

cation strategy with a properly transformative agenda. Vital in this respect is Vygotsky's notion of mediation, namely, the utilisation of cultural artefacts as a means of attaining higher mental functions. Vygotsky extends the concept of mediation with the pedagogical idea of the Zone of Proximal Development (ZPD). The ZPD refers to the gap that exists between the skills a given subject or audience has already acquired, and those tasks or abilities that require outside assistance. We are thus provided with an innovative means of assessing the efficacy of dialogical interactions in classrooms. Given the importance of semiotic mediation in the development of higher cognitive functions, this paper asks what happens when there is variation in semiotic mediation across contexts; in this case between face-to-face mathematics lessons and computer based mathematics lessons. Four teachers and 179 students participated in this small scale exploratory case study. Findings indicate that there is significant variation in semiotic mediation across contexts, calling into question the developmental impact with will have on children.

### The situation and relationship among gratitude, intrapersonal emotional intelligence and burnout of teachers

*Anming He School of Education Science, China; Qinyuan Hui; Qiuping Hui; Qiuping Hui School of Education Science, China*

In order to explore the situation and relationship between gratitude, intrapersonal emotional intelligence and burnout of central teachers in rural middle schools, data were collected from a sample of 103 central teachers in rural middle school using the Gratitude Questionnaire-6 (GQ-6), our own Intrapersonal Emotional Intelligence Scale (Intra-EIS) and Maslach Burnout Inventory-Educators survey (MBI-ES). Based on descriptive statistics, multivariate analysis of variance and multiple regression analysis, the results showed that: (1) Levels of gratitude and intrapersonal emotional intelligence of central teachers is higher, and degree of burnout is not very serious, (2) there are significant main effects and only two interactions on a handful of demography variables, the factors of gender, class teacher and health on burnout have significant main effects, gender on gratitude has significant main effects, class teachers on intrapersonal emotional intelligence has significant main effects. Moreover, the age and the class of the teacher on three factors have significantly two interactions, namely, gender and health on gratitude and burnout have significant two interactions, (3) gratitude and intrapersonal emotional intelligence of central teachers have significant negative effects upon burnout.

### Examination of 'self-handicapping' in a structural model for prediction of academic achievement

*Mahmood Heidari Shahid Beheshti University, Islamic Republic of Iran*

The main objectives of this study are the examination of the mediating role of self-handicapping (SH) in the relationship between the above-mentioned factors and academic achievement, and the evaluation of SH variables in structural modeling in prediction of academic achievement. The statistical population of the current study consists of all Sha-

hid Beheshti University undergraduate students during the second semester of one academic year (1387-88 IR colander, 2008-2009). Based on the number of instrument items, number of variables, and paths brought to the model, a sample of 1,010 subjects were selected randomly through a cluster sampling method. A battery of questionnaires including the SH scale, Self Esteem Inventory, Procrastination Questionnaire, Perfectionism Inventory, Goal Orientation Scale, and Five Factor Personality Inventory were completed. Data were analyzed by a series of statistical methods including correlation, partial correlation, exploratory and confirmatory factor analysis, path analysis and SEM. Results indicated that SH shows a mediating role between personal factors and academic achievement. The structural model developed for students' academic achievement was supported. These results indicated that SH as a behavioural reflection of psychological constructs such as self-esteem, procrastination, perfectionism, goal orientation, and personality factors may play an important role in academic failures. SH demands professional attention in order to manage the problem since a majority of afflicted students can easily survive this damaging characteristic if professional care is provided to them.

### Attention and perception in ADHD

*Roche Herbst Human Capital Solutions Inc., Canada*  
Inconsistencies in concentration and attention abilities seen with Attention Deficit Hyperactivity Disorder (ADHD) are shown to correlate with perceptual problems often seen with learning disabilities. Difficulties in determining an individual's learning profile often result in inappropriate academic accommodations and other interventions that support successful learning in an academic setting. This analysis explores cognitive and behavioural aspects related to ADHD and its co-morbidity with learning disabilities. Diagnostic interviews, standardised measurements and questionnaires/behaviour ratings i.e. Amen Brain System checklist, were used. The population comprised Canadian students within a formal academic setting. A sample of 45 case studies from elementary to high-school students with reported learning difficulties are reviewed. The examination of individual summary reports were seen as goal-directed action, exploratory, qualitative and non-experimental. In summary, practical accommodations for interpreting/processing stimuli in an academic setting are discussed where conclusions reveal a co-morbidity of atypical cognitive perceptual development and ADHD.

### Preparing pre-service teachers for dealing with students' diversity related to learning: An intervention study

*Silke Hertel DIPF / IDeA Research Centre, Germany; Sanna-Kristina Djakovic; Katja Adl-Amini; Ina Rieger; Lena Hondrich; Susanne Mannel; Simone Bruder*

The competent handling of students' individual learning needs plays an important role in everyday school life. Teachers are faced with the challenge to adapt their teaching methods to individual learning abilities, needs, and preconditions of their students, everyday. Teachers with high adaptive teaching competencies succeed in meeting the demands of subject knowledge, in taking diverse pre-conditions

and learning processes of students as well as situational aspects of topical themes into account, in making benefits of diverse teaching methods fruitful for learning, and in supporting students and the class in the regulation of learning processes. The present study investigates the effectiveness of a university course on dealing with students' diversity related to learning in the classroom as compared to a control-group (N=74). Data on competence beliefs, beliefs about teachers' role and content knowledge were analysed conducting ANOVAs with and without repeated measures. The results that we gained within the scope of our quasi-experimental study, support our main hypotheses: Student teachers gain knowledge and competence in dealing with students' diversity regarding learning by attending a regular university course on that content. The findings support the conclusion that it is worthwhile to include courses on dealing with students' differences related to learning in the classroom in the early stages of teacher education, already.

### Mathematics and statistics performance and anxiety: An online cognitive behavioural intervention

*Elizabeth Howe James Cook University, Australia; Anne Swinbourne; Deborah Graham*

Prior research shows a complex relationship between mathematics and statistics anxiety, self-efficacy and performance. The interaction of these factors is thought to be counterproductive to mathematics and statistics learning. Methodological problems and conflicting results are evident in intervention research, the majority of which have focused on performance deficits within the classroom. While performance is an important factor, anxiety is a greater determinant of future enrolment and avoidance of maths and stats in university and the workforce. Anxiety also has a negative effect on memory which can further compromise performance. Therefore, Cognitive Behavioural therapies are recommended to combat anxiety. Attrition, time and cost are common deterrents to this approach however. Online Cognitive Behavioural Therapy (OCBT) can address these issues and has been effective in combating a number of anxiety related disorders. The current research developed an OCBT program using short multimedia clips to combat mathematics and statistics anxiety and improve approach behaviours in Psychology students. Initial usability data provided positive feedback about the content, accessibility, and ease of use for this program from participants of different ages and educational backgrounds. Data is currently being collected in a randomised controlled trial of the OCBT program. An improvement in anxiety and reduction of avoidance behaviour for OCBT participants compared to controls is predicted. Preliminary findings will be presented. The program provides a flexible tool for targeting anxiety while reducing time constraints for staff and students.

### Violence in higher education institutions as correlate of negative psychosocial and emotional well-being of students

*Eucharia Igbafe University of Pretoria, South Africa*  
Worldwide, higher education institutions are seen as an excellent instrument for effective and efficient