fourth-year students. The statistical analysis of the differences in these categories of students (U -test) shows that there are statistically significant differences only between the samples of students by the scale Result ($U=316, p=.04$). But we have found a lot of differences in the relationship between coping strategies and meaningfulness of life scales in the samples. Coping refers to ways of handling stressful and trouble some circumstances. It also includes expelling effort to resolve problems and to deal with problematic situations. Problem-focused coping (PFC), emotion-focused coping (EFC) and seeking social support (SSS) are some of the common coping strategies one may use to deal with stressful situations. There are a lot of stressful situations in forensic psychologists’ professional activity. And their readiness for agency qualities use in stressful situations of moral choice is very important. Acknowledgments: The reported study was funded by RFBR, project number 18-413-400001.

3666 – Reading skills and cognitive characteristics: Evidence from typical and atypical development

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The results of the study of the cognitive resources of learning to read in school age children with different mental development trajectories – with mild mental retardation (F70; ICD-10) and typical development are presented. The focus is on cognitive characteristics – the processing speed, working memory and non-verbal intelligence, as well as a number of indicators of reading performance – the pace and method of reading, the

number of errors, the degree of understanding of the meaning of the text. Total sample included 220 schoolchildren (66.4% boys) with mild mental retardation from public special school ($N=110$, mean age = 11.26 years, $SD=2.43$, range 7.16–17.08) and matched schoolchildren with typical development controlling age, sex, family socio-economic status. To assess the processing speed and working memory, the computerized tests ‘Choice Reaction Time’ and ‘Corsi Block’ were used. Non-verbal intelligence was measured using ‘Raven’s Progressive Matrices’. Reading skills were assessed by testing in accordance with the Federal State Standard. ANOVA, correlation and multiple regression analysis were used. Differences and similarities in the relations between cognitive characteristics and reading skills in school age children with atypical and typical development were revealed. It was shown that a greater number of interrelations and more high correlation coefficients observe in schoolchildren with atypical development. In this case, the closest relationship between non-verbal intelligence and the processing speed was found. In contrast, in schoolchildren with typical development, the closest relationship between non-verbal intelligence and working memory was obtained. There are no significant relationships between non-verbal intelligence and processing speed in schoolchildren with typical development. The results discussed in term of in terms of the resource theory across development. The research is supported by the Russian Foundation for Basic Research (No 17-29-09127).

3659

Japanese high school students’ emotional intelligence and self-esteem change

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Purpose Emotional intelligence (EI) plays a crucial role in supporting high school students’ adaptation (i.e., high self-esteem, relatedness with others). Past research focused solely on the unique function of each EI, lacking in person-centered perspective. This study categorized freshmen’s EI and self-esteem and examined their longitudinal change in self-esteem. Methodology One hundred eighteen Japanese tenth graders answered the questionnaire measuring EIs, self-esteem, and school adaptation in April and October 2018. Results A Cluster analysis indicated four interpretable clusters. The first three clusters showed consistent levels of EIs and self-esteem, respectively named “Normal ($N=42$)”, “High-competent ($N=25$)”, and “Low-competent ($N=25$)”. Students of the fourth cluster named “Over-adapted ($N=24$)” showed unique tendency, extremely high active help (a subconstruct of EI) and low self-esteem. Two-way ANOVA (cluster

by time) on self-esteem detected cluster’s main effect, showing that low-competent and over-adapted students have the lowest self-esteem. Furthermore, the interaction effect indicated that only over-adapted students’ self-esteem increased over time. Also, ANOVAs on relatedness with teachers and friends showed that low-competent students reported the lowest relatedness. Discussion This study extracted a distinctive cluster, over-adapted students. Their relatedness with teachers and friends was not low regardless of the low self-esteem, implying that their maladaptation can be less observable by others. Interestingly, their self-esteem increased over time. Considering the quality of their relatedness, they can gradually get accepted by others and feel esteemed in October. However, their self-esteem in October was still low compared to normal and high-competent students. Future studies need to examine further whether their self-esteem continues to increase.

3636

Effects of peer-tutoring, discussion, and metacognition on cooperative learning

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Previous researches in educational psychology suggested that peer-tutoring and discussion during cooperative learning promoted deeper comprehension. Asamura (2018) investigated effects of peer-tutoring and discussion on cooperative learning, suggested improvement of retention and subjective comprehension. The other previous researches also suggested that metacognitive activities and cooperative learning with goal setting improved the learning performances. The purpose of present research is to investigate the effects of peer-tutoring and discussion on cooperative learning with goal setting as well as correlation among metacognition, these effects, and the performances of cooperative learning. Seventy-eight undergraduates participated in the experiment. Participants were divided into two groups (cooperative and non-paired learning), and learned about a psychological term. In cooperative learning, they were instructed a definition of the term, asked to make a pair, prepare an explanation of the term including retrieval from academic resources, explain the term in the pair alternately, and reach a conclusion through discussion about applicability of the term to everyday life as goal in the learning. In non-paired learning, they were instructed a definition of the term, asked to only prepare an its explanation. They also learned about another term in the same procedure. All participants were lectured that preparation of explanation and discussion could improve learning performances, answered the metacognitive scale, and learned about the term in either of the learning groups. One week later, they verified sentences about

the term as an unannounced post-test. Correlation analysis showed significant correlations among metacognition, depth of comprehension, and easiness of the explanation, suggested that metacognitive activity, peer-tutoring, and discussion promoted deeper comprehension. The results of post-test showed significant advantage of cooperative learning, suggested that peer-tutoring and discussion improved retention of meaning. These results are consistent with the previous research. It is concluded that peer-tutoring, discussion and metacognitive activities are effective for cooperative learning.

3630

Do students with various self-regulation profiles differ in personality traits?

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Presented research is conducted within the theoretical framework of differential approach to the conscious self-regulation (SR) problem (Morosanova, 2010). According to this approach stylistic features of SR can be described by individual regulatory profiles. Specific features of these profiles can be characterized by the personality traits, particularly, Extraversion and Neuroticism (Morosanova, 2003). The study had its purpose to identify and analyze student's typological regulatory profiles and compare groups of students with different profiles by Extraversion and Neuroticism (RFBR research project no. 19-013-00257 A). The sample consisted of 949 students of 5–11 grades of Russian schools with a mean age of 13.61 years (SD=1.99), 47.2% female. We used Morosanova's multi-scale "Self-regulation profile of learning activity questionnaire (SRPLAQ)" to identify individual profiles of SR. The profiles were based on the following indicators: Planning, Modeling, Programming, Results evaluation and Flexibility. Extraversion and Neuroticism were measured with "Big Five Questionnaire – Children Version: BFQ-C" in Russian adaptation by Malykh, Tikhomirova, & Vasin. The cluster analysis revealed four groups of students with different SR profiles. Manifestation frequency of the identified typological profiles was different among the students in our sample. Group 1 with harmonious profile with high SR level included 32% of the sample, group 2 – harmonious profile with low SR level – 19%, group 3 – accentuated profile (high Modeling and low Planning and Programming) – 22%, and group 4 – accentuated profile (high Programming and low Modeling and Results evaluation) – 27% of the sample. One-way ANOVA showed significant differences between these groups in Extraversion ($F = 12,315$, $p < .01$) and Neuroticism ($F = 31,334$, $p < .01$). Thus, the study results

support the previously developed ideas about Extraversion and Neuroticism as the differential basis of the regulatory profiles.

3482

The Effects of an art-based social and emotional learning (SEL) program on children' SEL competencies

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Object: The purpose of this study was to develop an art-based social and emotional learning (SEL) program for early childhood children and test its effects on their SEL competencies using a pre-test/post-test control group design. Method: Eighty children whose age range from 3 to 5 years were recruited from a daycare facility in Jeonju, South Korea. Participants were randomly assigned to the treatment group ($n = 44$) and the control group ($n = 36$). The SEL competency scale was used to assess the social-emotional learning as a pre and post-test measure. The treatment group received ten 40 minute-sessions of Strong Kids program using art activities while control group received no SEL program. The program consisted of various art activities to improve participants' social-emotional learning, such as self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Result: The results showed that children's SEL competencies significantly increased in the treatment group after the program ($p = .025$) while no change was found in the control group. Conclusion: This result of the study shows that an art-based SEL program can effectively develop the children' social-emotional learning. Finding from this study also suggests that more attention should be given in finding ways to incorporate art into curriculum in early childhood education.

3440

Designing activity to promote graduate students' research articles reading habit

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Reading habit is crucial attribute to graduate students because reading research articles could help to enrich and enlarge students' knowledge in learning, doing research as well as developing their research skills. Previous research mainly focused on the enhancement of reading behavior over habit, although reading habit is one of the factors that influence students' productive reading. Moreover, studies in regard to utilizing design concept in promoting reading habit is still limited. Thus, this study aimed to design activity to promote graduate students' reading habit in research articles. The

study employed design research and used habit formation principle as a design theory. To gain more effectiveness in an aspect of participants' affective, this research used user experience (UX) research to gather additional informative data to design the activity. The results revealed that the participants who joined the designed activity can be classified into two groups: the beginner group and the experienced group. The reading habit of both groups changed after participating in the activity. Additional results indicated important information to improve the design principles to appropriate to the participant with different characteristics.

3233

Students' classroom experience in foreign-faculty and local-faculty classes in Thai Universities

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The purpose of this study was to explore university students' perception of classroom experience in foreign-faculty and local-faculty classes and their relations to the type of university in which they studied in Thailand. Questionnaires measuring two dimensions of class traits, two dimensions of teacher traits, and three dimensions of student traits were distributed to 510 undergraduate students in Thailand. The results illustrate that students in both types of universities are unwilling to participate, feel pressure, and experience difficulty comprehending course content in the foreign-faculty class. However, students feel more supportive and approachable in the foreign-faculty classes than in local-faculty ones, particularly in private universities. Compared with public university students, private university students have higher scores on all of the seven dimensions.

2985

Relationships of the beliefs about feedback and error to feedback practice for secondary teachers

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The aim of this study is to examine whether feedback practice, belief about feedback and error orientation of middle and high school teachers differ according to school level and their major, and to explore how teacher's beliefs about feedback and error predict feedback practice. The data were collected from 294 middle and high school teachers. The results are as follows. First, middle school teachers performed more 'parent reporting feedback', put more important on 'timeliness about feedback', and showed more tendency of 'covering up errors' than high school

teachers. Second, arts & PE teachers performed more 'self-peer feedback', put more important on 'timeliness about feedback' and 'self-regulation about feedback', and showed more tendency of 'error competence' than humanities & social science teachers. Also, arts & PE teachers showed higher 'covering up errors' than science teachers. Third, belief about feedback as 'compliance' positively predicted all four types of feedback practice (self-peer feedback, teacher formative feedback, teacher protective evaluation feedback, and parent reporting feedback). Fourth, belief about feedback as 'learning improvement' negatively predicted relatively simple 'teacher protective evaluation feedback', for example, giving students the correct answer to learning task or praising them for their efforts. Fifth, 'error strain' positively predicted 'teacher protective evaluation feedback' and 'teacher formative feedback'. These results show that the more middle and high school teachers perceive feedback as their role, the more they perform all types of feedback practice. Also, it shows that feedback practice also differed depending on how teachers perceive students' errors. Therefore, in order to more actively perform various types of feedback, it suggested that teachers should reconsider the positive effects of feedback and error in teaching and learning situations.

2935

What is the factor determining the achievement behavior of undergraduate students?

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The purpose of this study was to examine the effect of two factors such as personality and perceived learning goal on the amount of preliminary effort and test score. We used a big five scale (extraversion, conscientiousness, neuroticism, openness and agreeableness) and a learning goal scale (mastery goal, performance-avoidance goal and performance-approach goal) in order to measure two factors. Thirty-nine undergraduate students of psychological course participated in this experiment. (1).They were given a task list which consisted of 50 English-Japanese pairs of technical terms on psychology, and were announced that they would take a test of 10 pairs selected from the list, (2).The next week, we conducted test after measuring the amount of their preliminary effort, (3).The next week, we returned graded test paper to them and informed the average score and the score distribution of all participants. Then they answered a questionnaire asking causal attribution and emotions. (4).Two weeks later, an unannounced test was imposed which consisted of the same problems as the

first test. Results showed that, (1).conscientiousness correlated with preliminary effort ($r = .40^*$, * means $p < .05$), (2). agreeableness correlated with preliminary effort and test score(respectively, $r = .48^*$, $r = .44^*$), (3).performance approach also correlated with preliminary effort and test score(respectively, $r = .44^*$, $r = .38^*$), (4).neuroticism correlated with task-difficulty of causal attribution and negative emotion (respectively, $r = .46^*$, $r = .58^*$), (5).although score of an unannounced test correlated with extraversion and openness (respectively, $r = .37^*$, $r = .40^*$), there was not a significant correlation between each learning goal and retest score. These findings suggested that personality factor (big five) predicted achievement behavior of undergraduate students than perceived learning goal.

2827

Open pair educational technology and socio-psychological climate among students

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The study objectives are to investigate specifics of open pair learning settings, analyze the socio-psychological climate parameters in students engaged in the learning process from the perspective of soft skills development. To measure interpersonal emotional relations, level of psychological climate, group unity, etc., the following questionnaires were applied: Sociometry questionnaires; Diagnostic evaluation of socio-psychological climate in a work group; Evaluation of psychological climate in a study group; C.E. Seashore psychometric test; WAM (wellbeing, activity, mood); Self-esteem questionnaire. The transformative experiment was conducted during one academic year. Sampling population consisted of 60 students grouped out in one control group and two experimental ones. The obtained results show that psychological climate in experimental groups improved as compared to the baseline data, group unity index stayed the same, being above the average parameter. Behavior component is diagnosed as contradictory. Emotional and cognitive components are positive in all groups, which is confirmed by high academic performance and academic achievements. All groups succeeded in completing the assessment test in the content of the transformative experiment. WAM questionnaire results do not show significant differences in results obtained from the transformative experiment. However, it is possible to assume that the collaborative learning model can relieve stress and study load to some extent. The study results demonstrate the efficiency of the applied technology in realization of educational, and

social functions, which results in development of soft skills.

2481

Exploring factors behind the psychological resources of university students

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Growing number of studies support the idea that academic success is based on certain psychological resources beside cognitive abilities (Richardson, Abraham & Bond, 2012). As early university drop out is a widespread problem, it is increasingly important to explore which psychological resources can enhance learning, academic motivation and achievement. The goal of our study was to explore the psychological resources which are linked to academic achievement. Coping mechanisms, time perspective, self-esteem, mindset, motivation and test anxiety were measured using questionnaires in a voluntarily online study among first-year university students ($N1 = 979$; $N2 = 843$). Using exploratory factor analysis, four different factors of psychological resources were identified: focus on learning results, positive attitude toward life, future-oriented and rational, enjoyment of present. Significant differences were found in the factor scores between man and woman and among university faculties. Moreover, differences in the factor scores were found according to academic achievement: higher focus on learning results and higher future orientation was associated with better grades. These results indicate that training of the psychological resources would be important in preventing university drop out. The study was funded by the European Union (EFOP-3.4.3-16-2016-00014 project).

2456

Perspectives of professional support for students in Armenia

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Professional background is the main requirement for the formation of personality, and, consequently, the development of society on the whole. The choice of profession, professional self-determination at a younger age exerts its influence on a person's activity. The structure of professional self-determination is represented by a number of specific components. By psychological provisioning technology, we mean a set of measures aimed for the formation of professional self-determination, the development and implementation of their internal potential. In the process of psychological and professional self-identification, these technologies are used to formulate the effective

psychological portrait of a future specialist, develop professional skills, adequate representation of professions and self-actualization. The main issue of psychological support is the psychological evaluation of the learner and the provision of appropriate counseling by the psychologist-pedagogues. It enables to combine the knowledge gained during the education process with own abilities, to foresee own opportunities in the related field, to make a self-determination and effective choice for the particular profession. To accomplish all this, our scientific team has developed, localized and published materials and psychological assessment tools that are already being used effectively in educational institutions where our trained psychologist-pedagogues work. The trainings have been conducted both in Yerevan and in the higher educational institutions and psychological support centers of different regions of Armenia. It should be noted that the published materials have been not only approved by the Academic Council of YSU Faculty of Philosophy and Psychology, but also guaranteed by the order of the RA Ministry of Education. We can say that the results of our research allow us to provide the continuity of training through the recognition of relevant competences and to supplement the provisioning materials with new content and promotional tools throughout feedbacks.

2362

Project-based learning as a support to self-authorship development

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This paper presents the third and final part of a larger research on undergraduate student's self-authorship development, its relation with identity construction and teaching methods, with Mexican sample. This particular study aims to understand how Project-Based Learning (PBL), applied on an entire professional educational program, affects the development of undergraduate student's self-authorship. Self-authorship refers to the ability to think and decide based on one's own internal foundation. Using a biographical-narrative approach, nine volunteer participants were interviewed. Participants were all enrolled in a bachelor's degree program that employs PBL. In addition, participants were subscribed on different semesters and they have different age, what makes this a transversal study, describing different moments of development with different individuals. Results indicated that practical experience during professional education would exert distinct effects on students depending on self-authorship position they show. The study also concludes that PBL on its own does

not serve to move students into more sophisticated positions, but it can support incipient movement already underway.

2332

Career development programming for children in the U.S.: Current status & advocacy needs

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Objectives: The goal of this project is to identify best practices in elementary school career development programming (CDP), so as to inform state and school district policy and ensure that all youth receive a quality career development foundation to support their later college and career readiness. **Methods:** Using national school counselor employment data and school district geocode data, we used stratified random sampling to recruit a school counselor sample that was proportional by state and by geographic regions within states. Unique survey links were generated for each participant and alternates were pursued to replace non-responders to ensure a representative sample. **Results:** To date, 91 elementary school counselors have participated. Highlights of our results include the following: (1) 90% agree that there are benefits to early CDP (2) 65% wish they could spend more time on CDP (3) 50% experienced resistance by others to their CDP work (4) 74% receive support for CDP work, but 76% report at least 1 barrier to CDP (5) 71% had a career development course in graduate school; but only some of the time did that include CD activities for children. (6) Only 16% have engaged in any PD for CD work. **Conclusions:** School counselors in the Northeast region of the U.S. believe that there are benefits to providing CDP to elementary school students, include this work in their practice, and receive support for doing so. They are poorly prepared to do so by their training programs and continue to face challenges to their CDP work. Results indicate areas for professional development and advocacy.

2275

Professional self-presentation skills as a key component of music graduate employability

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Successful employability of university graduates is an important indicator of both quality of education and practical skills they may apply while navigating through a complex and highly competitive job labor market. Like many other universities around the world, Chernivtsi National University (Ukraine) emphasizes the importance of embedding

specific employability-based learning outcomes into curriculum. Recent studies review on graduates' employability, reveals that a diverse range of skills and personal qualities are required in order to be successfully employed nowadays. Effective personal presentation skills are among them. They are especially important to advance in the Performing Arts career. However, up today there are not many advanced studies about the crucial role of self-presentation skills for music graduate employability and their development through higher education. The purpose of this study is to develop and implement elements of effective self-presentation skills training into the university curriculum. Using a collaborative approach based on the principles of psychology and pedagogy, this hands-on toolkit aims to assist students in discovering their strengths and challenges. It encourages self-analysis and identifies the areas for self-improvement. It also equips students with confidence and effective self-presentation skills to peruse careers as musicians. The Professional Portfolio Method has been chosen to achieve these goals.

2242

The effects of intentional mind wandering on one's mood and the degree of incubation effect

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Research has shown that the incubation period, which is a temporary shift from an unsolved problem, facilitates the identification of the solution. This is called the incubation effect, and it has been shown that mind-wandering during the incubation period enhances this effect. However, some types of mind-wandering are also known to result in a negative mood. Recent research has shown that spontaneous mind wandering is a maladaptive tendency of humans as opposed to intentional mind wandering. Therefore, in order to find a way to enhance incubation effect while maintaining a positive mood, we induced intentional and unintentional mind-wandering among our participants during the incubation period and examined whether intentional mind wandering included more positive thoughts and lead to better moods as compared to unintentional mind wandering. Fifty-seven undergraduate students completed creative problem-solving twice and in between, they had an incubation period of 11 minutes. Before the incubation period, participants in the intentional mind wandering group were instructed to wander their minds freely, and the unintentional mind wandering group was instructed to not think anything. No instructions were given to the control group. We examined the contents of their thoughts and their moods using thought sampling method. Results showed that participants in the intentional mind wandering group thought about more positive things

during mind wandering and their degree of positive mood was higher than in the unintentional mind wandering group. However, there were no significant differences in the degree of incubation effect. Therefore, we conclude that intentional mind wandering during incubation period is effective in enhancing incubation effect while maintaining a positive mood.

2002

Factors related to the practical abilities of the nursery teachers in the picture book reading

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The practical ability of a nursery teacher is acquired through experiential learning. Sensitive sensing and accurately understanding the feelings and desires of children is a cognitive function which is one of the practical abilities required in the nursing. Especially, there are many situations in which nursery teachers deal with children not only on a one-on-one basis but also as a group. The cognitive function in such group situation seems to include the wide function unlike the one-to-one scene. In this study, we focused on the picture book reading as such a one-to-many group situation. The purpose of this study was to clarify the factors related to the practical ability of nursery teachers to read picture books. We recorded a situation using video cameras in which 5 teachers with a wide range of experience as nursery teachers from 4 to about 20 years read a picture book to about 20 children (3 to 5 years old). Two veteran nursery teachers watched the 5 video images and freely discussed what they felt. The speech content in the discussion were recorded. Co-occurrence network analysis by text mining was carried out for the speech content. As a result of the analysis, 6 subcategories were extracted: educational intention, action and feeling of the nursery teacher, trust relation with the children, problem action of the children, important things when reading a picture book, and natural reading. These subcategories suggest that factors such as whether the teachers read picture books according to the children's development, the importance of educational intentions and consideration from the child's point of view, important and necessary matters in the reading to children including technical aspects, and the connection between daily class management and problematic behavior of children were regarded as important as practical abilities of nursery teachers.

1903

Cultural-historical comparison of fathers' child-rearing in European school textbooks

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The purpose of this study is to examine the shifts of fathers' child-rearing behaviors displayed in the elementary school textbooks in Germany, France, England and Italy published in 1960 and 2010 through statistical analyses. These European countries have shared the same trend of increment in father's childcare participation in each society in the last half century. How has the gender role of parents to the children in school textbooks been transformed? The 452 case families in the texts were analyzed through the qualitative-analysis method. The results were as follows: (1) Though there were significantly more mothers' child-rearing than fathers' one in 1960, in 2010 there was no significant difference between fathers' and mothers' child-rearing with exceptions in Italy. (2) The fathers' "cooks for children" in child-rearing, which had been regarded as being a mother's main role, more frequently appears in 2010 in Germany, France and England. (3) Among them a remarkable characteristic is found in German fathers. In the 2010 texts they cooked for their children especially in divorce and dual earner families. (4) Though the frequency of Italian fathers' "playing with children" and "reading books by the children's bed" was higher in 2010 than in 1960, the "cooking for children" was not so high percentage even in 2010. These results indicate that the differences of changes in the gender role of fathers' child-rearing have been reflected in the textbooks for children. The German women's employment rate is the highest among these four countries, and the divorce rate is also high, and fathers often take over and raise their children in German society. The Italian divorce and women's employment rate is the lowest among these four countries. These different shifts of family styles and the women's social advancement may be correlated to the contents in school textbooks.

1877

Ranking assessment of the gratitude-expression skills scale using latent rank theory

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We defined Gratitude-expression skills as repertoires of verbal and nonverbal behavior with appropriateness of social situations and effectiveness of achieving interpersonal goals used to express feelings of gratitude when individuals received a benefit from others. "Gratitude-Expression Skills Scale" (i.e., GESS) measures various behavior to express feelings of gratitude as social skills in two factors. In the GESS, factor 1 has called gratitude expression with polite behavior, and then factor 2 has called gratitude expression by giving

gifts. The purpose of this study was to evaluate the gratitude-expression skills on the ranking assessment of GESS using latent rank theory (i.e., LRT). In this study, the GESS was responded by 321 participants on a questionnaire survey. The results of this study indicated that the latent rank structure of GESS could evaluate the gratitude-expression skills in three ranks. Rank 1 was gratitude expression such as "Thanks", smiling and sending a message on SNS. Rank 2 was gratitude expression such as saying the reason in "Thanks for" and putting "you" in "Thank you". Rank 3 was gratitude expression such as giving gifts, treating meals and repaying kindness. The ranking assessment of GESS using LRT showed that those who belonged to higher ranks in three ranks learned the repertoires of verbal and nonverbal behavior in the gratitude-expression skills. This study found out that the ranking assessment of GESS using LRT was able to evaluate qualitative differences about gratitude-expression skills. In future study, using the latent rank structure of GESS will enable researchers to effectively educate individuals to learn how to express gratitude in accordance with each individual rank in the inventions of social skills training.

1794

Can Socratic improve students' learning at an international English language centre in Malaysia?

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Computer technologies have been in classrooms for almost 40 years and a significant body of research has shown that technology-supported English Second Language (ESL) learning can have positive effects in terms of effectiveness compared to not using technology. Similarly, since the term Mobile Assisted Language Learning (MALL) was coined, smartphones have become ubiquitous in every aspect of daily life and the effectiveness of MALL was proven to have an overall large effect size indicating a strong beneficial effect on ESL. The current study aimed at investigating the effectiveness of Socratic quizzes in the classroom at an international English language centre in Malaysia. Furthermore, it also explored students' perceptions and expectations of technology in the classroom before and after the study. The findings revealed a significant beneficial effect of the Socratic quizzes on the students' final exam scores. Additionally, the questionnaire data showed that students were predominantly positive about technology to study English and highlighted a gap between what is expected and what is typically offered at international English language centres in Malaysia.

1592

The usage of projective methods in diagnostics of pupils' personal space

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Objective: to study the peculiarities of ideas about personal space among schoolchildren of different ages through projective methods; Methods: 1. Drawing "My personal space"; mini-essay "Personal space is..."; 2. The method of content analysis; 3. The method of expert evaluation; 4. Mann–Whitney U-test, Kruskal–Wallace analysis of variance. The study was conducted in the period of 2016–2018 with 130 pupils from Rostov schools (Russia) participating in it. Results: The ideas of children of primary school age about personal space comprise the following categories: the object (40%) and the natural world (16.7%), the social (13.5%) and the inner world (4.7%). The category "Inner World" prevails in older adolescents (47.5%), but no less significant for adolescents in their middle teen age (38.8%). For younger schoolchildren, this category is characterized by the least degree of expression (4.7%). The category "Object World" is most characteristic of younger schoolchildren (40%). The category "Social World" prevails among middle-aged adolescents (22.7%), including family, friends, and older adolescents (18.7%) include friends. Results: Quantitative analysis revealed that there are: – significant differences in the ideas about personal space between a group of children of primary school age and those in their middle teen age in the categories: "Inner World", "Object and Social World"; – important differences in ideas in the groups of primary school and older adolescents in the categories: "Inner and Objective world"; – there is a tendency of finding significant differences in the ideas about personal space between groups of middle and older adolescents in the category "Social World". So, the projective tasks were given to schoolchildren for inducing them into independent reflections in the form of drawings, essays, and thereby for studying the peculiarities of the project students' ideas about their personal space.

1464

Creating a scale to measure imaginary interactive learning tendency **Hideaki Shimada** *Shinshu University, Japan*

Students often learn interactively with peers or teachers to deepen their knowledge. We postulate that some students interact with imaginary persons and consider it to be real interactive learning even when learning alone. For example, they tell an imaginary peer what they learned to promote better understanding. The present study aimed to develop a scale measuring the imaginary interactive learning tendency. We conducted an online questionnaire survey for 667 Japanese college students after we created some items to measure imaginary

or real interactive learning tendency. The students were asked to provide responses on a four-point Likert scale ranging from 1 ("never") to 4 ("often") to items such as "I interact with an imaginary person who exists in my mind during learning" or "I feel that textbooks or workbooks talk to me like a human does," and so on. As a result, a factor analysis identified a 10-item scale that could measure imaginary interactive learning. The scale had adequate internal consistency ($\alpha = .88$), and criterion-related validity with real interactive learning tendency ($r = .47$) and the Japanese version of the Creative Experiences Questionnaire (Okada, 2004) ($r = .52$) were confirmed. The distribution of the scale showed that about 5% of the students had especially high imaginary interactive learning scores; high scores constituted those over 3.5. In addition, the scale correlated with some social learning strategies of text comprehension, namely, interaction with authors ($r = .50$), empathy for authors ($r = .39$), and imagining authors ($r = .57$).

1372

Development of supervisor professional identity for supervision students in Latvia

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The research purpose was to study the formation of a supervisor's professional identity in context of study motivation and involvement in the learning process. In total, 54 students who were at that time acquiring supervisor profession were surveyed. The participants of the study took part in surveys listed below: Questionnaire on demographic data; Questionnaire on motivation types and involvement, MES-UC (Motivation Engagement Scale-University/College, Martin, 2016); Questionnaire for supervisors (adapted from Questionnaire for supervisors, Vaivade-Kalmeiere, 2010; modified after Professional Identity Scale in Counselling, Woo and Henfield, 2015). Summarizing the results of the study, the author concludes that there is a statistically significant correlation between motivation, involvement in the learning process and professional identity of supervisors. The results show that there is a statistically significant negative correlation between the negative motivation scale "Anxiety" and the supervisor's professional identity scale "Knowledge about the profession". Also, results show that the 2nd year students have a statistically significant correlation between the positive engagement scales "Task management", "Persistence" and the supervisors professional identity Scale "Philosophy of the Profession, Supervisor Competence and Roles". In addition, the results show that there is correlation between the negative involvement scale "Disengagement" and the supervisor's professional identity scale "Engagement in professional

societies and activities". Since the results of the obtained data from the study show a relatively unconvincing connection that motivation and involvement in the learning process is a determining factor in the identification and development of the supervisor's professional identity, so the author recommends continuing the study with a larger sample size (for example, at the Baltic level), or to develop a continuous study on the basis of the existing study to identify the internal (personal) and external factors that influence the awareness and formation of the supervisor's professional identity during the study process at the university.

961

How to read textbooks? An action research on developing an interdisciplinary reading program

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The present study is from a larger research project exploring the friendliness/consideration of Taiwan textbooks in high school. Previously, it was found that students considered the contents per se were simple, but not easy to read. Surprisingly, those difficulties faced by students were not recognized by their teachers. Teachers believe that textbooks are easy texts and tend to provide more supplementary material, which creates more predicaments for students. These unshared perceptions indicate a strong need for textbook instruction. The purpose of this study is thus to utilize action research to develop an interdisciplinary reading program. I was invited by a local high school to offer an elective course for the 10th graders in 2017. To maximize the effectiveness of the program, I also invited three teachers with different academic backgrounds (history, biology, and language arts) to form the team. Although I was the major instructor, the team members met twice a month over lunch to plan the lessons and had regular informal conversations through the web-chat tool (e.g., LINE, FB, email, etc.). We collected four types of student data: pre- and post-measure of the interdisciplinary reading comprehension test, final paper, semi-structured interviews, and portfolio. Each session was also videotaped and discussed during the meetings. Although the course was offered twice, it went through an unexpected change. Not only was the course format gradually adjusted, but the roles each member played had also gone through an evolving change. Interestingly, when compared with the pre- and post-measures, it showed a significant improvement. The students' attitude toward the program, however, was ambivalent. To design a team-taught and interdisciplinary course was challenging. Both the team and the students grappled with the fact that although textbooks were written by experts, they may not be friendly or considerate enough. Further suggestions were provided in the paper.

938

Achievement goal contagion: Mastery and performance goals spread among classmates

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Achievement goals predict key school outcomes such as motivation, engagement, achievement, and socio-emotional functioning. The literature on the antecedents and consequences of achievement goals is vast, but little is known about how classmates shape one's own achievement goal pursuit. Drawing on the concept of goal contagion, the present study aims to test whether the achievement goals that students pursue are influenced by their classmates' goals. We recruited 848 secondary school students nested within 31 classes who answered relevant questionnaires at Time 1 and Time 2, seven months apart. Multilevel analyses provided evidence of goal contagion for specific achievement goals: mastery-approach, performance-approach, and performance-avoidance goals were contagious, but mastery-avoidance goal was not. Our study provides evidence for achievement goal contagion in the real ecologies of the classroom.

283

Comparing different scaling methods used for developing creativity tests based on experts' ratings

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Current creativity tests are criticized mostly because their contents are too abstract to measure real-life creativity and evaluation methods are either subjective or objective failing to compensate weaknesses of each method. The purpose of this study was to develop a contextualized creativity test that integrates strengths of both subjective and objective evaluations. The Creativity Test for College Student (CTCS) was developed by analyzing subjective assessments of the experts to develop standard scales using three different methods: the equal appearing intervals method, successive intervals method, and rank-ordering method. Three different scaling methods were checked for validity and interquartile range. The successive interval method was the only scaling method to satisfy both validity and interquartile range analyses. Furthermore, the successive interval method was the only method that reflected the inequality in scale intervals perceived by experts; these showed that the successive interval method was the most appropriate scaling method which integrated the objective and subjective evaluations on creativity.

194

Psychological analysis of the factors of successful student's learning abroad

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We suggest that the most important indicators of successful study abroad are stress tolerance, behavior malcoping, and student's resilience. The experimental group consisted of 50 first-year students, Chinese and Indians studying in the state universities of Kazakhstan. The control group consisted of 25 Kazakh first-year students of the same faculties. Research methods: Leipzig express test for chronic stress (K. Reschke, G. Schroder), R. Lazarus coping behavior questionnaire, resilience scale (Wagnild, G. M. & Young, H. M.). Statistical methods: factor analysis and Mann-Whitney test. Seven latent factors were identified in descending order of their importance for the students success in studying abroad: a high level of resilience, confrontation with negative emotions, the use of various coping behavior strategies, the presence of social and emotional support, a sense of control, the search for social support, and finding the meaning. In the control group, 5 latent factors were identified: experiencing negative emotions through the search for social support, distancing from problematic experiences, a high level of resilience, finding meaning in social and emotional support, accepting responsibility. A comparative analysis of the two groups showed that accepting responsibility as behavior malcoping is more typical for Kazakh students, and planning to solve a problem is for Chinese and Indian students. Thus, the posed hypothesis was confirmed suggesting the success studying of students abroad is influenced, first of all, by a high level of resilience.

103

Guidelines for promoting organisational resilience in South African schools

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Recently, scientific literature began focusing on educator resilience, leading to an increase in international research on this topic. The body of literature is particularly interested in the factors that sustain educators, despite demanding work conditions. South African literature indicates that schools can become dysfunctional within an ineffective organizational climate. Therefore it is suggested that resilience

is important for South African schools to function and compete effectively. The aim of this critical review will be to provide a comprehensive account of resilience within the school setting (international and national), by reviewing what has been investigated and or written since 2008, with the main purpose of making suggestions on how to promote organizational resilience within South African schools. The search initially yielded 740 research studies of which 12 were finally extracted for thematic analysis. Four main themes emerged: importance of leadership; improving school climate/culture; creating a supportive work environment; and ethics of care. The findings suggest a circular model for school organizational resilience. This circular model delineates the interdependent relationships between each of the extracted themes. The researchers suggest that the basic education sector of South Africa should take note of this model, when they want to maintain or improve organizational resilience.

102

Positive psychology interventions in schools: A critical review

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Positive psychology interventions (PPIs) within the school setting are used to improve mental health and well-being of learners and educators. This is in alignment with the need for schools to acknowledge learners in a more holistic way, assisting learners to flourish psychologically, socially and academically. Although there is plenty research and publications on PPIs in schools, this study has performed a critical review of literature of studies of PPIs in schools in order to synthesize findings and allow for a clearer empirical understanding of this phenomenon. The research aimed to determine the effectiveness of PPIs in schools, the usefulness in underdeveloped settings and whether PPIs would be effective if implemented in South Africa. For this critical literature review, computerized searches were conducted on various databases for peer-reviewed scientific literature which had implemented PPIs in schools. A method similar to SALSA (Search, Appraisal, Synthesis and Analysis) was used for the search and analysis processes. A final sample of 18 published works was included into this critical review. The data was analyzed thematically, and the following themes were identified for the effectiveness of PPIs in school settings: Intrapersonal well-being; Interpersonal well-being; Feeling happy; Enjoy, engage, and excel at school; and Context of PPIs reviewed. The study concluded that PPIs were indeed effective in various settings as well as some in underdeveloped settings, and following the right guidelines would be effective if implemented in South Africa.

65

Predicting academic success: Towards granular race and gender admission models

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The study aimed to develop a model predictive of academic success, based on variables assessed during the admission process and the relationships of the variables with academic progress and academic success measured over a period of six years at a South African university. Astin's I-E-O model (1991) provided a logical framework for this study to assess relationships between variables, as the model promotes the study of several variables simultaneously through multivariate analysis of complex interactions. The study investigated if school exiting results and admission tests were significant predictors of academic success after the first-year grade point average and of final academic grade point average measured over a period of six years while taking into account different race and gender groups. The relationship between FYGPA and FinCumGPA was also assessed in order to develop an integrated model predictive of academic success. The results of this study highlighted the reality of significant inequalities in university outcomes between different race and gender group. The disaggregation of the dataset ($N = 3418$) into

different race and gender groups revealed to be useful and necessary as differences in mean scores of the predictor and criterion variables were observed and vastly different predictive models were presented for students of different race and gender subgroups, indicating that an overall model to predict academic success for all students is not appropriate. The results of this study should be interpreted in the context of access to guide admission decisions, and to develop policies and rules that are fair, equitable, reliable and justifiable in terms of the ability and probability of students to succeed while taking into account individual differences in prediction models for students of different race and gender groups.

33

Different types of argumentative resolutions in university students

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 IRICE-CONICET-UNR, Argentina

Within the framework of socio-cognitive interaction, argumentation is understood as a psychological process that supports and induces reasoning and learning. So argumentation is a target for researchers who highlight the importance of social and cognitive processes in learning. In the context of social interaction among university students, different types of arguments are analyzed according to group size (28

dyads and 11 triads) and the type of task (reading of frequency tables, causal explanation of physical phenomena, dilemmatic moral situation and causal explanation of social phenomena). 89 social sciences students of National University of Rosario participated. The groups were formed from the results of a pre-test that ensured the heterogeneity of points of view between participants. A quasi-experimental design was performed in which effects of the two variables (group size and type of task) on the argumentation were analyzed. Three types of argumentation are described: authentic dialogical argumentative resolutions, individualistic argumentative resolutions, non-argumentative resolutions. The results indicate that individualistic arguments prevail in dyads. That is, although people express their own arguments, there is no authentic argumentative interaction. By contrast, the authentically dialogical argument prevails in triads, showing a feedback between participants' points of view. It was observed that, in general, the type of task generates specific types of argumentative interactions. Finally, it is important to stress the value of dialogical argumentation in educational domains. The argumentative function allows a metacognitive reflection on one's point of view and the benefit of the exchange of points of view in interactive contexts.