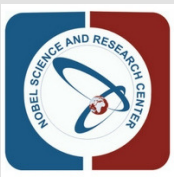


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BOOK OF ABSTRACTS



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DEVELOPMENT OF MALAYSIA INTEGRATED HIGHER EDUCATION RATING FOR UNIVERSITY AND UNIVERSITY COLLEGE

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Abstract:

Ratings of Higher Learning Institutions is one of the key initiatives outlined by the Malaysia Education Blueprint 2015-2025 (Higher Education). The aim of this paper is to describe the methodology used in the development of the newly integrated higher education rating instrument SETARA-2017. The process includes the evaluation on the current rating instruments used, and to produce a rating instrument that is able to evaluate university / university colleges at institutional level and university core business including teaching, research and services. The new SETARA-2017 is developed based on the need for the universities and university colleges to build strong fundamentals on three core functions that is Teaching and Learning, Research and Innovation and Services to Community and Industry. SETARA-2017 was also developed to complement research rating for Malaysian universities and university colleges i.e. MyRA. While MyRA only focuses on research performance, SETARA-2017 was developed to capture the overall performance of the higher learning institutions (HLIs) in three core functions of universities. The core functions of university and university colleges are to impart, generate and share knowledge. These functions are fundamentals to the university missions which are directly related to teaching and learning, research and innovations, and services to community and industry.

Keywords: Higher Education Ratings, Teaching & Learning, Research And Innovations, Services To Community & Industry

**This study is supported by the Ministry of Higher Education of Malaysia*

CONSTRUCTION AND VALIDATION OF AND INSTRUMENT TO EVALUATE SPECIFIC AND GENERAL COMPETENCES OF PSYCHOLOGY STUDENTS AT AND UNDERGRADUATE LEVEL FROM UNIVERSITIES IN PUERTO RICO

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Abstract:

The study of competences in higher education is an issue that has been raised in the 21st century thanks to the new demands of the labor context. Also, accredited agencies like the Middle States Commission of Higher Education are requiring new assessment methods to evaluate student learning experiences and competence development. The objective of this study was to construct and validate an instrument to evaluate the specific and general competences of Psychology students at an undergraduate level from Universities in Puerto Rico. The Q-sort methodology was used to analyze content validity by locating the most important competences identified by 14 university professors. Of the 40 specific and general psychology competences created for the Bachelor of Science in Psychology of the Carlos Albizu University, only 6 competences were found to be most important and statistically significant ($p < 0.01$). The analysis of the construct validity, item discrimination, monotonicity, dimensionality, instrument difficulty and instrument reliability were based on the item response theory (IRT) through the application of the mathematical model of Rasch. The instrument was validated with a sample of 85 University students, demonstrating a Cronbach's Alpha reliability index of 0.98. Also, Analysis of Variance showed statistically significant differences between the average specific and general competence scores obtained by students according to the University in which they study, $F(4,80) = 4.13$, $p < 0.05$, $\eta^2 = 0.17$, and according to the state of work, $F(2,82) = 3.186$, $p < 0.05$, $\eta^2 = 0.07$.

Keywords: Competences, Psychology, Rasch's Model, Higher Education, Puerto Rico

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EXAMINATION OF FOURTH GRADE STUDENTS' PROBLEM POSING, SOLVING AND STORFYING SKILLS OF GIVEN MATHEMATICAL EXPRESSION

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Abstract:

Mathematical problem solving is a cognitive process in which students often have difficulties. According to Polya (1957), problem solving process has four phases, i.e., understanding the problem, devising a plan, carrying out the plan and evaluation, respectively. Problem posing exercises are one of the evaluation ways of problem solving.

Because improving students' creativity and mathematical thinking are crucial skills in the revised curriculum, Gonzales (1998) added problem posing as a fifth phase to Polya's four phases methodology. In problem posing, numbers and operations are given to students and they are asked to create a problem using these elements. Therefore, problem posing is expected to develop higher-level skills. Because of this, it is required to focus on problem posing skills in addition to improving problem solving skills. In the related literature, storyfing is considered as a method to develop students' problem solving skills.

First, a mathematical expression was provided to students. Then, students were asked to create, storfy, solve, and draw a model appropriate to the problem. Hence, this study's purpose was to evaluate each process given above.

The participants were 31 fourth grade students (16 male) in primary public school located in Tuzla, Istanbul. The stories written by students will be analyzed with content analysis; students' problem solving approaches and problems posed by them will be analyzed with rubrics prepared by researchers. The findings and results will also be discussed later.

Keywords: Problem Solving, Problem Posing, Storfyng

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LISTENING COMPREHENSION STRATEGIES AND INDIVIDUAL DIFFERENCES

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Abstract:

In Turkey, there is a great dissatisfaction with the listening comprehension activities at universities. Students have difficulties in understanding the spoken language. As a result, this study aims to investigate the use of listening comprehension strategies by the students studying at preparatory schools of universities in Ankara, Turkey. Additionally, this descriptive study also investigates the relationship between the use of listening strategies and some individual differences such as gender, level of English, and listening performance of students. To this end, a descriptive study was designed and conducted with 200 preparatory school students studying at the preparatory schools of universities in Ankara. The study was conducted in 2017-2018 academic year. The related literature was reviewed and data were collected through a questionnaire which was prepared to get information about the relationship between listening comprehension activities and individual differences. The quantitative data collected through questionnaires were analysed through SPSS 22. According to the quantitative analysis of the data, it was found out that there were significant differences in the use of note taking and prediction strategy types during the listening task. On the other hand, no statistically significant relationship was found between the listening comprehension strategy use and the listening comprehension achievement.

Keywords: Individual Differences, Listening Comprehension Strategies

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EFFECTIVE USE OF EDUCATIONAL SERVICES AND LEARNING TECHNOLOGIES IN MUNICIPALITIES: THE CASE OF YILDIRIM MUNICIPALITY

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Abstract:

In municipalities, which are the most important part of local governments, the implementation of “social” services besides classic municipal services is increasingly accepted all over the World. Municipalities increasingly attach importance to education and learning activities and services within the scope of social municipalism in Turkey. In this context, municipalities have differences from each other, they implement many projects related to the education of their citizens. These projects range from the pre-school, primary and high school levels to post-secondary preparatory courses, language courses and vocational courses open to all classes of the society. Within the framework of adult education, educations that give the certificates of specialization which gain profession and income for the people, have been organized by municipalities intensely.

While municipalities carry out their services and projects in the field of education and training, they also benefit from new teaching technologies. In parallel to digital transformation in education, not all municipalities are at the same level, but some municipalities are going to benefit from digital education and advanced technology.

Bursa Yildirim Municipality is trying to be active in almost all areas of social municipalism. One of these areas is education and training services. Yildirim Municipality has realized projects in the last four years in this field. In the execution of these projects, the municipality, which is endeavoring to use the contemporary technologies, benefits from multiple digital learning environments such as social media, advanced technologies in teaching, digital media facilities and GSM.

It is investigated municipalities’ tendency to use educational studies and learning technologies in the case of Bursa Yildirim municipalities in this study. The aim is to provide a scientific and descriptive framework about how municipalities’ present their services on which conditions, whom and how much effective through the sample. The study includes the application phase after the theoretical explanations. The implementation phase involves a four-year period from April 2014 to April 2018. The result of this scientific research is intended to show that education and training services for municipalities have become an increasingly important service area. Another consequence is that when the use of these services will be more effective and widespread, it will have a significant contribution to the teaching technologies. Digital education has an increasing validity in every field and every level at present.

Keywords: Municipalities, Education Services, Learning Technologies, Digital Education, Yildirim Municipality.

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EU VOLUNTEERING PROGRAMME AS A DIFFERENT LEARNING EXPERIENCE

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Abstract:

Volunteer is a person who works for an organization without being paid. This paper presents advantages of EU Volunteering program which has been started approximately 30 years ago. It is the program for young people between the age 17-30 years old. Under this program young people can go to another country for 2-12 months as a volunteer. This program help young people and youth workers to develop their proficiency with common method of learning, active citizenship, entrepreneurship and increase their ability to cope with problems. Volunteering another country is a different learning experience and is another way to learn different culture, meet new friends. Volunteer also help to the host organization for their project. It is also a great way to improve key competence skills for young people.

Volunteering action takes place between two organisations named sending and hosting. For involving a volunteering action as a youth It is necessary to get acceptance from a host organization which also has a EU supported project. and . Most of the arrangements made by host organization for example accommodation, daily plan, language course etc. Volunteer also get some pocket money for their personal spendings.

This paper gives brief information about EU volunteering programmes and a guidance for young people who intent to be a volunteer.

Keywords: Volunteering, Informal Learning, EU Programme

**The research was supported by 2018KKP283 PAUBAP project Pamukkale University, Turkey*

A STUDY ON APPROACHING STRESS AS AN ADVANTAGE

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Abstract:

Stress is an integral part of everyday life which is usually perceived as unpleasant feeling. It influences our body, thoughts, feelings, and behaviors (panic, nausea, social withdrawal, anxiety etc.). Our body is designed to experience and react to stress and the intensity of stress which we experience depends on the demands, uncertainty of the outcome and the importance of the situations. Even though we are tend to associate it with negative symptoms, by focusing on the positive aspects of stress, we might use it to our benefit when it comes to building motivation, resilience and taking risks that leads us to our goals. Certain amount of stress might lead us to take an action and experience less fear toward change. It might help us gain experience and confidence to cope with future stressors. It also improves focus and memory. Stress provides us strong motivation to work harder and adapt the difficulties better when it is short-time and used in our advantage instead of avoiding. Considering stress as something which helps us to do best we can, question what we need and warn us when things don't work out at the moment would help us benefit the good sides it. How we percieve stress shapes how it influences us.

Keywords: Stress, Stress Management

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WHAT DO STUDENTS THINK ABOUT THE USE OF MOBILE AUGMENTED REALITY APPLICATIONS IN THE SEVENTH-GRADE "SOLAR SYSTEM AND BEYOND" UNITE ?

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Abstract:

Given the educational potentials offered of AG applications, it becomes important to integrate this technology into science teaching and to study the applicability and effectiveness of the technology in the classroom environment. In this study, it was aimed to investigate the opinions of the students about the teaching activities supported with AG technology in the seventh grade Solar System and Beyond unit. This is an action research for being done to understand the problem of the teaching and learning in teacher's classroom and to investigate the influence of innovative practices. It began with the presentation of AG implementations to the study conducted with 60 seventh grade student in a state school in the district of Dilovasi, Kocaeli province in 2017. From the activities envisaged in the program over a six-week period; Space Adventure, Star Tracker; solar system concept iSolarsystem, Space 4D; Space research was supported by AG applications such as Spacecraft 4D and Astronaut. A questionnaire consisting of open-ended questions was prepared by the researcher and aimed to determine the views of the students for the AG applications.

Students who recognise AG applications thanks to lesson activities, expressed their liking for this application very much because they saw it for the first time, how different and astonishing the celestial objects they investigated through this application, they felt themselves in outer space. The students about AG activities stated that most like from the activities that are being realised as now are that the planets look more realistic and create opportunities for them to look, touch and examine the planets as they wish.

Keywords: Ag Application, Solar System, Science Lesson

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TEACHERS' OPINIONS AND RECOMMENDATIONS FOR THE USAGE AND ACCESSIBILITY OF MATERIALS FOR AURAL TESTS IN THE ABRSM'S MUSIC EXAMINATIONS

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Abstract:

This research is intended to determine teachers' opinions and suggestions on the effect of materials recommended for the aural tests administered by The Associated Board of the Royal Schools of Music (ABRSM). The Associated Board of the Royal Schools of Music has been examining the leveling exams for the instruments and also music theory since its foundation in 1889 in London. Leveling exams are available for applicants around the world and are in effect in Turkey since 1990. These exams help motivate students at all ages and levels, also enable professionals and amateurs to develop musical skills and fulfill their potentials. In this study, the aural tests materials applied for the first 5 grades in the Associated Board of the Royal Schools of Music examinations were examined and it was decided to carry out this study due to its benefits to literature. Open-ended questions, prepared by taking expert opinions in this study, were asked to 20 teachers and the data obtained as a result of the evaluations were examined by content analysis based on the qualitative research approach. As a result of this research, the usage and accessibility of the materials were evaluated and the opinions and recommendations of the teachers were presented.

Keywords: ABRSM, Aural Tests, Materials, Qualitative Research, Teacher's Opinions And Recommendations.

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CONSTRUCTION AND VALIDATION OF A TEACHER-REPORTED BEHAVIORAL CHECKLIST FOR STUDENTS WITH LEARNING DIFFICULTIES

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Abstract:

It is well documented that students with learning disabilities usually display behavioral issues, contributing to further academic underachievement. For the provision of the appropriate psychoeducational support, it is essential that these behaviors be systematically recorded from teachers in order to effectively managing them. Behavioral checklists are more objective and effective tools because they provide continuous feedback about student's behavior, link behavioral and academic support, provide effective classroom management and lead to the provision of appropriate interventions for the improvement of the targeted behavioral issues. Due to the absence of behavioral validated checklists in Greek inclusive settings, this study aims to construct a behavioral checklist that can be used by the teachers and special education teachers to record the behavioral issues of students with learning disabilities in the typical classrooms or resources rooms. The construction of a teacher-reported, four-scale Likert-format checklist was based on the extensive study of the international literature associated with the behavioral issues of students with learning disabilities, such as, inattention, non-compliance in classroom rules, problems in their relationships, the motivation to participate in learning activities in classrooms. In addition, the present investigation has studied the face and content validity of this checklist. The preliminary results shows that the four more important clusters emergent were the social skills, the inattention and lack of motivation. The consideration of the strengths and limitations of the present research is relevant for further validation.

Keywords: Development, Behavioral Check List, Informal Detection, Learning Difficulties, Behavioral Issues

**Hellenic Foundation of Research and Innovation and General Secretariat for Research and Technology*

OPINIONS AND KNOWLEDGE OF THE MOTHERS' OF YOUNG CHILDREN WITH DISABILITIES INTERMS OF CHILD ABUSE

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Abstract:

Child abuse is a subject that is always on the agenda of societies and, attracts attention with its sociological, psychological, medical and legal aspects. Abuse is especially prevalent in children's studies and it is known that the young children and children with disabilities are at risk of being abused. The researches related to child abuse in Turkey, mostly examined the knowledge, opinions and approaches of individuals in society, health workers, teachers, school administrators and parents according to child abuse. These studies revealed that the participants had a basic knowledge of child abuse, but the types of child abuse is not known and the mothers' and fathers' reactions to the abuse situations which is expressed by the child, are different. It is especially important that the mothers' of children with disabilities have sufficient knowledge about this subject and, to determine how aware and informed the mothers' of children with disabilities interms of 'if the child is abused' and 'what to do when the child is abused'. This is also necessary to start some trainings for the parents and establish the legislations. In this phenomenological study, semi-structured interviews were conducted to determine the opinions and knowledge of the mothers' of young children with disabilities interms of child abuse issue. The children of the mothers' were all attending a special rehabilitation center in Istanbul and the interviews were conducted face-to-face in the rehabilitation center. The responses of the interviewees were recorded for transcribed verbatim. The results will be discussed at the presentation.

Keywords: Child Abuse, Young Children With Disabilities, Phenomenological Study.

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FLIPPED CLASSROOM TECHNIQUES IN STATISTICS COURSES AT UNIVERSITY LEVEL

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Abstract:

Z-generation started to arrive at the universities everywhere in the world . As their attitude and motivations is different compared to earlier generations the teaching methodology should be changed to meet their needs. It is observe that they need much more chance to interact in the classroom, however thin interaction must be forced. They are less able to understand the long-term effects of their studies. Flipped classroom techniques, methods and tools can be very useful to improve the effectiveness of their studies. The balance of the responsibility of their studies must be pushed toward them, so they will be able to handle their future life responsibilities as well. If the students are motivated to study before they meet the professor, there is a chance in the classroom for a real discussion of the topics.

The aim of this presentation is to introduce the experiences of the flipped classroom teaching methodology in statistics courses at our university. Several tools and ideas of this methodology have been applied in a course called Business Statistics for different second year bachelor students for three semesters. Detailed feedback of the students are available and the differences of their performance with previous students' results are also analysed.

Keywords: University Teaching, Flipped Classroom, Interactive Learning

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INTRODUCTION OF SMART INDUSTRY CONCEPTS TO VOCATIONAL COLLEGE STUDENTS OF MECHATRONICS WITH EMPHASIS ON ECONOMIC EFFECTS

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Abstract:

The year 2011 is considered the official start of 4th industrial revolution. The concept of smart industry itself brings new concepts and ideas. Production automatisisation and higher level of customer needs satisfaction and lower production costs are the key goal of 4th industrial revolution. It is important that vocational college students of mechatronics learn about these concepts today since they will be production focus for majority of their professional aspect of life. One of the prognosis for the companies of the future is that some parts of production will be organized for standard products some part of production will be for individualized products. Today we are witnessing automated and robotized systems implemented not only in work areas where safer work environment or economy of numbers is required but also within work areas that were not automatized before. Smart industry has emphasis on economic benefits as well. We learned about lean production, KAIZEN, cost/effect as well as CSI aspects within the 3rd industrial revolution. Today we have to discuss sensing, efficient data collection, device to device communication, high speed communication, simulation, statistical models and artificial intelligence. The new production environment creates new value through 3 zones of improvement that are productivity, quality, safety. The emphasis of smart industry is also on OEE – overall equipment effectiveness. By measuring OEE we can gain the information on loses, benchmarking process and improving the productivity of manufacturing equipment.

Keywords: Smart Industry, Productivity, OEE, Benchmarking Process

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TRANSITION FROM TECHNICAL IDEA DEVELOPMENT TO BUSINESS PRODUCT MODEL

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Abstract:

Technical vocational high schools are known to be treasure houses of new product ideas. This can be said Secondary school of Technical Professions in Ljubljana, which has over 900 students, predominantly male, since we have only 4 female students. Our mechatronics students are acquainted with technical novelties, but are less motivated to develop business models. Some of them are personally quite introverted, and therefore presentations and promotions of business ideas is not something that they would normally volunteer to do. However, with appropriate preparation and motivation, even technically-oriented students can understand, why the customer demands and production costs are important, and why they have to consider visual aspect of a product, as well as the marketing and branding of a product.

Firstly, the students draw their personal coat of arms which includes their preferences. By analysing the coat of arms, we establish preferences important for their business ideas. Every student is required to write 20 words that represent his/her personal qualities so we can discuss the possibilities of these qualities in a business environment. Only then can we start to form groups of 2 to 4 students that will work together in order to develop the business idea. Experience shows, that the development of a business idea is not a problem, but it is the understanding that technical features have to comply with the customer's demands and that cost management is important, which often proves to be problematic.

Keywords: Coat Of Arms, Motivation, Student Qualities,

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MANIPULATIVE USE IN FIRST GRADE MATHEMATICS

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Abstract:

This short-term small-scale study investigated several concrete and virtual manipulatives and tablet apps in first grade math instruction and pupils' reactions and interactions with these math tools. This study is part of a broader project focused on evaluating concrete and virtual manipulatives in primary mathematics and creating a practical manual for primary school teachers. The main focus of this study was to observe pupils' reactions and interactions when using specific manipulatives and apps for learning new concepts for the first time. The study was conducted in a primary school located in a small town ca. 50 km from the capital. A total of 23 first-graders took part in a one-week instruction during their regular math classes. They hadn't used tablets or interactive whiteboard at school before and the only manipulatives they had used before were beans, nuts and abacus. The qualitative data include video-recordings of lessons, observations, class teacher's notes, lesson plans and an interview with the class teacher. The aim of selected concrete and virtual manipulatives was to facilitate learning through visualisation of addition up to 20. Most of the pupils quickly understood the concepts and used the manipulatives for problem solving. However, some pupils invented their own strategies for using the tools or tried to solve the arithmetic problems mentally instead of using the manipulatives, although they couldn't solve the problems mentally yet. In the article we analyse and discuss these observations.

Keywords: Concrete And Virtual Manipulatives, Addition, First Grade

**This study has been supported by a university grant number UK/226/2018 and project APVV-15-0378.*

THE MOTIVATION OF TEACHERS FOR PROFESSIONAL DEVELOPMENT AND CAREER GROWTH IN THE CZECH AND SLOVAK REPUBLICS

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Abstract:

The system of teachers further education is an essential opportunity for countries to increase the teaching competencies of teachers effectively. However, the functionality depends on how the system further education motivates teachers to increase pedagogical competencies through it. The article puts it in context the results of the research conducted in 2017/8 in the Czech Republic with the research conducted in 2016/7 in the Slovak Republic. The research uses a qualitative approach, as a design chooses a grounded theory, and as a method, focussing on the focus group. The discourse of teachers, which represents the consistent result of the individual and intersubjectively shared transformation of reality, is examined through mirroring the model formed in focus groups. The results indicate that the absence of a career growth system in the Czech Republic has no impact on motivation for career growth. In both countries, teachers do not consider career growth as motivating mainly because of doubts about the proven quality, the criteria of the quality of teachers in the individual career stages or their classification. In the field of professional development, the primary motivation of teachers is further to educate themselves and their pupils. The ambition of the law to externally motivate teachers to increase their knowledge often unfortunately only leads to the motivation for participation in the institutions providing this education.

Keywords: Motivation, Teacher, Professional Development, Career Growth, Modelling In The Focus Group

**The study was supported by the Charles University, project GA UK No 1110716*

THE ROLE OF ACADEMIC RESILIENCE BETWEEN ACADEMIC BURNOUT AND TEST ANXIETY OF HIGH SCHOOL STUDENTS

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Abstract:

The purpose of this study is to examine whether individuals' life satisfaction, self-esteem, and social commitment differ from each other according to gender, ethnic and religious differences. Participants of the study were 310 university students, 218 female and 89 male. The data of the study were collected with the Life Satisfaction Scale, self-esteem scale and social commitment scales. The data of the study were tested by one way analysis of variance and t test. In addition, skewness, kurtosis, Cronbach alpha, mean and standard deviations were calculated for the descriptive analyzes of the study data. As a result, according to the gender of the students, life satisfaction and self-esteem were found to be significantly different from each other. According to the classes of the students, was significantly different the self-esteem. According to the political views of the students was found significantly different only life satisfaction. According to the ethnic structure of the students, there is a significant difference in life satisfaction. Moreover, according to the religions of the students, a statistically significant difference was found in life satisfaction. In the study, according to the classes of students, political opinions, ethnic and religious characteristics, self-esteem, life satisfaction and social commitment were discussed.

Keywords: School Burnout, Test Anxiety, Academic Resilience

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THE LIFE SATISFACTION SELF-ESTEEM AND SOCIAL COMMITMENT ACCORDING TO SOME PSYCHOSOCIAL VARIABLES

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Abstract:

The purpose of this study is to examine whether individuals' life satisfaction, self-esteem, and social commitment differ from each other according to gender, ethnic and religious differences. Participants of the study were 310 university students, 218 female and 89 male. The data of the study were collected with the Life Satisfaction Scale, self esteem scale and social commitment scales. The data of the study were tested by one way analysis of variance and t test. In addition, skewness, kurtosis, Cronbach alpha, mean and standard deviations were calculated for the descriptive analyzes of the study data. As a result, according to the gender of the students, life satisfaction and self-esteem were found to be significantly different from each other. According to the classes of the students, was significantly different the self-esteem. According to the political views of the students was found significantly different only life satisfaction. According to the ethnic structure of the students, there is a significant difference in life satisfaction. Moreover, according to the religions of the students, a statistically significant difference was found in life satisfaction. In the study, according to the classes of students, political opinions, ethnic and religious characteristics, self-esteem, life satisfaction and social commitment were discussed.

Keywords: Life Satisfaction, Self Esteem, Social Commitment, Ethnic, Religion

**Pamukkale University*

FORMATIVE ASSESSMENT IN THE TEACHING OF NATURAL SCIENCES, MATHEMATICS AND INFORMATICS

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Abstract:

The article discusses the national project VEGA Formative assessment in the teaching of natural sciences, mathematics and informatics registration number 1/0265/17, which is aimed at design of formative assessment tools to enhance understanding and development of inquiry skills. Formative assessment tools were implemented into science, mathematics and informatics education within inquiry-based and project-based education. The research aimed at identifying the impact of their implementation on students' learning, in the field of understanding and inquiry skills is conducted.

One of the scientific goals of this project was develop formative assessment tools (teacher, peer and self-assessment) for inquiry-based science education (IBSE) integrated into the structured system of teacher materials. These materials are aimed at development of scientific literacy and elements of inquiry on the basis of the analysis of available assessment tools and results of mathematical and scientific literacy measurement.

Article informs about the results of research aimed at suggest recommendations for the use of IBSE enhanced by formative assessment tools based on the results of pedagogical research in order to help to solve problems indicated by the international PISA measurements.

This article was created in the framework of the National project VEGA Formative assessment in the teaching of natural sciences, mathematics and informatics reg. number 1/0265/17 and in the framework IT Academy – Education for the 21st Century, which is supported by the Europe an Social Fund and the European Regional Development Fund in the framework of the Operational Programme Human Resources.

Keywords: Formative Assessment, Inquiry Based Learning, Project Based Learning

**Project VEGA Formative assessment in the teaching of natural sciences, mathematics and informatics reg. number 1/0265/17*

INNOVATION OF CONTENT, FORM AND METHODOLOGY OF CHEMICAL LABORATORY PRACTICES FOCUSING ON THE WORK MARKET

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Abstract:

Human society has changed more than ever before over the last fifty years. Our lifestyle and labour market have changed and employers' requirements to young school leavers (their potential employees) also have been changed. Workers in the 21st century must have the skills to process information, including reader literacy, mathematical literacy and problem-solving skills. Today, the school is only one of the places where students learn.

In this context, the role of dialogue between schools and employers is increasingly recognized. These time requirements should also be addressed to educational institutions in chemical professions. The subjects of practical education in the area of natural education are crucial for the readiness and applicability of graduates in the labour market. Based on these requirements, in cooperation with employers, we innovate practical lessons at bachelor level in all study fields, inorganic, analytical, physical chemistry and biochemistry, focusing on the requirements of practice.

At the conference, we will present new content, forms and methods of practical training of individual chemical departments in order to develop the scientific and digital competencies of graduates needed for employment in the labour market.

Keywords: Chemical Laboratory Practices, Labour Market, Forms And Methods Of Practical Training

**This work was supported by the Ministry of Education, Science, Research and Sport of the Slovak Republic under the grant KEGA 008UPJŠ-4/2018*

INVESTIGATION OF THE RELATIONSHIP BETWEEN PARENTAL ATTITUDES, EMPATHY AND AUTHORITARIAN TRENDS

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Abstract:

When the related literature is examined, it is seen that studies on the relationship between parental attitudes and children's empathy skills have been made. In these studies, it is seen that more authoritarian parental attitudes are also observed. However, it is seen that there is no study which includes the relationship between the individual's authoritarian tendency, empathy and individual's perception of parental attitudes. In this study, the relationship and interaction between authoritarian tendencies and empathy levels of university students and the parents attitudes of university students are examined. A quantitative and relational model was used to investigate the relationship between variables in this research, which explores the relation between the authoritarian tendencies, empathy levels and perception of the individual's parental attitudes. The sample of the study consisted of 297 students determined by cluster sampling method among Marmara University undergraduate students of the 2016-2017 academic year. In the study, Abbreviated Perceived Parental Attitudes Scale-Children's Form (KAST-C), Basic Empathy Scale and New General Authority Scale were used as data collection tools. In the study, the relationships between the measurement tools will be examined. Also it is aimed to determine causal relations between direct and indirect effects between path analysis and underlying processes surrounded by hidden structures. The perception of university students about parental attitudes, authoritarian tendencies and empathy will be examined according to demographic characteristics of university students.

Keywords: University Students, Parental Attitudes, Empathy, Authoritarian Trends

**This study is supported by Scientific Activities Support Program of Marmara University*

INTRODUCTION OF NEW ANALYTICAL AND EXPERTISE PROCEDURES INTO CHEMICAL LABORATORY PRACTICE WITH DIRECT COOPERATION OF POTENTIAL EMPLOYERS OF CHEMISTRY FIELD LEAVERS

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Abstract:

During the last 25 years, the rapid development of the progressive technologies has a great influence on the human society. This implies the employers' demands for young school leavers with skills valued in the labor market. A good Chemistry degree opens the door to an extensive choice of careers, however school-leavers lack essential workplace skills. Today, universities provide a broad and balanced academic curriculum, however the students lack of skills. Matching employers' needs, universities modify study programmes to prepare young people for work while gaining core qualifications. The dialogue between schools and employers is crucial in this process.

Based on these requirements, in partnership with potential regional employers, we innovate practical lessons at bachelor level in all study fields, inorganic, analytical, physical chemistry and biochemistry to equip our graduates with the workplace skills to make them an immediate asset to employers. The aim of the innovation process is to involve potential industrial employers into the teaching process and the preparation of students for the labour market.

The innovate analytical and expertise methods, forms and content of laboratory practice training applied at individual chemical departments in order to provide school leavers with hands-on experience of the workplace alongside study, and access to the qualifications which students need for employment were presented at the conference.

Keywords: Chemistry, Education, Laboratory Practice, Innovation

*KEGA 008UPJŠ-4/2018

A STUDY ON HIGH SCHOOL STUDENTS' ACHIEVEMENT EMOTIONS IN BIOLOGY

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Abstract:

The purpose of this study is to determine the achievement emotions of Turkish high school students in biology classes. The sample of the study consists of 2183 ninth, tenth and eleventh graders from 12 public high schools in Turkey. Students were chosen to participate in the study through convenience sampling method. Each student participated in the study answered the items in 'Biology Achievement Emotions Scale (BAES). The scale is a five-point likert type scale and is made up of seven sub-dimensions which are enjoyment (10 items), pride (6 items), anger (9 items), anxiety (15 items), shame (8 items), hopelessness (6 items) and boredom (6 items). 'Exploratory factor analysis' and 'descriptive statistics' (mean, standard deviation, skewness and kurtosis) were used to analyze the dataset. According to analyses, students had an average which could be considered as high in the enjoyment-pride sub-dimension. In other words, they enjoyed attending biology classes or felt pride due to their success in biology. Although these students did not have a very high average in anger, anxiety, shame, hopelessness and boredom sub-dimensions, they sometimes felt relatively negative emotions towards biology. Moreover, females had higher mean scores in enjoyment-pride sub-dimension than males had, but male students had higher scores than female students in anger, anxiety and shame

Keywords: Biology Education, Achievement Emotions

**This work was supported by Karamanoglu Mehmetbey University, The Scientific Research Project Commission, Turkey [grant number 03*

MAKERSPACE OR MAKER(-) : MAKING CULTURE AS AN ALTERNATIVE SOCIETY TO MASS CONSUMPTION

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Abstract:

We are in the midst of a never-ending paradigm shift of standards and insights in a technology-focused educational structure that is constantly underdeveloped. Because of the democratization of the information with widespread use of the Internet, the organization of educational processes has lost its existing hierarchical structures. Education once was a one-way communication between the teacher and the students, has transformed into an experience-oriented structure with a multi-faceted communication. One of the most common implementation examples of today's experience-oriented education component is the Makerspace, which is rapidly becoming popular in the society. Makerspace can be defined as the common spaces where participants create practical projects that will reinforce their knowledge and skills based on their internal motivations. However, makerspaces can move away from the basic principles that make them exist and become the consumers of life, not the producers of life. When it comes to the use of makerspace in educational content, some confrontational social and ethical responsibilities arise. In this article, the author discusses the necessary content components that would be required for an efficient use of Makerspaces based on the experiences in the VA455 Physical Computing course being given at Sabancı University. During this course students are introduced several topics about how to integrate the use of computational systems by utilizing various physical sensors to create interactive art and design projects.

Keywords: Arts Education, Arts And Technology, Makerspace, Physical Computing, Interdisciplinary Education

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WEB-BASED APPLICATIONS IN THE UNDERGRADUATE TRAINING OF 21ST CENTURY TEACHERS

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Abstract:

Rapid technology development is reflected in the education process only belatedly and significantly more slowly. The products and processes of technological development expand the physical space of learning with the interactive world of digital environment, offering attractive opportunities for both the learner and the teacher. By involving the digital environment in education, there has also been a change in the demandingness of the teaching profession. On one hand, the possibilities of the digital world have simplified the work of the teacher, facilitating interactivity and increasing flexibility in the learning process; however, on the other hand, the amount and diversity of ICT resources also complicates their selection for meaningful use.

Within the framework of our project, research was carried out focusing on two main areas. Firstly, we investigated the analysis of web applications and their possible implementation in undergraduate teacher training. We focused on commercially developed web-based applications that have an educational potential. The providers of such web applications offer free access to their online environment and digital content for educational purposes. To analyse the selected web applications, we created a structured evaluation/observation tool, in which we set up assessment categories in order to examine the technical, content-structural, and didactic aspects of web applications.

Secondly, the research aimed to map teacher trainees' digital competences and their attitudes towards the development of digital competences and the usage of digital technology resources and tools in education. The research applied the questionnaire method.

Keywords: Web-Based Applications, Teacher Training, Ict

**This study is supported by Cultural and Educational Grant Agency MŠVVaŠ SR, KEGA No. 002UJS-4/2016.*

BUILDING UP A LEGAL IDENTITY AS A PART OF SOCIAL AND CULTURAL DEVELOPEMENT OF YOUTH - BASED ON OWN RESEARCH OF EDUCATIONAL TEXTBOOKS.

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Abstract:

The author will present a research pursued in order to analyse the modern way of building up a legal identity by using an example of Polish youth. Author decided to inspect the textbooks approved by National Ministry of Education and used in public schools in order to check the informative value of legal education in the context of being a modern citizen of democratic society. In order to find an indicators of legal identity for a grown up person and to check if they exist within the materials used by teachers author conducts a critical study and will introduce the conclusions that are coming from a crossdisciplinary perspective of philosophy, criminology and social studies.

The point is to look for some key factors of contemporary legal identity such as ability to spot the modern criminal behaviour and properly react (e.g. cybercrime, cyberviolence or hate speech on social media) and to have the knowledge of personal rights and civil rights and how to use them in the case of extremity.

The conclusions involve a remark that the official textbooks do not provide a proper background to build up a present-day legal identity for young adults. Author offers a list of possible amendments for future reference which includes philosophical summary of what is necessary to teach in order to attune moral, ethical and legal development of youth.

Keywords: Philosophy Of Education, Legal Education, Legal Identity, Criminology, Social Studies

**This study is supported by Young Scientists' and PhD Students' Project of Ministry of Science and Higher Education*

THE SPATIAL QUALIFICATIONS OF A SCHOOL GROUND

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Abstract:

Children need to be able to develop their social, physical, emotional and mental skills so that they can grow up as healthy individuals in the future. The most appropriate and effective places where all these skills can be realized are school grounds. The schools and its grounds where primary school children are educated, should be regulated by taking into account the developmental characteristics of the students.

The aim of the study is to reveal the spatial qualifications of the school ground for the academic, social and physical development of children. In the study, Ticaret Primary School in Trabzon was chosen. A Checklist has been established to determine the spatial status of the school. In the context of the topics defined in the checklist; On-site observation and land use determinations, analyzing the existing maps, the physical characteristics of the school ground, the play and sport areas on the school ground, the arrangements suitable for the nature on the school ground, security-comfort, education and ground relations were determined within the framework of national and international standards.

The size of the unit area (m²) per student in the ground, ground area, building floor area and total construction area were determined and their suitability was evaluated. In addition, the number, size, and quality of educational, social and cultural, game and sports activity areas, ceremonial and celebration areas, practice horticulture and areas in the school ground were analyzed. Analysis results will be an important data for the designer in the process of reorganization of the schoolyard.

As a result; spatial competences / shortcomings of each schoolyard were defined.

Keywords: School Garden, Spatial Qualification, Check List

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TEACHER-STUDENT RELATIONSHIPS, AND MAINTAINING CLASSROOM DISCIPLINE

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Abstract:

Teaching is a challenging profession, which imposes notable demands on teachers as soon as they enter the schoolhouses. In this regard, research has been conducted around the world to better understand some of the specific problems teachers come across. Besides the pressure stemming from a variety of organizational sources such as inadequate physical conditions, bureaucratic barriers, and dissatisfying relationships with administrators and, sometimes, colleagues; classroom management (and relatedly maintaining classroom discipline due to overcrowded classes) remains one of the main demands of this profession. Teachers tend to find various solutions to maintain discipline from physical punishment to persuasion. This study explores the views and perceptions of teachers regarding their relationships with their students, and how they maintain classroom discipline. The findings reported are based on responses from face-to-face semi-structured interviews with 12 teachers working in state schools in Istanbul, Turkey. During the interviews three major questions were asked: 1) Can you talk about your classroom relationships with your students? 2) How do you maintain classroom discipline? 3) How do the psychological counselor(s) in your school support you with your relationships with your students? The interviews were analyzed with constant comparative method; and results showed that generally teachers try to have warm, sincere, and positive relationships with their students; generally teachers try to solve the problems in class in a friendly manner. Sometimes they try to ignore them; sometimes they get help from the school counselors.

Keywords: Classroom Discipline, Classroom Management, School Counselors.

**Boğaziçi University Scientific Research Projects*

SHOULD STUDENTS BE PLACED IN GROUPS WITH OTHER STUDENTS WHO HAVE THE SAME RESULTS IN ORDER TO ACHIEVE BETTER RESULTS?

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Abstract:

Educational facilities are under increasing pressure to improve the quality of education and adherence to curricula that should reflect the needs of practice. In order to be able to meet this, schools apply different methods of organizing learning process to get closer to that goal. This paper presents an evaluation of the system of grouping students into study groups. The paper is devoted to the analysis of comparison of study results in two measurements carried out on students of three-year bachelor study with economic focus.

In the first measurement, the students of the study program were divided into two groups. During the three-year study, the results of the students of both groups were monitored. Subsequently, the impact of the breakdown into individual groups was analyzed on the overall student learning outcomes.

Besides the possibility of distributing students into groups according to the achieved educational results, the impact of the structure of the subjects of the admission procedure on the achieved study results was also monitored. In this case, the measurement focused on splitting students into two groups. One group of students took a mathematics exam. The second group did the admission exam, in which mathematics entered only partially. The subject of the analysis was to perform the mathematics exam after passing the first year and to compare the results of both groups of students. The results of both measurements have an impact on the analysis of the admission procedure for bachelor study and the study results of the students during the study.

Keywords: Ability Grouping, Homogeneous Grouping, Sociology In Education, Streaming In Educational System.

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INNOVATION OF CONTENT, FORM AND METHODOLOGY OF CHEMICAL LABORATORY PRACTICES FOCUSING ON THE LABOUR MARKET

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Abstract:

Human society has changed more than ever before over the last fifty years. Our lifestyle and labour market have changed and employers' requirements to young school leavers (their potential employees) also have been changed. Workers in the 21st century must have the skills to process information, including reader literacy, mathematical literacy and problem-solving skills. Today, the school is only one of the places where students learn.

In this context, the role of dialogue between schools and employers is increasingly recognized. These time requirements should also be addressed to educational institutions in chemical professions. The subjects of practical education in the area of natural education are crucial for the readiness and applicability of graduates in the labour market. Based on these requirements, in cooperation with employers, we innovate practical lessons at bachelor level in all study fields, inorganic, analytical, physical chemistry and biochemistry, focusing on the requirements of practice.

At the conference, we will present new content, forms and methods of practical training of individual chemical departments in order to develop the scientific and digital competencies of graduates needed for employment in the labour market.

Keywords: Chemical Laboratory Practise, Innovation, Labour Market

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