

nisational environment, and burnout. Factor analyses confirmed the structure of all the constructs used in the study. Correlational analyses showed that emotional exhaustion was negatively related to general self-efficacy, and positively with all perceived organisational stressors. Personal accomplishment was related to achievement, beliefs that knowledge is being handed down by authority figures/experts (naïve epistemology), teacher self-efficacy and perceived stress arising from professional interactions and meeting pupils' needs during the practicum. Finally, depersonalisation was positively correlated with all perceived organisational stressors. Regression analyses showed that emotional exhaustion was predicted by age, overall perceived stress about the practicum, terms and conditions of the practicum and student teachers' self-perceptions during the practicum. Depersonalisation was predicted by the same variables plus by low general self-efficacy, and perceived stress about pupils during the practicum. Finally, personal accomplishment was predicted by student teacher achievement, teacher self-efficacy, and the beliefs that knowledge is delivered by authority figures.

### The developing pattern of deductive reasoning in error types

*Hui-Ying Lang Chung Yuan Christian University, Taiwan, R.O.C.; W. Y. Lin*

Recent years have seen increased attention being given to logical thinking in educational psychology. Logical thinking is particularly influential in contributing to the ability to reason. However, few studies have been done on the effect of deductive reasoning on children's development. Therefore, the purpose of this study was to investigate the developing pattern of deductive reasoning in error types. This research will investigate the differences in the reasoning response between the conditional subjects, biological or non-biological, in children. A task was developed for the evaluation of deductive reasoning. We control the contents, context and relationship of the main antecedent, then try to draw the developing pattern of deductive reasoning errors effect. The participants in this study were young children who had not learned logically thinking. We generalise the error types of early children's performance into three types (content, context and relationship), assuming the content effect will be the strongest at all age levels.

### The moderator effects of the mathematics test emotion model

*Yi-Mei Lee National Taipei University of Education, Taiwan, R.O.C.*

This study aims to analyse and compare the relation between achievement motivations and test emotion. 1241 high-school students (642 male and 599 female) from 17 high schools in Taipei are sampled. These students are administered the scales before a math test. The latent independent variables in the achievement motivation scales are subjective competence (self-efficiency, task difficulty and success expectation), and motivations (intrinsic, autonomous, and avoidant motivations). The latent dependent variables are positive and negative emotions. Multiple group analysis of SEM was conducted to test the moderator effects of two test emotion models between 691 normal and 550 gifted high-school

students. The results of this study is presented. The intrinsic and autonomous motivations are verified; the moderator effects on enjoyment, and the intrinsic motivation is verified; moderator effect on pride. Corresponding to self-determination theory, the results partly verify our moderator's hypotheses, especially for the intrinsic motivation. Finally, the phenomenon that autonomous motivation may arouse negatively the math test anxiety is worth further exploration.

### An integrated motivational and emotional sequence to explain the psychological well-being of students

*Jaime Leon Univ. Las Palmas de Gran Canaria, Spain; Jaun Nunez; Fernando Grijalvo; Celia Fernandez; Jaime Leon*

Self-determination macro-theory has been established as a theoretical framework to explain students' optimal functioning. Within this theory it has been posited that social factors influence students' well-being by nurturing, versus thwarting, basic psychological needs. In the educational context, a critical social factor is the motivational climate, which influences students' needs, and this, in turn, has an effect on students' well-being. The aim of this study was to test a structural equation model in which the total effect of climate on basic psychological needs is divided into a direct and an indirect effect through clarity (understanding of our own and others' emotions). In addition, we tested the effect of basic psychological needs on three psychological well-being indicators (self-esteem, life satisfaction, and subjective vitality). A total of 422 students (60 men and 362 women) took part in this study. The fit indices were adequate, and confirmed the relationships proposed in the model. In conclusion, if teachers properly structure their classes, foster relationships among students and between teacher and student, accepts their students' decisions and negative feelings, and offers choices, this will nurture students' basic psychological needs. When students understand their emotions and those of others, they nurture their basic psychological needs. In addition, if students feel competent, autonomous and related to both their peers, and their teachers, they will have better self-esteem, greater satisfaction with their lives and feel more energetic and vital.

### Helping students learn English through a shared-reading programme

*Yea-Mei Leou Tainan Institute of Nursing, Taiwan, R.O.C.; Chin-Ya Fang; Shang-Liang Chen; Ten-C Shen; Shiu-Hsung Huang; H.C. Huang*

How to help ESL students with low achievement to be interested, and to gain confidence, in learning English has bothered many teachers since English became part of the formal curriculum in Taiwan elementary schools in 2001. Therefore, the purpose of this study was to explore whether a shared-reading remedial programme could influence the students' English learning, and which aspects would be influenced. Six seventh-graders were invited to join the programme because their English ability fell far behind that of other classmates. Levelled picture books were used in the programme, and the teacher combined phonics and reading strategies in the teaching process. The programme lasted for ten

weeks, two hours each week. Qualitative data, such as interviews with the teacher and students, the students' logs and worksheets, the teacher's teaching journals, and the classroom observation records, were gathered and analysed to examine the students' changes and the influences of the shared-reading programme. Before and after the remedial programme, three standard assessments were taken by the six students for triangulation. There were three main findings. Firstly, the students were very interested in reading English picture books, and had more confidence in learning English. Secondly, they enjoyed the programme and, over time, actively joined the discussions. Thirdly, they had better results in standard assessments and the school monthly tests in the end of the programme. Finally, reasons for the remarkable changes were explored.

### A research on the subjective well-being of college students based on the comparison of traditional method and the method of ecological momentary assessment

*Dongmei Liang South China Normal University, China; Zhang Min-Qiang; Xiao-Peng Li*

The objective of the study is to tell the difference between the traditional Subjective Well-being scale and the EMA method in the SWB of college students. 36 Chinese college students were asked to participate in the measurement of SWB with the traditional Subjective Well-being scale and the EMA method. The results show that the SWB level is higher in the college students group and there is no difference between the genders. There is no difference in the average score of the students SWB in the first week but it makes a difference in the two weeks score. The EMA method illustrates that the results would be highly affected by mood swing, the most negative things and the end affect when students were asked to recall their SWB through some time. The results of SWB will be more accurate when the traditional Subject Well-being scale and the EMA method are integrated.

### The integration of the drafting and instruction of teaching cases with teacher education curriculum

*Pei-Yun Liu National Dong Hwa University, Taiwan, R.O.C.; Heng-Chang Liu*

The combination of the case teaching method and teacher education curriculum will not only help a preservice teacher to think like a teacher, but also bridge the gap between teaching theory and practice. The authors try to integrate educational psychology with mathematics instruction. It demonstrates both the knowledge of educational psychology and pedagogical content knowledge of mathematics required to analyse a teaching unit. By applying theory to teaching objectives, teaching development, and teaching practice, our research finds that a teacher can actually improve his/her pedagogical content knowledge and professional knowledge. This research adopts the action research approach. The authors collected and analysed the reports and reflections written by 31 preservice teachers along with video and its verbal transcript of discussions of the teaching cases. Two evaluators independently categorised and interpreted the data utilising the constant comparative method and reached .87 rater consistency reliability. The authors