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Driving Positive Psychology and Well-Being
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Derived from the internal/external frame of reference model, dimensional comparison theory (DCT) assumes dimensional comparisons to be a central mechanism in people’s evaluations of their own abilities. Dimensional comparisons take place when people compare their own achievements intra-individually between different domains (e.g., school subjects like English and mathematics) and typically lead to negative path coefficients from achievement in one domain to self-concept in another domain. So far, the effects of dimensional comparisons have mostly been examined for academic self-concept. In this symposium, we intend to boldly go beyond and present topical research that extends DCT by providing new insights into the process as well as the generalizability of dimensional comparisons. Whereas the first paper investigates the effects of dimensional comparisons on teacher’s inferences of their students’ academic self-concepts, the second study looks more closely at the processes underlying dimensional comparisons by manipulating the number of domains students compare intra-individually and examining their effect on dimensional comparisons. Finally, the third and fourth paper gradually leave the academic context and provide support of dimensional comparisons in students’ evaluations of their own intellectual and problem-solving abilities as well as between personality traits like agency and communion.
When Knowledge is Power: On Dimensional Comparison Processes in Teachers' Inferences of Students' Self-Concepts

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The internal/external frame of reference model (Marsh, 1986) assumes two comparison processes to have an impact on student's self-assessed academic self-concepts, namely social comparison (external frame) and dimensional comparison (internal frame). Previous field studies showed that external observers like teachers only utilise social comparisons when inferring their students' self-concepts (e.g., Pohlmann, Möller, & Streblow, 2006). In contrast, an experimental study by Dickhäuser (2005) provided evidence that observers may utilise dimensional comparisons as well, but only when aware of the same achievement information the rated students possess themselves. To further test this assumption, we are currently conducting a field study on N = 100 secondary-school teachers and their approx. N = 2,500 students. Students are asked to report their own grades and self-concepts in German and mathematics, whereas their teachers are asked to infer their students' self-concepts in both subjects, as well. We experimentally manipulate the amount of salient knowledge teachers have about their students' academic achievement: While one group is informed about their students' grades in German and mathematics, another group receives no information. We will examine and compare the effects of social as well as dimensional comparisons in both groups as well as their accuracy at inferring students' self-concepts.
A1 / SYMPOSIUM: DIMENSIONAL COMPARISONS

Contrast and Assimilation Effects of Dimensional Comparisons: The Role of the Number of Comparison Domains

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Students compare their academic achievement across different domains and form their self-concepts accordingly (dimensional comparisons). Dimensional comparisons may have both contrasting and assimilating effects on academic self-concepts. Whereas the evidence for contrast effects between math and languages is tremendous, it is somewhat inconclusive for more similar domains. For example, both contrast and assimilation effects have been found between math and science and between different language domains, but it is not yet understood under which conditions these effects occur. In a study with about 3,500 German ninth-grade students, we scrutinized the effect of a potential moderating variable—the number of domains that students are asked to compare. We hypothesized that students would be more likely to contrast their abilities between two domains when only these two domains are presented because achievement in one domain would be the most salient comparison standard for evaluating achievement in the other domain. In an experimental design with five randomly distributed questionnaire forms, students were asked to evaluate their ability in two (math/German, German/English, or math/physics), four or eight domains. We will examine the direction (contrast or assimilation) and magnitude of dimensional comparison effects across the experimental conditions. The results will be presented at the conference.
Due to its eminent importance for students' development, it is crucial to understand how students' self-concepts are formed. Here, prior research on the internal/external frame of reference model (I/E model) as well as on the big-fish-little-pond effect (BFLPE) has repeatedly shown that social and dimensional comparison processes are amongst the most important factors influencing self-concept formation. However, research on the I/E model and BFLPE has almost exclusively focused on academic self-concept. Complementary research on students' intellectual self-concept (ISC) and problem-solving self-concept (PSSC) is lacking. To close this gap and to examine the formation of students' ISC and PSSC simultaneously, we will build on recent integrative research on academic self-concept formation by unifying the I/E model and BFLPE framework (i.e., revisited I/E model). More concretely, to test whether the assumptions of the revisited I/E model are generalizable for the formation of ISC and PSSC, we will draw on a sample of 555 German secondary school students (M = 13.57 years, SD = 0.66). Finally, we will present the predictive potential of the revisited I/E model for the ISC and PSSC formation and will discuss our findings in light of self-concept research and established theories of social and dimensional comparisons.
Dimensional Comparisons Between the Big Two

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Dimensional comparison theory (DCT) defines dimensional comparisons as comparisons between one's own achievements or characteristics in two domains. In the academic domain, frequently there are found contrast effects of dimensional comparisons, that is, self-concepts correspond less than do subject-specific achievements. As DCT assumes contrast effects of dimensional comparisons to be a general phenomenon in the forming of self-concepts, not only in the academic area, in the presented studies contrastive effects of dimensional comparisons are investigated between two central aspects of self-perception: the "Big Two" Agency (competitiveness, assertiveness) and Communion (empathy, agreeableness). In Study 1 with a sample of N = 276 students, in a path-analytic design students' self-ascriptions of Agency and Communion were regressed on peer-evaluations of the students' attributes (as these can be assumed to influence self-evaluations). It was determined whether peer-evaluation in one area had a negative effect on self-evaluation in the other area and found that indeed there were negative effects ($\beta = -.14; -.21$, both $p > .05$). Study 2 (N = 91) explored the matter in an experimental design. Results of both studies are interpreted with regard to DCT's assumptions about the generalizability of dimensional comparison mechanisms.
Stories of Indigenous Australian Success

Chairs: Mooney, Janet; Craven, Rhonda G.; Yeung, Alexander Seeshing; Blacklock, Fabri; Kickett-Tucker, Cheryl; Marder, Kurt (Australian Catholic University, Australia)

Discussant: Craven, Rhonda (Australian Catholic University, Australia)

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The Institute for Positive Psychology and Education at the Australian Catholic University endeavours to make a substantial contribution to Indigenous education and well-being, by utilising a positive psychology framework to develop and implement novel, research-derived, strengths-based approaches. It capitalises on new advances in theory, research, and practice to explicate drivers of socio-economic well-being for Indigenous Australians, including: self-concept enhancement; engagement in productive and fulfilling employment; and attainment of educational and life outcomes that enable them to flourish. There are now many Indigenous Australians, … who despite adversity have triumphed, competed, and succeeded in diverse mainstream settings – they have seen and lived the way to success and have flourished as a result thereof. As a nation we have much to learn and gain from empirically synthesising and analysing what these successful Indigenous Australians, and other Indigenous people, identify as drivers of their success (Craven & Parbury, 2013, p. 372). The papers presented in this symposium illuminate empirical drivers of educational and socioeconomic wellbeing for Indigenous Australians.
Due to the absence of evidence-based research in Australian gifted education, and gifted Aboriginal students in particular little is known about why gifted Aboriginal students are under-represented in opportunity classes (OC) and selective high schools (SHS). The central purpose of this research was to capitalise on cutting-edge interdisciplinary theory and research to explicate: Underlying factors influencing the under-representation of gifted Aboriginal students in OCs and SHSs and the drivers of decision-making on whether or not to participate in OCs and SHSs; Features of gifted education programs that attract and benefit gifted Aboriginal primary students; and The extent to which gifted Aboriginal students’ perceptions about gifted education are similar and different to those of gifted non-Aboriginal peers. The findings highlight the need for intervention at several levels. Strategies to ensure that gifted Aboriginal students are identified are encouraged to apply for selective education offers. Professional teacher development could focus on ensuring pre-service and in-service teachers and school staff are knowledgeable about Aboriginal giftedness and how to identify and encourage gifted Aboriginal students to apply for selective settings. The Department of Education and Communities consider strategies to promote the advantages of selective opportunities to principals, teachers, and the families of Aboriginal students.
While it is important to identify the failures and its causes in Australian Aboriginal education, it is equally important to identify the successes and its causes. Until recently, there has been a huge imbalance favouring the failures, hence research into how to best help Aboriginal students reach their full potential has mostly proceeded from a deficit model. The Seeding Success Project moves beyond deficit modelling and instead identifies the salience of an array of positively orientated educational and psycho-social variables that may seed success for Aboriginal students. The variables are those that are critical in the classroom and yet are readily manageable by educators to seed success. Results show that Aboriginal students displayed statistically significantly lower School, Reading, and Math Self-concept mean scores compared to their non-Aboriginal peers for all three domains of academic self-concept measured. Overall, the findings imply that excellent teachers are a crucial key for seeding success for Aboriginal primary students. These teachers proactively enhance Aboriginal students' academic self-concepts, promote Aboriginal students' cultural identity, and utilise teaching strategies that focus on high expectations of Aboriginal students to achieve excellent educational outcomes.
The Young Mob Aboriginal Leaders Program is a World Vision initiative that aims to engage Aboriginal students in public speaking and leadership opportunities through utilising locally developed Aboriginal pedagogies. Facilitated by local Aboriginal community members, Young Mob utilises Aboriginal yarning as the central pedagogy to develop public speaking and leadership skills with Aboriginal students at Chifley College Shalvey, a low socio-economic school in the Western suburbs of Sydney. As a part of the initiative, students participate in a cultural camp at the end of each year, which is held in various locations across New South Wales, involving local Aboriginal Elders and community members. The program’s success has seen students present at conferences in South Africa and South America as well as becoming school captains. This presentation will focus on stories from successful students who have participated in the program, as well as discussing the development of local Aboriginal pedagogies. Replicating these success stories is essential to seeding success for Aboriginal students.
The central importance of a strong sense of identity is ensuring a person develops as a well-rounded and functional individual, who experiences social and emotional well-being in their community, (Berzonsky, et. al., 2011). Identity, in a nutshell, might be described as “people's concepts of who they are, of what sort of people they are, and how they relate to others" (Hogg & Abrams 1988, p. 2). If school is considered as a major socialising agent which enhance a 'community' then how does Aboriginal identity influence Aboriginal children's opportunities for school success? Furthermore, what does success mean for the parents and carers of Aboriginal children? The results in this paper are drawn from a larger study that explored the development of Australian Aboriginal identity and related self-esteem across the life span and how this has manifested Aboriginal people's mental well-being in urban and rural areas of Western Australia. For this paper, a qualitative study using an ethnographic methodology was employed within an interpretive paradigm. The perceptions and experiences of 27 adult Aboriginal men and women, aged 32-88 and living in urban Perth, Western Australia will be presented to explain the role of identity in their children’s journey toward ‘success’ at school.
The purpose of the present study was to examine the validity of a political self-concept construct by embedding it into contemporary self-concept research. Furthermore, the relations between political self-concept and two outcome variables (information behavior, political knowledge) from grade 7 to grade 10 were investigated, focusing on the question whether there is evidence for a pattern of reciprocal effects over time. The analyses were based on a total of N=2504 students from the German study “Learning Processes, Educational Careers, and Psychosocial Development in Adolescence and Young Adulthood” (BIJU). Confirmatory factor analyses revealed political self-concept as a domain-specific self-concept facet distinct from verbal and math self-concepts. Thus, it seems to be neither a 'more verbal' nor a 'more math' self-concept facet. Cross-lagged panel models demonstrated a moderate normative stability (r = .49) of political self-concept over time. Moreover, reciprocal relations over time could be found for political self-concept and information behavior as well as for political self-concept and political knowledge, i.e. that political self-concept can be conceptualized as an outcome and determinant of information behavior and political knowledge. These findings further expand evidence for the reciprocal effects model to the political domain.
Longitudinal Analysis of Prospective Teachers' Professional Self-Concept: First Results

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Self-related cognitions are an important part of (prospective) teachers' professional knowledge. Self-related cognitions are for example reflected in self-concepts. Concerning self-concept, research shows high differentiation for different domains (at least for students in school). As the teaching profession comes along with the most diverse challenges, it is especially important to consider these different tasks in research on teachers' self-concepts. With the newly developed questionnaire “ERBSE-L" it is possible to measure multidimensional professional self-concepts for teaching (self-concept for subject, innovation, media use, diagnostics, education, and consulting). However, it is not yet clear how the self-concepts of teacher candidates develop over the course of their studies. Therefore, the aim of our research was to study the development of prospective teachers' professional self-concept. We drew on data obtained from a longitudinal panel study and followed 400 teacher candidates from the beginning of their studies until their Master’s degree. The factorial structure of ERBSE-L was confirmed. We will present the results of the development of the self-concepts and discuss the relationship with further motivational constructs, workload and academic achievements.
In teachers' daily work counseling is a major issue (Schnebel, 2012). Teachers are counseling to support the development of students' learning skills and also play an important role as career counselors to assist students to make career decisions. As an essential competence learning counseling techniques has become an important part of the professionalization of teachers. The experiences teachers make during their consultant training at universities lead to self-assessment/self-evaluation about their counseling skills. The development of a positive self-concept in this important field of teachers' work is supposed to be desirable, as high confidence might lead to a decreased feeling of stress and anxiety (Abele & Candova, 2007). In this paper we present the development of an instrument to measure the self-concept of educational counseling ability. Based upon a performance-orientated model of counseling ability (Schiersmann, Weber, & Petersen, 2013) the instrument measures 4 facets of self-concept. In a first test (N = 147) the scales showed satisfactory reliabilities, with Cronbach’s Alpha ranging from .65 to .88 (M = .80). Significant correlations between the scales and external criteria, such as counseling results, leisure activities, stress related cognition and self-efficacy, provided evidence for the validity of the instrument.
Perfectionism as a Predictor of Change in Students' Study Goals, Motivation and Well-Being

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Perfectionism is an important individual difference factor with implication for mental health, motivation and academic performance. It is seen to involve both performance expectations and evaluation concerns, that is, strivings for certain standards and concerns about reaching those standards. "Healthy" perfectionists are described as individuals with high goals but low levels of concerns, and "unhealthy" perfectionists as the ones with both high standards and high concerns. Nonperfectionists are those with low perfectionistic strivings. In this study, we first clustered upper secondary students (N = 172) based on their scores on perfectionistic strivings and concerns into three groups representing the above "types" of perfectionists, and then profiled them across various motivational and individual difference factors such as achievement goal orientations, temperament and motivational beliefs. Our main research question dealt with the level of and change in different student groups' course-specific goals, motivational appraisals and well-being. These factors were measured repeatedly during different subjects and courses over a school year. The results showed variation in the patterns of change over time for perfectionists and nonperfectionists, suggesting different dynamics in motivation, achievement and well-being in these student groups.
Often the duties and obligations of daily life elicit little positive affect and feelings of vitality. Dual-process theories suggest that this could be altered by greater consideration of the implicit motivational system. Motto-goals provide a person with a guiding principle of how to approach a personal goal or obligation (e.g. With the inner strength of a bear I am forging ahead.). Motto-goals are characterized by figurative, metaphorical language and are therefore particularly effective in stimulating the implicit system. We examined the effectiveness of personal motto-goals in boosting positive affect and vitality regarding an unpleasant obligation with a pre-post-control design. 78 participants were randomly assigned either a motto-goal intervention or a control-intervention designed to boost positive affect. We found that the motto-goal intervention was more effective in boosting vitality than the positive affect intervention and equally effective in boosting positive affect toward the obligation. Additional analyses revealed a different source of positive affect in the two conditions: only in the motto-goal condition positive affect resulted from a more positive view of the obligation. The results suggest that motto-goals can help individuals form a more positive view on an obligation and is more effective in boosting vitality than a positive affect intervention.
Stage-Specific Self-Efficacy as Crucial Factor of Health Literacy: How is Its Role in the Health Behavior Change Process?

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Background: Self-efficacy may be subdivided into stage-specific resources (for non-intenders, intenders, actors). Behavior change consists of different tasks, too. Combining these perspectives, namely stage-specific self-efficacy, different stages of behavior change, and different task to be managed, a stage-specific impact of the different subtypes of self-efficacy should be found. Research questions: Do non-intenders benefit from pre-actional and coping self-efficacy for their subsequent goals? Do intenders show high intercorrelations of task and coping self-efficacy with goals, planning and behavior. Do actors exhibit interrelations of task and maintenance self-efficacy with subsequent planning and behavior? Method: N=584 orthopedic rehabilitation patients were enrolled in a longitudinal study with a 12-month, a 3-years, and a 6-years follow-up. All variables were measured repeatedly. Results: In non-intenders pre-actional and coping self-efficacy was associated with subsequent goals (r=.28/.20). In intenders intercorrelations of task self-efficacy with subsequent goals and behavior (r=.21/.14) were found. In actors task self-efficacy was associated with goals, planning, and behavior (r=.30/.28/.21). Conclusion: Self-efficacy seemed to support task performance stage-specifically and individually. Depending on the stage a person is in, the stage-specific self-efficacy should be promoted, and thereby, behavior change might be supported more effectively.
Exploring the Dimensionality and Globality of Psychological Health in the Workplace: A Substantive Methodological Synergy

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Psychological health (PH) theoretically involves the presence of psychological wellbeing (PW) and the absence of psychological distress (PD). A key question that remains unanswered is whether these two components of PH form distinct constructs that are simply negatively correlated together, or whether they form an underlying global construct, reflecting a continuum of PH. In the first instance, it would be possible for individuals to present high levels of PW, coupled with high levels of PD, whereas this would not be possible in the second scenario. In this substantive-methodological synergy, we first address this question using a variable-centered approach (based on Morin, Arens, & Marsh, 2015) applying bifactor models to test the continuum hypothesis of PH. Then, we address this question using a person-centered approach to test whether distinct profiles presenting diverging levels of wellbeing and distress could be identified using a factor mixture approach (improved from Morin & Marsh, 2015). These approaches are applied to a sample of 1232 teachers who completed a measure of psychological health at work (Gilbert et al., 2011; Massé et al., 1998). The results generally support the continuum assumption, but also show that some specific profiles present slightly diverging levels of PW and PD.
Self-Efficacy: Mediator or Moderator?

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Self-efficacy is regarded as a substantial predictor of various health behaviors based on a bulk of empirical evidence. Moreover, many observational studies have specified self-efficacy as an intervening variable, illustrating how a mechanism of change may look like. In such mediation designs it is of particular interest how distal or proximal self-efficacy is located to the behavior. Theories specify chains such as either self-efficacy->intention->behavior, or as intention->self-efficacy->behavior, among others. In intervention designs, mediated effects have been found by first affecting self-efficacy, leading to changes in behavior. But often there are neither direct nor indirect effects. Instead, self-efficacy, then, may interact with other variables on the outcomes. Such moderation effects point to the question for whom a certain treatment is beneficial or not. There may be subgroups (levels of the moderator), for whom a mediation chain is valid, and others, for whom a different mechanism is valid (moderated mediation). Research examples from several studies, conducted in several countries, will be presented. Based on such evidence, researchers need to explore various complex models when embedding self-efficacy in behavior change projects.
Foundations of Self-Regulated Learning: Processes of Motivational Regulation

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As theoretical background the Rubicon model of action phases (Heckhausen, 1989) was extended by a previous motivation phase. The resulting Integrated Model of Learning and Action defines three main phases of learning: The motivation phase refers to the need to reduce a perceived learning deficit or to tackle a learning challenge. In the intention phase, an intention for a learning action is formed which can fulfill the learning motivation. In the volition phase, finally, a learning intention is translated into a real learning action. Using a Mixed-Methods Sequential Explanatory Design 523 students of educational science and 516 students of computer science were initially asked with an online questionnaire. Of these, 12 students were interviewed. Questionnaire Scales: Perceived Threat, Sensitive Coping, Acceptance of Responsibility, Outcome Expectancy, Self-Efficacy, Persistent Goal Pursuit: Maintenance, Persistent Goal Pursuit: Distraction, Goal Congruent Self-Monitoring, Working with Peers, Generation of Positive Emotions, Effort Avoidance after Negative Emotions, Metacognitive Learning Strategies. In a 2-step-analysis process based on IRT methods 4 subpopulations could be identified for each sample. In addition, population-specific patterns can be identified: "extrinsic" learning motivation (computer science), "unsecure" and "unsettled" learning motivation (education). The interviews imply that patterns of motivational regulation are often associated with prior experiences.
**A5/SELF-EFFICACY AND SELF-REGULATED LEARNING**

**Parental Attitudes Towards Learning and Academic Self-Efficacy as Predictors of Procrastination in 7th to 9th Graders**

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Procrastination involves multiple social, cognitive and affective factors and it is related to low achievement during education. This research aimed to investigate the effect of academic self-efficacy and perceptions of parental attitudes towards learning on procrastination. Participants were 216 7th to 9th graders. Parental attitudes towards learning is conceptualised as a two dimension variable. The adolescent is asked to assert if his/her father and mother is encouraging regarding the learning process and focused in the acquisition of skills (dimension 1) or, if mother and father stress him/her to have the best results, in a competitive basis (dimension 2).

The results indicated a negative association between procrastination and results on Maths and Language. Boys procrastinate more than girls. The stepwise multiple regression revealed that low academic self-efficacy, high perception of the fathers’ attitudes focused on the results and low perception of the mothers’ attitudes focused on the process, were the best predictors of procrastination. The results are discussed in terms of the parental involvement in the learning process, supporting the importance of flexible attitudes. Parental practices excessively focused on the results, within a competitive ground, may be counterproductive, leading to procrastination.
In the present research, we conducted a series of five studies designed to examine the moderating effect of learning focus (test-directed versus self-directed) on the relation between relative strength perceptions and effort allocation in multiple goal pursuit. Each study yielded supportive data, indicating that students with a test-directed learning focus put more effort into their perceived weaknesses, whereas students with a self-directed learning focus put more effort into their perceived strengths. This pattern was observed across different methodologies (scenario, field, and experimental studies), different research designs (within-person and mixed factorial), different participants (secondary school, college, and university students), and different measures of effort (effort intentions, self-reported effort, and behavioural effort). These findings contribute both to the theoretical discussion on the within-person relations between competency self-perceptions and effort allocation in multiple goal pursuit, and to the applied debate on the consequences of test-directed versus self-directed learning for students' learning endeavours.
Resilience, as a multidimensional construct, is an object of interest for different approaches, philosophies, and psychological schools. This leads to different definitions of resilience on the one hand; but most of all, we have to deal with definitional overlaps with other constructs that describe similar phenomena. Hagger (2014) calls this problem the déjà-variable phenomenon. However, for a precise empirical work we need clear definitions and explicit operationalizations of a construct. In this presentation, we will contrast the construct of resilience with the constructs of self-efficacy and spirituality, basing on mysticism. We follow a method (Koller, Glück, & Levenson, in prep.) which allows, on the base of expert ratings, the contrasting of different constructs at item level. The current contribution shows unexpected ambiguities and overlaps of resilience, self-efficacy, and aspects of spirituality. We will discuss theoretical and methodical consequences and implications for the research and research practice.
Labeling academically oriented students as “nerds” is quite common in educational context. Research have shown that characteristics which are usually attributed to nerds are high academic aspirations, competitiveness, physical unattractiveness, and lack of social skills. This study focused on differences between self-perceived and other-perceived characteristics of nerds. N=461 university students rated themselves on 5 domains of Self-Description Questionnaire–III and rated importance of 14 domains of self-concept measured by revised Self-Attributes Questionnaire. Results show that, when compared to non-nerds, self-perceived nerds rate themselves more positively in terms of academic self-concept and they regard intellectual abilities and competitiveness as more important. Students who are not sure if they are nerds have positive academic self-concept, as well as positive physical self-concept. Students who were at least once labeled by others as nerds have more positive academic and more negative physical self-concept, perceive intellectual abilities and competitiveness as more important and sports abilities as less important. Results suggest that academic orientation, high intellectual abilities and competitiveness are core characteristics of both self-perceived and other-perceived stereotype of nerds. On the other hand, valuing sports abilities and having positive physical self-concept may protect individuals from being labeled nerds, even when they have high academic aspirations.
Although there is evidence that teachers who approach their job as calling (as opposed to carrier or "just job") have higher levels of well-being, research addressing the reasons for these relationships is still scarce. The aim of this study was to assess the relationship between teachers' work orientations (job, career and calling orientation) and well- and ill-being with possible mediating effects of meaning of life. The following measures were administered to 249 primary school teachers in Zagreb region: Work-life questionnaire (Wrzesniewski et al., 1997), Work Meaningfulness scale (Steger et al., 2006), The Satisfaction with Life Scale (Diener et al., 1985), The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988), Emotional Exhaustion Scale (Maslach, Jackson & Schwab, 1996) with addition of one-item assessment of job satisfaction. The structural equations modeling was used to analyze data and indicated adequate fit by most indices. Calling orientation was positively related to well-being and negatively to ill-being. Job orientation was directly positively linked to ill-being. Career orientation was not linked to well- and ill-being in any way. In addition to that, mediation analysis performed with bootstrapping method, showed that meaning of life was significant mediator between calling orientation and well-and ill being.
Students' interest in science declines substantially in the transition from elementary to secondary education. Thus, using students' ratings of their instruction on the topic of evaporation and condensation, we examined if perceived differences in instructional practices would account for discrepancies in both situational interest in science instruction and enduring individual interest in science between elementary and secondary school classrooms. Multilevel regression analyses were conducted for a sample of 60 fourth- and 54 sixth-grade classrooms; students' ratings of instruction were incorporated according to the multilevel latent covariate approach. In addition, we included students' gender, pre-instructional achievement and pre-instructional individual interest in science as well as the achievement composition of classrooms as covariates in the analyses. The use of student experiments, lack of clarity and the elicitation of student explanations accounted to varying degrees for disparities in situational interest between grade levels. Corresponding effects for individual interest were considerably smaller. However, the impact of the instructional practices of using student experiments and eliciting student explanations on individual interest was mediated by situational interest. This conformed to predictions of the person-object theory of interest and of self-determination theory. Apparently, instructional practices contribute to the deterioration of students' interest in science.
Much of the research on flourishing has adopted the PERMA model. A weakness of this model is that it neglects the impact of morality. In an attempt to redress this issue, the concept of ‘moral-flourishing’ is defined as flourishing of moral agents, noting that ‘being a moral agent’ refers to having morality as the most central aspect of one's identity. Moral-flourishing classifies individuals into four groups of low flourishing-high moral centrality, low flourishing-low moral centrality, high flourishing-low moral centrality, and high flourishing-high moral centrality. This study (N=322) investigates the difference of Dark Triad traits (i.e., Machiavellianism, Narcissism, and Psychopathy) between these groups. Analysis revealed that the low flourishing-low moral centrality group reported the highest levels of Dark Triad traits. Moreover, individuals with high flourishing and low moral centrality showed lower levels of Dark Triad in comparison to the ones with both low flourishing and low moral centrality, but scored significantly higher than high flourishing-high moral centrality group. The results support that flourishing individuals have different levels of moral centrality, and also, lack of moral centrality results in higher propensity of immoral dispositions among flourishing individuals.
Giftedness is an ambivalent construct. Although empirical studies show consistently that gifted persons are by no means less emotionally or socially competent than their average-ability peers, negative prejudices stressing a disharmonious view on giftedness have proven highly persistent (Baudson & Preckel, 2013). Gifted individuals have to face these stereotypes in the course of their development and integrate both positive (high achievement) and negative societal prejudices (low social-emotional competence) into their identity. Other, more clearly negatively stereotyped minorities face similar issues. For homosexual identity development, Cass (1979) has suggested a stage model encompassing different stages of under-, non-, and overidentification with the minority, eventually resulting in a positive and differentiated view of both ingroup and outgroup. The present study applies this model to identities of gifted adults (N > 750). First latent profile analyses yield evidence for meaningful subgroups and correlates that are in line with Cass’s model but also some discrepancies, which are discussed with respect to sample characteristics and to the ambiguity of the construct.
This study aims to better understand music’s influences on psychological well-being by exploring connections between adolescents’ School-based Musical Engagement (SME) and their perceived satisfaction of psychological needs in a multiple case study in Hong Kong. Guiding the study are theoretical assumptions of Basic Psychological Needs Theory (BPNT), a sub-branch of Self-Determination Theory (Ryan & Deci, 2000), which state that satisfaction versus frustration of three universal needs for Autonomy, Competence, and Relatedness leads to increasing versus diminishing psychological well-being. This presentation will outline some of the theoretical and methodological challenges involved in applying a psychological theory within an educational research framework that strives to study the complexities of heterogeneous contexts in depth. Findings will be presented to illustrate how this approach has shed light on the influences of School-based Musical Engagement on secondary school students’ psychological well-being in and out of the music classroom. Implications for research and practice in the area of music and psychological well-being will also be discussed.
The Role of Coordinating Support in the Professional Development Program SINUS for Primary Schools

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Almost 870 schools and about 5440 teachers participated in SINUS for Primary School, a German professional teaching development program conducted from 2009 to 2013. The implementation of the program was coordinated and evaluated by the Leibniz Institute for Science and Mathematics Education (IPN) in Kiel, Germany. The program aimed to enhance the quality of science and mathematics instruction in primary schools by supporting teachers via ten modules and five key objectives. This framework of modules and objectives was meant to provide the impetus to improve teaching and instruction. In addition, schools and teachers were supported by coordinators of the program. The presentation focuses on the role of coordinating support in regard to how teachers experienced the professional development in the program. Deci & Ryan’s (1985) self-determination theory and theoretical considerations about the role of interest (Prenzel et al. 1996) form the theoretical basis for the assumption that the quality of coordinating support, in terms of autonomy, competence, relatedness, coordinators’ interest and structuring competencies, affected the perception of how teachers experienced development within the program. A sample of 1900 participating teachers shows positive evidence to corroborate this assumption.
Motivational Effects of Gender Differences in Perceptions of Teachers

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Most researchers agree that boys have more controlled motivation to learn than do girls, who are more autonomous-oriented. Yet, studies have found it difficult to explore the reasons for these differences. In this study, we suggest a mechanism to explain gender-related differences in motivation. We base our investigation on two propositions that have wide support: The self Determination Theory, by which perceptions of teachers' behaviors and practices have a significant impact on how students feel about and engage in learning. Second, the Social Relation Model, by which girls have a tendency to perceive others in a more positive way than do boys. Taken together these two propositions we hypothesized a mechanism in which gender-related differences in perception of the teacher mediate the relations between gender and motivation. 129, 9th grade students completed questionnaires assessing their motivation to learn and their perception of their teachers as supportive. The results indicated that gender-related differences in perception of the teacher mediated gender related differences in motivation. This highlight the need to consider differences that might affect variations in students' perception of their teachers, in order to paint a more complete picture of the well-known relations between teacher behaviors and student motivation.
What Should Leadership Look Like in a Modern Policing Organisation?

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Between 2011 and 2013, 742 randomly selected employees of the New South Wales Police Force were brought together in small groups to discuss leadership and their experiences throughout their careers. Each group spent a total of 3 days with researchers. Data collected included field notes, filmed exercises, written presentations by participants and Likert Scale surveys. Data were qualitatively analysed to determine if there were superordinate themes which identified particular beliefs within the self-concept of employees (as police officers). Three beliefs strongly emerged. These were mateship (closeness to other officers); a belief in the job they did making a positive difference to the lives of the public, and a (negative) belief that they were often treated as ‘numbers’, rather than as individuals. These results correlate to Self-Determination Theory’s core aspects of relatedness, competence, and autonomy. These findings are now being used to examine the development, implementation and application of policies and procedures throughout the 20,000 strong organisation, the inclusion of self-concept development into training programs, and the development of intrapersonal and interpersonal skills of leaders, managers and followers throughout the organisation. Further research is being conducted to determine if the loss of these self-concept beliefs has contributed to police suicides.
According to self-determination theory, the alignment of the person and the environment internal motives and the external environment are important to learning outcomes. This study investigated the relationship between motivation, classroom environment, student engagement, and teacher assessment. Elementary students in western Japan (n=434) completed surveys at three times during the 2013 school year. Pre and post surveys recorded motives, while a process model was used to model supportive teaching, need satisfaction, and engagement. Longitudinal structural equation modeling was used to analyze responses. Teacher assessment and external observation were used to triangulate self-report measures. Prior motivation influenced perceptions of teaching and need satisfaction, but no direct relationship with engagement. Classroom processes and perceptions showed a stronger influence on engagement, partially mediated by need satisfaction. Significant auto-correlations were found for each set of motives. Engagement had a direct effect on end-of-year motivation. Teacher assessment was influenced by engagement, but not motivation. Student engagement, but not motivation, was also recognizable to external observers. Results indicate engagement, rather than motivation, may be more salient to teachers and observers. Further, the classroom environment may be of greater import to engagement than motivation. Implications for theory and practice are discussed.
We will present a method to test reliability and validity of measures from a reduced SRQ-A questionnaire with quantifications of qualitative data in a study comparing two teaching settings with two different schools. We tested Cronbach's alpha for both, the inventory as a whole and separately for the four different motivational domains Intrinsic Regulation, Identified Regulation, Introjected Regulation, and Extrinsic Regulation in the two teaching settings. We also performed a factor-analysis and re-calculated the SDI-values after having excluded one critical item from the inventory, and compared the re-calculated SDI-values with the original values. The comparison shows that the original SDI-values corroborate much more stable SDI-values, despite the inclusion of a critical item. Put together this suggests that our SDI-values are robust and reliable. Furthermore, the consistency of the SDI-measures are backed by a modified split-half-test of the qualitative data. But instead of splitting our qualitative data-set in two random halves, we chose to split the data by the group "school" which yields differences in SDI-measures. Since we found similar patterns in the quantitative features of the qualitative data as in the SDI values, we assume a high level of validity in the qualitative data and reliability in the SDI values.
Our present essay explores an interdisciplinary question at the interface of philosophy and psychology: we argue that humble persons tend less towards akratic action. We proceed in three steps: (1) Kehr’s “compensatory model” identifies explicit and implicit motives as well as subjective abilities as the core components of motivation. In a nutshell, Kehr argues that the will needs to compensate for motivational deficits as long as the person is not in an integrated state. Those integrated states are inherently and intrinsically motivating. (2) But if the will is only a limited resource as recent empirical research shows (c.f. Baumeister), this leads to the interesting observation that from a “motivational point of view” the fewer willpower we need in order to achieve our goals the more willpower remains at our disposal when unforeseen difficulties arise. (3) Our hypothesis is going to be that humility leads to realistic self-assessment – which ultimately leads to less akrasia: Humble persons are via realistic self-assessment in more integrated states. Accordingly, they do not need as much willpower for compensation when compared to non-humble persons. This means they have more resources to compensate those situations and circumstances that would lead to akrasia in others.
Learning in Times of Social Media – A Challenge for Self-Regulation of Students and Teachers

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How does using online-communities relate to the learning behavior of pupils? Based on the theories of motivational interference (Hofer et al. 2010), volition and action control (Kuhl, 2006), self-regulated learning (Boekaerts, 1999) and self-determination (Ryan & Deci, 2000) we approached approx. 200 pupils with a questionnaire about their use of (social) media, their learning behaviour and action- vs. state-orientation. Results show that participation in online-communities as well as increased usage of messenger-apps such as WhatsApp correlate with state-orientation and superficial learning behaviour. These results were used by teachers and pre-service teachers in KLefoLa (Collaboration of pre-service teachers and teachers). This project aims at fostering teaching-quality at universities by providing pre-service teachers opportunities for problem-based learning. During the course they combine theoretical concepts about learning with the practical requirements taken from the field. Thus students gain competencies that can be adapted to various situations in a flexible way. The KLefola-students designed scripts for coaching sessions to improve the self-regulation strategies of pupils in dealing with Social Communities. Results from the evaluation show, that the learning objectives for the pre-service teachers are met in most cases. Further results will be presented and discussed.
Process-oriented self-regulative studying may be experienced by the students very differently depending on their learning style (see Vermunt 1998, 2004). While students who are meaning-directed in their learning may flourish, those who have learnt to operate in more structured and controlled instruction may be distressed (Vermunt & Verloop, 1999). Although a small amount of anxiety can be natural in the process of learning, strong anxiety narrow’s students’ scope of attention and may affect their well-being (Inkinen & al. 2013; Salmela-Aro&al, 2009). The study aims to examine the cognitive and motivational-emotional outcomes of the self- and co-regulated process-oriented studying in academic teacher education. The participants were first year teacher students (n17) majoring educational psychology. Data consisted of learning diaries and interviews. An abductive content analysis was conducted. The findings suggest, that the process-oriented studying period was especially enjoyable to the meaning-directed students, whereas for reproduction-directed students it caused anxiety, which in few cases had a temporal negative effect on student well-being. However, a transformation started in the learning style of the reproduction-directed students, generating deep processing and personal control over the process, both in short and longer term. Despite the struggles, the students reported high personal relevance of the process.
There are already a number of training studies to improve the well-being (see meta-analysis of Sin & Lyubomirsky, 2009). It remains unclear whether the way strategies are assigned has an influence. The present study aims to evaluate four training conditions to improve the well-being by using art-of-living strategies: 1. Participants arbitrarily select out of a group of 14 strategies. 2. The investigator assigns five different strategies. 3. Participants select strategies according to their individual scores of the pretest. 4. A control group does not receive training. A total of 138 students of higher grades are randomly assigned to the groups. A validated art-of-living questionnaire (N = 1105) and the Satisfaction with Life Scale (SWSL) (Diener et al., 1985) were used immediately before and after the intervention. The training duration is a school morning. Multivariate analyzes of variance show significant group*time-interactions for the entire art-of-living score ($\eta^2 = .05$) and for SLWS ($\eta^2 = .12$) - with higher values for the variants 2 and 3. In summary, the training of the art-of-living strategies to improve the well-being was successful. In that process the way the strategies were assigned is important. Too many choices were proved to be less suitable.
Domain Specificity Between Self-Attribution and Hassle

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Self-attribution has been found to be associated with hassle. However, most of these studies have not considered the significance of domain specific relation between self-attribution and hassle. In the present study, the domain specific relation between self-attribution and hassle was examined in a sample of Australian high school students (N = 209). Results demonstrated that academic hassle is negatively associated with success/ability and success/effort scales, and is positively correlated with failure/ability, failure/effort and two external scales. Although the pattern of association between academic hassle and attribution scales is similar to that between social hassle and attribution scales, the correlations between academic hassle and attribution scales are much higher that between social hassle and attribution scales. It clearly demonstrates the domain-specific relation between academic self-attribution and academic hassles. Hence, it is important to consider the domain specific relation between self-attribution and hassle when examining these two variables.
Within the international obligatory demand of inclusion and inclusive school education, we emphasize the role of motivational and self-related outcomes. Therefore, we use the capability of an activity-oriented, cooperative and co-constructivist learning in primary school science education. Our empirical school study with the subject of “Renewable energies” focuses on learning conditions for an individual optimum development for children with or without special educational needs in order to meet their individual opportunities. Of special interest are the motivational and self-related outcomes of all participated children in inclusive learning settings with special regard to the feeling of competence, engagement and social integration according to relevance for further learning motivation. A multi-way procedure with qualitative and quantitative methods is used. Based on our results we develop didactical material to support its application in schools. The project, funded by the “Stifterverband für die Deutsche Wissenschaft”, is based on cooperation between the didactics in elementary science education and the primary school pedagogy. The poster presents the theoretical and educational significance of our research, the design and methodology and first results of our study.
Theorizing Reflection in Education: The Dance Between the Conceptual and the Embodied

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The notion of critical reflection, or self-reflection, has been seen as a virtue for higher education and adult learning in general, and for transformative learning in particular (Kolb 1984; Mezirow 1991; Taylor 2007). While lived experience has often been seen as the target of reflection, the previous theorizations emphasize the conceptual over the perceptual and embodied (Mälkki & Green 2014). This study aims at filling in the resulting lacuna by examining and theorizing reflection as a process of interaction between conceptual and embodied ways of knowing. It builds on our previous research that has 1) theorized the prerequisites and challenges to reflection (Mälkki 2010; 2011; 2012; Mälkki & Green 2014a), and 2) explored the experiential or phenomenological aspect of transformative learning (Mälkki & Green 2014b). The theory building was based on analyzing Jack Mezirow’s transformative learning theory (1991, 2000) while utilizing recent understanding on embodied experience (Gendlin 1997; Varela 1999; Damasio 2010) as a complementary theoretical source. The methods used were conceptual analysis and rational reconstruction (Davia 1998; Haberma 1976). This study presents a framework that explicates how the balanced relationship between the conceptual and embodied in reflection may result in greater “permeability to experience”: a capacity that enhances teacher performance and student preparedness. Perceptual/action system is introduced as an elaboration of the notion of “embodied knowledge”. Pedagogical implications are discussed.
Effective interaction or feedback between teachers and students is widely regarded as crucial for positive learning outcomes. Research also indicates that such feedback is most effective when it provides students with specific information and guidance on how to improve. Providing such feedback however can be challenging. This is especially true in foreign language classes where teachers and students often do not share the same first language. This paper presents the finding from a qualitative study investigating 3 foreign teachers’ feedback beliefs and classroom practices within one private university in southern Japan. This paper begins by introducing the study’s methodology, and the three participating teachers. It then analyzes the teachers’ feedback beliefs and observed classroom practices through the lens of three established feedback models: error correction, Hattie & Timperley’s formative feedback (2007) and Jang, Reeve & Deci’s autonomy-support and structure (2010). It then discusses how these teachers’ beliefs, and the educational setting they work within, may have constrained the feedback they provided. The paper then discusses the limitations of the current study. Some preliminary suggestions on how teachers might mitigate any similar linguistic or institutional constraints they are working under will then be presented.
Through Individual Teachers' Eyes – The Impact of Individual and Collective Self-Efficacy on the Evaluation of the Team-Quality of the Teachers of a School

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The quality of a team of teachers has an impact on the quality of a school. Cooperation with other professional and high commitment as a team are important resources to handle the requirements a school is supposed to. Different studies show, that the quality of a school and of the team of teachers can be evaluated differently, depending on individual characteristic of the individual teachers. Not every teacher of a team perceive the quality of the team he or she is in in the same way as others do. In the presented study RUMBA – «Ressourcenentwicklung im Umgang mit Berufsanforderungen», in English «Development of resources through mastering professional demands» – teachers of ten schools in Switzerland/Zurich were asked by a survey to evaluate characteristics of their school, their dean, their colleagues and their team they are a member of, as well as individual characteristics of themselves. Effects of self-efficacy (individual and collective, with instruments of Schmitz/Schwarzer 1999) on the evaluation of characteristics of team-qualities will be examined and discussed concerning their significance for school-development.
A Natural-Language-Definition of (Lack of) Free Will: Character, Moral Identity, and Well-Being

Participants (N = 323), recruited through Amazon’s Mechanical Turk, generated 10 words they associated to free will and 10 words they associated to the lack of free will. These words were quantified using the Latent Semantic Algorithm to create natural-language-definition of (lack) free will. Participants also reported, using psychometric measures, their own sense of free will, character, identity, and well-being. The natural-language-definition of ‘free will’ correlated to Self-transcendence (r=.11, p<.05). The natural-language-definition of ‘lack of free will’ was related to self-reported free will (r=.21, p<.001). Self-reported free will was positively related to Self-directedness (r=.42, p<.001), Moral Identity (r=.20, p<.001), Collectivism (r=.24, p<.01), Flourishing (r=.42, p<.001), and both subjective mental and physical health (r=.29, p<.001; r=.22, p<.001), while negatively related to Egoism (r=-.22, p<.001). Participants’ conceptualization of (lack of) free will was mirrored in their own sense of free will and Self-transcendence (i.e., considering oneself an integral part of the universe). Individuals’ own sense of free will was related to a self-schema that is mature, responsible, cooperative, and organized around seeing the self as, for example, caring, compassionate, fair, friendly, generous, helpful, hard-working, honest, kind. Moreover, the sense of free will was related to a healthy and flourishing profile.
Modelling the Predictors of Students’ Motivational Deficits for Learning Online

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As the cost of higher education continues to rise, so do its aspirants. For many tertiary institutions, a partial solution to this challenging situation is e-learning. The majority of e-learning research is focused on its development and implementation within specific curricula. Scant attention, however, has examined students' motivations to learn within these environments. The current study follows-up recent research (Authors, 2014) into the development of students’ deficits for e-learning. This study examines the role of students' prior experiences with technology, perceptions of teacher support and their content specific proficiency on their future critical motivational deficits (ability, value and effort) for learning online. This study employs Structural Equation Modelling to test a longitudinal (four and ten months) model of why students don’t want to study online. Prior computer fluency was found to reduce deficits in ability and value. Prior teacher support reduced value deficits and effort beliefs for e-learning. Prior proficiency in the topic of study reduced all three motivational deficits measured. Gender was not a significant predictor of motivations experienced during e-learning. A complex range of factors contribute to students’ motivational deficits for learning. The implications for this study’s findings and essential areas for further research will be discussed.
Expectancy-Value in Mathematics as Predictor of Career Aspirations in Science

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This study examines the role of mathematics motivational factors, derived from the Expectancy-Value Theory (EVT), in predicting career aspirations in science. Using latent-variable models with latent interactions (LMS method) on a sample of 444 students attending the final year of high school (236 males and 208 females, Mage = 18.5), we investigated the main and multiplicative interaction effects of expectancy of success (ability self-perceptions) and subjective task values (interest, importance, and utility value), measured by the Expectancies-values scale of Eccles, O’Neill & Wigfield (2005). Results ($\chi^2 = 256.571; \text{df} = 80; \text{CFI} = .951; \text{TLI} = .935; \text{RMSEA} = .071; \text{R}^2 \text{for career aspiration} = .399$) suggested that among the first order predictors, only expectancy promotes career aspirations in science (std $\beta = .212; \text{S.E.} = .069$). Moreover, among the multiplicative interaction effects, only the predictive effect of expectancy and interest value on career aspirations was positive and statistically significant (std $\beta = .166; \text{S.E.} = .081$). These results support the need to take into account the different components of subjective task value as well as the multiplicative combination of expectancy and value on educational outcomes.
Swedish Priests’ Conceptualization and Sense of Free Will: Relationships to Psychometric Measures of Personality and Well-Being

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Swedish priests (N = 252) generated 10 words they associated to free will and 10 words they associated to the lack of free will. These words were quantified using the Latent Semantic Algorithm to create a natural-language-definition of (lack)free will. Priests also reported (psychometric measures) their sense of free will, temperament and character, and well-being. The natural-language-definition of ‘free will’ was related to self-reported free will (r=.25, p<.001) and Novelty Seeking (r=.22, p<.001). The natural-language-definition ‘lack of free will’ was related to self-reported level of free will (r=.20, p<.001) and Self-directedness (r=.16, p<.01). Self-reported free will was negatively related to Harm Avoidance (r=-.27, p<.001) and negative affect (r=-.22, p<.01), but positively to Persistence (r=.20, p<.01), Self-directedness (r=.39, p<.01), positive affect (r=.21, p<.01), harmony in life (r=.24, p<.01), and resilience (r=.22, p<.01). Priests’ conceptualization of (lack of)free will was mirrored in their own sense of free will, temperament (i.e., Novelty Seeking: exploratory and impulsive behavior), and character (i.e., Self-directedness: responsibility, purposefulness, resourcefulness, self-acceptance, and congruent second nature). Their own sense of free will was, in turn, related to a personality pattern that is mature, responsible, optimistic, and persevering. Moreover, the sense of free will was related to a healthy profile.
There have been some attempts to teach linguistics to children. However, little has been empirically seen about how the teaching influences them. Hence, this study aims to investigate the effect of linguistics instruction on linguistic beliefs and attitudes of young students. Participants were 22 Japanese secondary students. They attended 4 linguistics classes regarding syntactic rules in Japanese and English. Before the classes, they answered pre-questionnaires (self-efficacy and belief in language learning, language attitude). Also, they took pre- and post-tests to measure their metalinguistic skills. 2 months later since the last class, delayed questionnaires were completed. The results revealed that the post metalinguistic score was significantly higher than the pre-score. There was no difference between pre- and post scores of self-efficacy. Still, some previous studies have shown that metalinguistic ability is related to self-efficacy. Therefore, the above result suggests that linguistics instruction leads to enhancement of students’ self-efficacy. Regarding language attitude, the participants had a significantly higher interest in language than before the instruction. Also, positive items of belief showed a significant increment. These findings suggest that linguistics instruction has a significant positive effect on linguistic beliefs and attitudes of students. This study gives a constructive insight to language education.
Political knowledge is considered to be a cornerstone of political behavior. Therefore, an unequal distribution of political knowledge poses a social problem for democratic societies. One such gap in political knowledge is the constantly shown gender gap, favoring males. Several explanations for this phenomenon have been offered, including gender-specific socialization and biological differences. All these theories imply a constant disadvantage for women in the acquisition of political knowledge. However, what we propose here is a situational effect of negative gender stereotypes in accordance with the stereotype threat theory. Stereotype threat is defined as a situational threat that diminishes performance, originating from a negative stereotype about one’s own social group. In an online survey (Study 1, N = 603) we showed that there is a gender stereotype, portraying women as politically less knowledgeable than men. In an online experiment (Study 2, N = 237) we found that the performance of female participants in political knowledge tests was invariant between stereotype and control condition. However, male participants showed a higher test performance when the female stereotype was activated, thus showing a stereotype lift effect. Implications for research as well as civic education in schools and female students in political sciences are discussed.
Students Matter – The Effects of Motivation and Self-Efficacy on the Outcome (Knowledge, Skills, Self-Concept) of the Intervention-Program JOBS to Foster Romanian Students in Their Preparation for Professional Life

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The joining of Romania to the European Union has changed the job-related perspectives of students in Romania. To adapt to this changes continuous development of knowledge and skills are demanded. To prepare students for their professional life by the intervention program JOBS (Job Orientation Training in Businesses and Schools) was developed for students in the 9th grade of compulsory school. In this program students work in interactive settings to build up their knowledge and skills about professional world in relation to their own interests and their self-concept. The effects of this intervention-program were evaluated by a longitudinal study (pre-post-design with control-group according to Solomon). About 1000 students of 36 classes (18 intervention, 18 control-group) were examined by questionnaires. Based on the theoretical framework, that not only teaching and high quality of training leads to the development of knowledge and skills but also individual factors like self-concept, motivation and self-efficacy, the study focuses not only on the growth of knowledge but also on the development of skills, self-concept, meta-cognition and self-esteem. Results about the impact of motivation and self-efficacy on the development of knowledge, skills and self-concept, fostered by this program, will be presented.
The assessment of pupils is a central task of teachers. It was shown that expectancies against individuals can affect the students self-concept and achievement. As assessment and identity processes take place both at the individual and collective (group-related) level, we assume that teacher assessments and expectancies are also relevant on the collective dimension and that they can show incremental effects on the pupils self-concept and achievement. We want to extend the extensive research on expectations at the individual level to collective expectations of teachers, so estimates of whole classes, as well as their school or school type. Results will be reported of a study with schools in Saxony-Anhalt and Leipzig pupils were pupils in over 30 classes of 5th and 7th grade were investigated at the beginning of the school year and after 4 months. Math skills and identity measures for the students and teachers expectations on an individual and collective level were assessed.
The present study focuses on an educational arrangement in Bosnia and Herzegovina (BiH) known as “two schools under one roof”. The term refers to two different ethnic groups (Bosniaks and Croats) physically sharing the same school building, but maintaining separate administrations, teaching staff, and curricula. The purpose of the study is to explore the manner in which Bosniak and Croat teachers and students (n=25) from the two ethnic groups perceive and construct their group identities within this context. Findings indicate that the teachers' and students' sense of belonging to their respective ethnic group is strong. Furthermore, the use of language and other symbols seems to function as a vital marker for expressing ‘own group’ identity, while simultaneously accentuating the differences between the groups. Considering that people in this area, prior to the armed conflict of the 1990s, were considered “one people” in terms of collective identity, the issue of ethnic identity change appears to have occurred over a relatively short period of time. In addition, we argue that this type of educational organization may reignite dormant tensions between the groups and accentuate ethnic differences in terms of (de)constructing ethnic identity.
Based on the Aristotelian concept of Eudaimonia, Seligman has proposed the PERMA model of human flourishing. According to this model people will flourish by nurturing Positive emotions, Engagement, Relationships, Meaning, and Accomplishment (PERMA). The PERMA model may, however, be criticized on the basis of being value-neutral comparing to Aristotelian Eudaimonia, which emphasizes that an action is morally-right if and only if it leads to human flourishing. This theoretical study argues that the PERMA model is by definition amoral, and proposes that this moral gap can be bridged by drawing upon 'virtue ethics' and by incorporating psychological theories of the moral self (Blasi, 1984). "Moral-flourishing" is subsequently defined as an alternative account on par with Aristotelian Eudaimonia that requires the highest levels of moral identity internalization (i.e. moral centrality) in cultivating the elements of PERMA. A two-dimensional typology is proposed; high flourishing-high moral centrality, high flourishing-low moral centrality, low flourishing-high moral centrality, and low flourishing-low moral centrality. It is argued that the concept of “Moral-flourishing” provides a more accurate picture of the eudaimonic person and captures the different levels of morality among flourishing individuals.

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How may we explain which children are musically active, playing an instrument or singing, and which are not? There is a scarcity of studies on the determinants of musical activities in primary school age. Therefore, based on the theory of planned behaviour (TPB), we developed subscales to systematically assess the three main TPB predictor constructs attitude towards the behaviour, subjective norm and perceived behavioural control related to the determinants of musical activities (Alpha-range = .80 - .92). Moreover, we applied a criterion scale, to measure the frequency and duration of musical activities (Alpha = .82). After testing the items in a preliminary study, N = 683 primary school pupils from 54 classes answered the questions in the main study. Results of the confirmatory factor analysis confirm the theoretical structure of the model. The structural equation model (CFI = .972, TLI = .969, RMSEA = .038) indicates that in particular the musical self-concept and a supporting environment possess a unique explanatory value regarding musical activities of children. The relative importance of the predictors and perspectives for the conduction of a qualitative cognitive-lab study for further validation of the questionnaire will be discussed.
This investigation, basing on Mosston's Spectrum of Teaching Styles model, aimed at examining (a) teachers' self-reported use and perceptions of benefits (fun, effectiveness for learning, and motivation for learning) for their students of various teaching styles in physical education, and (b) the role of the perceived pedagogical benefits of the teaching styles on the reported use in classes. The sample comprised 200 physical education teachers, male and female, from primary schools, who randomly came from various towns of Greece. Data were collected at the middle of a school year. The results revealed that teachers differed in the reported use and in the perceptions of pedagogical benefits of the various teaching styles. Specifically, the teachers were favor in reproductive teaching styles. Also, it was found that teachers' perceived pedagogical benefits of the reproductive teaching styles had positive impact on the experience of the use of the styles in classes, while the effects of perceptions on the use of the productive styles were intriguing.
The Development of the Scale of Beliefs and Attitudes Toward Education in Japanese Teachers: Its Relation to Teachers' Self-Esteem

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This is a pilot study which was designed for the development of Japanese version of the scale of beliefs and attitudes toward education in teachers. In school setting, it is important to examine teachers' beliefs regarding teaching, learning, and classroom management. As theoretical frameworks, teacher knowledge and self-efficacy theory were applied. Teacher self-esteem scale, self-efficacy scale, and Japanese translation of TALIS were administered to 12 elementary school teachers in Tokyo metropolitan area. TALIS (Teaching and Learning International Survey) is an international survey which is designed to measure teaching beliefs and practices, relationship with students and community, and needs for professional development activities. The result showed that: (1) in most subscales, there were no differences in terms of gender and age. (2) There were positive correlations between "self-esteem" and "relationship with students." (3) Most teachers regarded professional development activities as crucial and necessary for them. These scales are found to be useful for the analysis of teachers' self-consciousness and beliefs on teaching and learning multi-dimensionally. This research would be beneficial to the field of teacher education because it clarified the teachers' beliefs and on their teaching and students' learning. Also, it showed the relationship between teachers' self-esteem and educational beliefs.
Development of Occupational Identity of Preschool Teacher Students Before and After Their Practice Period

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Occupational identity refers to the conscious awareness of oneself as a worker in terms of internalizing knowledge, skills, attitudes, and values that are characteristic of members of the profession. Explorations of occupational identity are important considering its positive relation to general identity development, commitment to work, professionalism, and occupational success. The purpose of the present study was twofold. First, we aimed to investigate the levels of professional identity among first and second year preschool teacher students in Norway. The second objective was to examine the effects of a supervised practice in kindergarten on the development of occupational identity. The study adopts a longitudinal approach and includes 101 first-year and 88 second-year kindergarten teacher students (M age = 22.6, SD = 3.8) who completed the questionnaire before and after their practice period. Results indicate that second-year students reported a significantly higher degree of occupational identity comparing to first-year students. Furthermore, second year students significantly increased their level of occupational identity after completing a practice period. Findings are discussed in light of significant variables that play a role in the formation of occupational identity. Implications and limitations of the present research are also discussed.
The encouragement of the development of a realistic self-concept of the children in their classes is an important challenge for school teachers. Children who know about their strengths and weaknesses can work on the competences, which need to be improved, more effectively. The study accompanied first-grade students and their teachers looking at the development of the children’s self-concepts concerning their mathematical competences. Research has taken place at the beginning, in the middle and at the end of first-grade by interviewing all 94 students of five classes in order to find out how they rate their mathematical competences and their position in class. Furthermore the children attended mathematical tests in order to gain data for comparison of the actual skills with their self-concepts. Interviews with the teachers provided a basis for analyzing the teaching methods they use and their overall strategies to meet the heterogeneity in their class. Researcher’s observations of school lessons completed the design of the study. One aim has been to find out whether there are differences in the self-concept development of the children with and without visual impairment and how teachers cope with the special needs of their students.
Self-compassion describes a positive and caring attitude of a person toward her- or himself in the face of failures and individual shortcomings. As a result of this caring attitude, individuals high in self-compassion are assumed to experience higher individual well-being. The present meta-analysis examines the relationship between self-compassion and different forms of well-being. The authors combined $k = 55$ samples, with an overall sample size of $N = 11,122$, and analyzed the central tendencies of effect sizes (Pearson correlation coefficients) with a random-effect model. We found an overall magnitude of the relationship between self-compassion and well-being of $r = .47$. In addition, the analysis showed statistically significant differences between different forms of well-being in their relationship to self-compassion. To identify possible reasons for existing heterogeneity in the effects, sample characteristics and exploratively identified variables (stress, depression, mindfulness, and self-esteem) were tested as potential moderators. This analysis provides a unique contribution to the understanding of self-compassion and well-being. The results should encourage the scientific research community to further investigate the relationship between self-compassion and the different forms of well-being, and focus on the examination of possible further moderators.
Variability in Self-Concept: How Does Social Context Influence the Core Self?

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This study draws from core concepts of Self-Determination Theory (SDT, Deci & Ryan, 1985, 2000), Symbolic Interactionism (Mead, 1934), and Heterotypic Continuity (Rosowsky, Abrams, & Zweig, 1999) to develop a new conceptual model, and to develop meaningful links between these theories to examine the role of social context in terms of variability in self-concept. This variability is articulated by looking at discrepancy between actual and ideal self, using all three fundamental levels: individual, relational, and collective (Sedikides & Brewer, 2001). First, we explicate this model by incorporating Mead’s (1934) argument about symbolic interactionism, and how he viewed people’s selves as social products to highlight the role of social context in framing self-concept. We then integrated SDT’s self-regulation continuum, specifically, looking at sublevels of extrinsic motivation to differentiate between quality of social settings in terms of their motivational states and how this variation creates discrepancy. Lastly, we specify the elements of heterotypic continuity, which indicates that individuals possess the underlying quality of the core self but the behavioral manifestations are distinct at different times across different social context. Hence, coherence is maintained in the long-term self-characteristics but the manifestations are dissimilar (Rosowsky et al., 1999).
How can Happiness and Well-Being be Enhanced?

Happiness is a central matter of concern for individuals and today's society. The main purpose of this symposium is to study the effects of interventions on well-being. It is known that certain kinds of trainings can improve the well-being. We will evaluate whether it is also important how far participants can complete their tasks. We will study generalizability with respect to designs, dependent variables, kinds of interventions and kinds of samples. This symposium includes quasi experimental designs as well as experimental designs. We will focus on different dependent variables for well-being, for example the art-of-living, flow-experiences, achievement motivation, flourishing, mindfulness, self-efficacy, attributions and life satisfaction. In addition, different samples are evaluated like students, teachers and general population groups. To measure improvement and to compare the different experimental conditions we used questionnaires (paper pencil and online), sociodemographic information, as well as learning-diaries. We will show that a training in applied positive psychology conveyed achievement motivation (Brohm) and increases participants' subjective happiness, flourishing, positive emotions and life satisfaction, while their depressive symptoms decreased (Rahm & Heise; Blickhan). We will also show that task incompletion reduces subjective flow-experiences (Peifer & Syrek).
Fostering Achievement Motivation in Schools. Approaches and Empirical Findings of an Intervention Study

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Achievement motivation is the fundamental power of two of the elements of the PERMA-Model: engagement and accomplishment. In addition the cognitive development and psycho-social self regulation of children and adults depends vital on the level of motivation (Weiner 2001). On the other hand according to European and Anglo American data, teachers complain children's lack of motivation. Hence we investigated, whether achievement motivation could be conveyed by a teacher based intervention (40 hours/2 months) in primary-, secondary modern- and grammar schools (N 1073). The intervention included the core findings of the achievement motivation research and offered typecasting practical exercises for students aged from 10 to 19 years (different language levels). The effects were assessed by self assessment data by a validated questionnaire (FLM, Petermann/ Winkel, subscales: hope of success, persistency and diligence, fear of failure, fear of success) as well as by a questioner concerning the social self regulation (FASK, Kanning, subscales: social orientation, offensiveness, self-regulation, ability to reflect). The requested sociographic information were gender, age, socio-economic background (ISCO), cultural resources and ethnic background. Female gender of the students and organizational constancy in supporting the training program by teachers predicted the strongest impact of the intervention. The findings show moderate to strong effect sizes.
Training of Subjective Well-Being

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One main aim of Positive Psychology is to increase subjective well-being in non-pathological populations to empower individuals to thrive. We developed a four week training for students with one training day every two weeks. Psycho-educational topics included happiness/well-being, positive emotions, self-efficacy, attributions, gratitude, mindfulness, good deeds and flow as well as rumination and social comparisons. Participants had to perform the exercise Three Good Things (Seligman et al. 2005) every evening during the training period. Additionally, they planned three activities to further develop well-being and decided which one they wanted to realize. The seminar was evaluated with different instruments assessing subjective well-being which were applied as pen & paper questionnaires before and after the seminar and as online questionnaires at one-, three- and six-month-follow-up. A control group filled in all questionnaires online. The results show a significantly higher increase of positive emotions from pre-test to the other three times of measurement in the training group than in the control group ($\eta^2 = .05$ to .11; $p < .05$). From pretest to three-month-follow-up also satisfaction with life increased significantly stronger in the training group than in the control group ($\eta^2 = .05$; $p < .05$).
This follow up study evaluated effects of a training in applied positive psychology in comparison to a control group, carried out in Germany. The course addressed a general population group who aimed to increase their level of subjective well-being. Over a period of six months, participants’ subjective happiness, flourishing, positive mood and life satisfaction increased, while their depressive symptoms and risk for burnout decreased. These effects were statistically significant at the end of the course and two months later, thus indicating sustainable changes in psychological functioning. This study shows evidence for the effectiveness of this type of training which is open to the general public. The course is short (five evenings over four months), therefore cost-effective, and available in form of a handbook. It can consequently be delivered by any experienced coach or psychologist and provides a practicable course of action in times of increasing prevalence of depression and burnout.
The key mechanisms involved in the emergence and sustainment of flow-experience are not yet fully understood. We postulate that the need for completion (NfC), which arises during task engagement, acts as a motivating force to persevere task engagement and plays a key role during flow. We further assume that persons high in conscientiousness experience more flow at an earlier point within task performance, which could be mediated by a stronger NfC. To test our assumptions, we performed a study with 60 participants (45 females), who played a puzzle-task. In order to vary the point of time within task performance, we let participants complete the task to 50%, 90% or 100%. Participants were asked to stop working on the puzzle and to fill in a questionnaire to assess their NfC and their flow-experience. Conscientiousness was assessed before start of the experiment. The effect of task incompletion on flow-experience was significant, but not mediated by the NfC. Furthermore, there was no moderating effect of conscientiousness. Notably, the effect of task incompletion went into the opposite direction as predicted. Presumably, being asked to leave a task incomplete led to frustration, which then reduced subjective flow-experience in the retrospective.
C2/Symposium: Self-Concept, Self-Efficacy, and Achievement: Sources and Reciprocal Effects

Self-Concept, Self-Efficacy, and Achievement: Sources and Reciprocal Effects

Chairs: Schoeber, Christian; Koeller, Olaf (IPN – Leibniz Institute for Science and Mathematics Education, Germany)

Discussant: Wigfield, Allan L. (University of Maryland, United States of America)

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Academic self-concepts and self-efficacy are very prominent motivational variables that have been investigated in many empirical studies. Enhancing both variables represents an educational goal and much research has been carried out to show their important role for increasing academic achievement. Furthermore, work on reciprocal effects clearly suggests that self-concepts as well as self-efficacy are influenced by students' academic accomplishments. However, there is not much research investigating whether previous findings are also valid in groups of migrant students or for preschool children. This symposium presents four longitudinal empirical studies with one of them investigating the sources of self-efficacy in different socialization contexts for students of different migration backgrounds in Germany. If reciprocal effects of domain specific self-concept and domain specific self-efficacy can equally be found within groups of students with different migration backgrounds attending secondary schools in Germany is the aim of two contributions. In a fourth study data of preschoolers was analyzed to investigate, if the reciprocal effects model within the domain of mathematics also holds for children before beginning formal instruction. The results provide further insights into the reciprocal effects model for self-concept and self-efficacy and how enhancement of self-efficacy works.
Reciprocal Effects Between Domain Specific Self-Efficacy and Academic Achievement

Research has shown that reciprocal effects between domain specific self-concepts and academic achievement exist. However, it is not clear, whether this reciprocal causal model can be transferred to domain specific self-efficacy and whether subgroup invariance in reciprocal effects between domain specific self-efficacy and academic achievement can be assumed. We thus conducted a repeated measurement study to analyze domain specific self-efficacy beliefs and respective academic achievement of German students (N = 1598; 49.4% female; N = 1404 on both measurement points) at the beginning and at the end of grade 7 in different schools. We took into account mathematics and reading predicted, that, even after controlling for autoregressive paths, subsequent self-efficacy beliefs can be predicted by prior achievement and later achievement can be predicted by previous self-efficacy beliefs. Structural equation modeling showed the hypothesized reciprocal effects without any causal predominance of one of the two variables. Additional multi-group analyzes with separated model estimations for students with different migration backgrounds (Germany, Turkey, Former Soviet Union and Poland) indicated a universal development of self-efficacy and achievement. The results add to similar findings in self beliefs and culture.
The present study was carried out to analyze the relationship between academic achievement (reading and spelling) and verbal academic self-concept in groups of migrant and non-migrant students. Two samples (cohort 1: n = 1001 students from 44 classes; cohort 2: n = 855 students from 38 classes) from different school types (academic track vs. non-academic track) worked on standardized spelling and reading tests and verbal self-concept items at the beginning of grade 5 (T1) and the beginning of grade 7 (T2). In line with the existing literature, migrant students had lower achievement levels at T1 and T2, even after controlling for school type, but differences in verbal self-concept failed to be significant. Change in verbal self-concept and achievement was similar in both groups. Further analyses provided evidence for the reciprocal effects model, i.e., verbal self-concept had positive effects on change in achievement while at the same time achievement had positive effects on change in verbal self-concept. These reciprocal effects were not moderated by school type or students’ migration background. Practical implications of the findings are discussed.
Self-Enhancement, Skill-Development, or Reciprocal Effects: Examining the Relation Between Math Self-Concept and Math Achievement in Preschool Years

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Given the scarce knowledge about the construct of academic self-concept of preschool children before the beginning of formal schooling, the present study aims to examine whether (1) preschool students differentiate between competence and affect components of math self-concept as has been found for elementary and secondary school students (Arens, Yeung, Craven, & Hasselhorn, 2011) and (2) whether the well-established reciprocal effects model (REM; Marsh & Craven, 2006) for self-concept – achievement relations also applies to preschool students. The sample study consists of 413 preschool children. Math self-concept and math achievement in terms of precursor skills were measured three times. The results indicate that even preschool students differentiate between competence and affect components within math self-concept. In the longitudinal analyses, the competence component of math self-concept was found to be influenced by former math achievement while there were no effects of achievement on the affect component of math self-concept. Neither the competence component nor the affect component of math self-concept were found to influence math achievement. These results imply that if there is any relation between math self-concept and math achievement in preschool years, it is primarily an effect of prior achievement on subsequent competence self-concept supporting the skill-development model.
The aim of this paper was to examine the predictive role of Omani preschool teachers' efficacy beliefs in predicting their burnout levels. Building on the social cognitive theory (Bandura, 1997), five dimensions of teachers' self-efficacy beliefs (efficacy for instruction, management, engagement, assessment, emotional interaction) were used to predict the three dimensions of Maslach's burnout scale (low personal accomplishment, emotional exhaustion, depersonalization). The sample consisted of 248 female teachers teaching pre-school children in three Omani districts. The participants responded to two questionnaires, the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) and the Pre-School Teachers' Efficacy Belief Scale (PS-TEBS, Aldhafri, 2014). The three subscales of the MBI and the five subscales of the PS-TEBS showed good reliability and validity evidences. Three separate regression models consisting of the five efficacy belief dimensions explained 15.5% of the variance in low personal accomplishment, 7.3% of variance in the teachers' emotional exhaustion, and 6.4% of variance in the teachers' depersonalization. Variations were found among the five dimensions of efficacy beliefs in their abilities to predict the three dimensions of the burnout. Across the three models, teachers' efficacy beliefs related to emotional interaction with children stand as the most powerful significant predictor of burnout levels.
This study examined (a) teachers' experienced emotions at school, problem solving, self-efficacy and school collective efficacy beliefs, (b) the role of self-efficacy in problem solving, and in the effect of problem solving on collective-efficacy, (c) the impact of self-efficacy, collective efficacy and problem solving on emotions, and (d) the role of educational level in the variables considered. The sample comprised 256 primary and secondary school teachers, male and female, who completed the scales at the middle of a school year. The results showed that (a) the teachers reported from moderate to high intense positive emotions, mainly context-, task- and others- related, (b) self-efficacy had positive effect on problem solving, and it mediated the impact of problem solving on collective-efficacy, (c) self-efficacy, problem solving and collective-efficacy, in combination, explained a moderate amount of the variance of the emotions, (d) self-efficacy had direct and indirect, through the interaction of problem solving and collective-efficacy, effect on the emotions and (e) the primary school teachers, compared to secondary school teachers, had a stronger sense of school collective efficacy, were less impulsive, and had a lower level of personal control over problem solving procedures. Theoretical and practical applications of the findings are discussed.
This paper reports a national project that aims to examine the predictive role of teachers’ quality of life, their self-efficacy beliefs and their emotional intelligence in predicting students' academic achievement. The investigation is important because of the vital role of students' academic achievement (as a dependent variable) and its possible teacher-well-being related factors that were found to influence teachers' performance, motivation and decisions to stay in the teaching profession, especially in an era of rapid economic, social and cognitive changes. The researchers will use some existing international measures as well as some new designed measures to reach the study goals. The study sample will consist of 20% of the total Omani math and science teachers. Those teachers will be selected from a randomly selected sample of schools across all Omani school districts. Both descriptive and inferential statistics will be used in data analyses. The study is expected to contribute to a better understanding of the factors influencing students' academic achievement and Omani teachers' well being. In this presentation, we will report the findings from the pilot study that examines the interconnection among the study variables and test the validity of the teachers' measures in the Omani context.
Promoting General and Specific Self-Efficacy Beliefs by Experiential Education Programs in the Outdoors

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Transfer effects of experiential education programs depend on the participants' perceived level of challenges (Eberle, 2008). Different types of challenges, peak and limit experiences (Fengler, 2010) may influence sub-dimensions of self-efficacy beliefs (Schmitz, 2002). The aim of our study is to evaluate the structure of general and specific self-efficacy beliefs, their antecedents and development in an outdoor-educational setting. Positive effects are assumed on all self-efficacy sub-dimensions depending on the particular perceived level of challenge and the appraisal of success. Furthermore, we investigate the emotional experiences of participants during the intervention as well as interaction effects with achievement motives, risk and competition seeking, domain-specific values and self-efficacy beliefs. In our study, N=544 students from German secondary schools (8th to 11th grade) were asked by questionnaire before and after a one-week outdoor-educational intervention about certain beliefs (traits). Additionally, we measured their emotions and on-task-beliefs (states) after three randomly selected adventure educational tasks. Research is in progress. First findings show acceptable to good reliabilities of the scales. General, emotional and cognitive self-efficacy beliefs show significant increases. Positive emotions correlate positively with self-efficacy increase on a significant low to medium level. Implications for experiential education programs as well as school education will be discussed.
Self-Perceptions of Epistemic and Achievement Emotions in Learning Mathematics

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In this empirical paper we investigate the relationships between epistemic emotions, operationalized in the self-report instrument Epistemic Emotion Scales (EES) (Meier, Pekrun, Muis, Sinatra, & Azevedo, 2014; Pekrun & Meier, 2011), and achievement emotions, operationalized in the Achievement Emotions Questionnaire (AEQ) (Pekrun, 2006; Pekrun, Goetz, & Perry, 2005). Subjects are 1036 first year students business and economics taking an introductory course mathematics & statistics. Main focus of research is to determine the role of control appraisals as proximal antecedents of both types of emotions, and to investigate whether epistemic emotions mediate the relationships between control appraisals and achievement emotions using latent variable mediation models (MackKinnon, 2008). We indeed find significant mediations, with indirect effects of size ranging between 20% to 40% of total effects. Most mediators appear to be of the distal mediator type (Hoyle & Kenny, 1999). Educational implications are discussed.
The Role of Basic Psychological Need Satisfaction for Apprentices' Well-Being in Vocational Learning Environments

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In the dual vocational education and training (VET) system in Germany, about 100,000 of all terminations (> 60%) of the employment contracts are initiated by trainees within the first year. From an economic point of view, early drop outs from VET are unfavorable for the hiring organizations, while the trainees run the risk of long-term unemployment. Therefore, the identification of determinants that boost satisfaction in VET while reducing the dropout intention seems to be of prime importance. In our study (N = 1660), we investigated the role which basic psychological need satisfaction (i.e., perceived autonomy, competence and relatedness) in the different VET learning environments (i.e., at the company and at school) plays in predicting apprentices' satisfaction in their first year of VET. We applied hierarchical regression analyses and found need satisfaction at the company (but not at school) to be a significant predictor for satisfaction with the VET, also when controlling for the Big Five personality traits. Our results indicate both the importance of the trainers' support and the social support at the company for trainees' satisfaction with VET programs.
Teachers' Well-Being and Basic Need Satisfaction: Do the Need for Relatedness and the Need for Competence Explain the Importance of Good Teacher-Student Interactions for Teachers' Well-Being?

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The teaching profession is highly demanding. Especially interacting with students, particularly managing classroom behavior, is one of the most frequent stressors (Friedman, 2011). However, working with young people and fostering their learning is also a key motivation and resource for teachers. But what is it, that makes interaction with students such demanding and rewarding at the same time? We suggest that self-determination theory (Ryan & Deci, 2000) - precisely, the fulfillment of the need for relatedness and the need for competence - may explain the link between stressors and resources concerning interaction in class on the one hand and teachers' well-being on the other hand. The present study accompanied N = 153 teachers for a two-week-period using a diary approach. At the end of each workday, teachers reported on stressors and resources, fulfillment of basic needs, and job satisfaction. Path analysis revealed that first, resources concerning students' learning as well as resources and stressors concerning classroom management predict job satisfaction. Second, both the need for relatedness and competence mediate the association between the experience of stressors regarding classroom management and job satisfaction. Third, relatedness partially mediates the link between job satisfaction and resources regarding students' learning.
Well-being can be seen as a marker of a fully functioning human being (Deci & Ryan, 2012). It is influenced not only by personal attributes or behavioral strategies but also by the context (cf. Mesquita, Barrett & Smith, 2010). Self-Determination Theory (Deci & Ryan, 2000) offers many insights into how the social context influences well-being (e.g. Sheldon & Filak, 2008). Going beyond the framework Self-Determination Theory provides, intra- and interdisciplinary research highlights how not only the social but also the physical context impacts well-being (e.g. Smolders & de Kort, 2014). The presented theoretical contribution builds upon these findings and the assumption of a transactional relationship between person and context and between social and physical context respectively (cf. Pervin, 1968). It proposes to integrate the non-social context and its influence on human well-being into the theoretical framework of Self-Determination Theory. By doing so, it aims to contribute to a holistic picture of context impact on well-being, providing a common framework for the fragmented field of physical context influences at the same time. The integration further intends facilitating comparable and profound results on the understanding of how well-being can be influenced by the context as a whole.
Need Satisfaction and Well-Being: Toward a Structural Model

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This study used Self-Determination Theory's (SDT, Deci & Ryan, 1985, 2000) conceptualization of the need for competence to examine the structural relationship between Conscientiousness and relational well-being mediated by competence across five different relationships. SDT specifies competence as an innate psychological nutrient that is essential for ongoing psychological growth, integrity, and well-being. Satisfaction of this need is assumed to be necessary for psychological growth but failure to meet the need for competence leads to nonoptimal psychological outcomes. To test the hypothesized model with a structural equation analysis (using AMOS version 21), we included a sample of 620 college students from the U.S. (n=235), China (n=232), and Russia (n=153), who completed measures of need satisfaction (La Guardia, Ryan, Couchman, & Deci, 2000), Big Five Inventory (Goldberg, 1993), and well-being. The results of SEM indicated good fit $X^2 (51, N = 620) = 96.366, p < .01$, RMSEA = .06, NFI = .90, CFI = .95, suggesting that being highly Conscientious was associated with better relational well-being when the need for competence was satisfied. The test of mediation showed competence as fully mediating between Conscientiousness and relational well-being across all three samples.
When the Journey to the West 58 Meets Romans 7: The Divided Self as a Commonality of Interreligious and Philosophical Dialogue

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Romans 7 of the New Testament was a foundational treatise for any researcher with some serious interest about the inner “I” of humankind. In it, there was Paul's narration of the inner self. That narration essentially presented “I” as a complexity with divided and differentiated levels of self-awareness and self-control. Eventually, this narration has provided the backbone for philosophical anthropology in the West. Interestingly enough, The Journey to the West was a Buddhist novel; and its author in Ming China was named WU Cheng’en; and in Chapter 58 of The Journey, WU has delivered a strikingly comparable narration of the inner “I”. Assuming, there was no direct influence between them, their surprisingly comparable narrations could be theoretically significant. Such similarities could be pointing to mutually affirmative observations about the underlying ontological conditions of humankind. In other words, the proposed paper aims to make clear the comparable understandings of the inner “I”, as contained in these two pieces of anthropological studies, respectively penned down by St. Paul and by WU Cheng’en. The wider significance of this proposed study is that their shared observations could constitute that indispensable foundation for future interreligious and philosophical dialogues as well as for future scientific investigations.
Consideration of Self-expression as a motivational concept is practically non-existent. Moreover, researchers have suggested that self-expression is empty, explains nothing, and is culturally biased (Tobin, 1995), or that expression simply reflects the state of an organism without having a specific aim or goal (Maslow, 1970). On the other hand, self-expression is fairly common in research and used in connection with persuasion, consumer and civic behavior, individualism, choice, variety seeking, communication, and assertiveness. In a broader perspective, self-expression is also detectable in self-determination, self-actualization, self-disclosure, and expressive writing. The main aim of this presentation is to argue that the need for self-expression represents a fundamental motivation which is commonly overlooked in contemporary literature. Considering the relatively weak position of self-expression, this aim will be achieved by (1) offering a working definition, (2) comparing self-expression to similar concepts, and (3) assessing its importance against the criteria of fundamental motivation (Baumeister & Leary, 1995). The intention is not to invent a completely new motivational concept, but rather demonstrate that self-expression already exists in various forms within the literature. Finally, I argue that the present conceptualization includes and expands on similar concepts and provides a parsimonious explanation for many different types of behavior.
“Flip classroom” has been a popular reform initiative due to the ease in preparing videos and online learning material. The emphasis is to have students individually prepare before class using the videos or online materials, while leaving more time for in-depth discussion and interactive activities during class. This is in contrast to traditional teaching with instruction of basic content in class and students individually working on difficult problems at home. In this experimental study with 80 students in an introductory postgraduate educational research methodology course (3 h × 6 meetings), “flip” was adopted. Students viewed short (3 × 10 min) videos and lecture notes before each lesson, while leaving all class time for in-depth small and large group discussion of additional challenging problems. Results showed that 60%-70% of these students believed “Flip” to be worth strong promotion and they would use “Flip” in their own teaching. Only 10%-15% had some reservation. “Flip” seemed to improve more the test performance of the middle ability students. Relations of students’ attitude to flip and various Deci and Ryan’s motivation scales [General Causality Orientations Scale, Interest/Enjoyment, Perceived Competence, Effort/Importance, Perceived Competence for Learning, Self-Determination Scale (SDS) and Reasons for Learning] were examined.
Motivated and Involved? Which Family Characteristics Promote Students' Academic Outcomes – A Person Centered Approach

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The importance of various family characteristics for students’ academic outcomes is well-known in developmental research (e.g., Eccles, 2007). However, little is known about the interplay of different family characteristics: Specific configurations of family characteristics might characterize distinct family types with some types of families fostering students’ academic outcomes; others potentially impairing students’ outcomes. Using data from 1571 ninth grade students from 82 academic track schools in Germany and their parents, the interplay of different family characteristics was investigated using latent profile analysis. Based on parents’ motivational beliefs, child-specific beliefs, academic involvement, and the social context of the family, five types of families were identified: disengaged, motivated & engaged, motivated & non-controlling, controlling, and average. Subsequently, cross-sectional and longitudinal associations of the five family types with students’ motivational and achievement outcomes in math were analyzed. These analyses revealed the importance of family’s motivational beliefs: Students from motivated & engaged families and students from motivated & non-controlling families showed higher levels of motivation and achievement in math compared to students from average families. In addition, students from both types of families with high motivational beliefs showed an increase in math achievement and grades over five month compared to students from average families.
Predictors of Career Aspirations in Science During Adolescence

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Despite excellent career options in a growing labor market most students opt out of science throughout their school career. The present study assessed the importance of students' interest in science and science self-concept regarding corresponding career aspirations half a year, three years, and six years into secondary school (Grades 5, 8, and 11), with three cohorts on the highest educational track. The overall sample consisted of N = 1013 students. After establishing measurement invariance multiple group models were computed to compare the effects on science career aspirations between cohorts. Both constructs contributed incrementally to the prediction of science career aspirations in Grade 5; interest was, however, a significantly stronger predictor than self-concept. In the older cohorts, students' science self-concept did not predict their career aspirations beyond interest; this pattern of results held for both genders. The results thus suggest that—at least among students on the highest educational track for whom there is a pressing need on the labor market, but whose competencies allow for multiple career options—kindling and sustaining students' interest in science is pivotal for them to consider entering a science career.
Elementary Students' Trajectories of Ability Self-Concept and Intrinsic Motivation in Math: What is the Role of Grades?

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Based on theoretical assumptions made by skill-development and self-enhancement approaches as well as by self-determination theory, this study investigated the role of grades for interindividual differences in the decline of students' ability self-concept (ASC) and intrinsic motivation in math. A sample of N = 519 German elementary schoolchildren (t1: M = 7.95 years, SD = 0.57) was followed from the end of 2nd to the end of 4th grade. Grades in math, domain-specific ASC and domain-specific intrinsic motivation were assessed at 7 measurement occasions. Results of Latent Growth Curve Models revealed interindividual differences in the decline of ASC and intrinsic motivation. Initial grades were strongly correlated with initial ASC, whereas the correlation between initial grades and intrinsic motivation was significantly weaker. Initial grades were associated with the decline of students' ASC, but not with the decline of their intrinsic motivation. Moreover, the correlation between change in grades and change in ASC was moderate, whereas the association between change in grades and change in intrinsic motivation was only weak. These results suggest that grades might play a minor role for the variability in trajectories of children’s intrinsic motivation. Results are discussed with regard to their educational relevance and theoretical implications.
The Psychology of Passion: A Meta-Analytical Review of a Decade of Research on Intrapersonal Outcomes

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It is just over a decade since Vallerand and colleagues (Vallerand, Blanchard, et al., 2003) published their seminal paper on the dualistic model of passion. Here, we provide a meta-analytical review of the ensuing research to better understand how the types of passion Vallerand et al proposed (harmonious and obsessive) affect intrapersonal outcomes. A systematic literature search yielded 70 papers containing 94 studies, which reported 27 distinct criterion variables. These criterion variables derived from 4 research areas within the intrapersonal sphere: (a) well-/ill-being, (b) motivation factors, (c) cognitive outcomes and, (d) behaviour and performance. From these areas we retrieved 1308 (634 bivariate and 674 partial correlations) independent effect sizes and analysed the data using random effects meta-analysis. Supporting the dualistic model, mean weighted bivariate and partial correlations showed harmonious passion to be an enriching force that positively corresponds with adaptive intrapersonal outcomes (e.g., positive affect, satisfaction, performance). Conversely, the mean weighted bivariate and partial correlations for obsessive passion revealed a less desirable pattern of association with both adaptive and maladaptive intrapersonal outcomes (e.g., negative affect, rumination, burnout). Accordingly, while both passions matter in people’s lives, it is only the harmonious form that is associated with exclusively positive intrapersonal consequences.
Flourishing and Staggering Pathways to Adulthood: International Symposium of Longitudinal Studies on Motivation and Well-Being

Chair: Moeller, Julia (Yale University, United States of America)
Discussant: Wigfield, Allan L. (University of Maryland, United States of America)

This international symposium presents four papers on longitudinal studies on motivation and well-being in adolescence and emerging adulthood. Well-being, task values, achievement goal orientations, and passion were studied from the micro-level of moment-to-moment change in individual experiences during lectures (Dietrich et al.) to the macro-level of change of society-level influences (Parker et al.). The samples stem from four different countries: Australia (Parker et al.), Germany (Dietrich et al., Moeller et al.), Finland (Tuominen-Soini & Salmela-Aro; Moeller et al.) and Brazil (Moeller et al.). Two studies advance the expectancy-value research by presenting situation-specific measures (Dietrich et al.) and the relations of task values and competence beliefs to groups of individuals with distinct goal orientation profiles (Tuominen-Soini & Salmela-Aro). Distinct subgroups of individuals are also addressed by Moeller et al., who show how latent profile analyses change how we interpret types of passion. Fourth, Parker et al. examine how economic crisis influences the psychological well-being in a whole cohort (Parker et al.). Allan Wigfield is discussant and will link these papers with each other and previous research. All papers origin from collaborations formed in the international post-doctoral fellowship programme “Pathways to Adulthood”, funded by the Jacobs Foundation.
Expectancy and Value as In-The-Moment Predictors of Students’ Effort

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Many studies support expectancy-value models (Eccles & Wigfield, 2002), predicting that both students’ expectations for success and their values regarding a task at hand are central precursors for achievement, persistence, and choices. Because most findings were based on panel studies, it remains unknown how much expectancies and values vary between situations, or lessons, and whether findings about sample correlations in panel studies reflect individual development. With a short-term intensive longitudinal design we followed 155 German university students with weekly Experience Sampling over one semester (ten consecutive lessons/weeks á three beeps. We assessed students’ situational efforts, expectations for success, task value components, and cost. We used multilevel structural equation modeling with situations nested in lectures nested in individuals. 22-54% of the variance in expectations, values, and effort was due to different situations within one lecture, 20-34% was due to differences from lecture to lecture, and 24-55% was accounted for by inter-individual differences. The task value facets highly correlated with one another, so did the cost facets. Values more strongly predicted effort on the week and person level, while on the situation level expectations and values equally well predicted effort. Higher motivation relates to higher effort on the intra- and inter-individual level.
Math- and English-Related Achievement Goal Orientation Profiles and Their Associations to Task Values and Academic Well-Being

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This study focuses on subject-specific motivation and integrates achievement goal, expectancy-value, and academic well-being frameworks. The aim was to investigate students' math- and English-related achievement goal orientation profiles, and how these profiles differ in task values (intrinsic, attainment, and utility values, cost) and more general academic well-being (school engagement, burnout, perfectionism). A person-centred approach and I-States as Objects Analysis procedure were employed. The participants were 16Ð18-year-old high school students (I-States N=528). Using latent profile analysis, four goal orientation groups were identified: indifferent (34 %), success-oriented (29 %), and mastery-oriented (23 %) in both subjects, and math-avoidance-oriented students (14 %), who focused on avoiding work in math, but displayed an adaptive motivation in English (girls overrepresented). Both mastery- and success-oriented students strove for learning and gaining good grades in both subjects, valued them, and were engaged, but success-oriented students were characterized by higher perceived cost, social utility, burnout, and maladaptive perfectionism. For math-avoidance-oriented students, the perceived cost of studying math was extremely high and intrinsic value very low but they scored the highest in English-related intrinsic value. Math-avoidance-oriented students' motivation was highly subject-specific but, among the other students, achievement goals in math and English were congruent. Temporal stability in goal profiles will be investigated.
Passion is an affect-intense and long-term persisting inclination to engage in specific activities. The dual model of passion (Vallerand et al., 2003) distinguishes between two types: harmonious passion (HP) and obsessive passion (OP). While HP correlates with adaptive experiences, OP correlates with maladaptive experiences. We investigated whether HP and OP are types of individuals in terms of distinct subgroups. While the previous research on passion reported mainly covariance/correlation-based analyses, this study applied Latent Profile Analyses and two-step cluster analyses. We analyzed five cross-sectional and one longitudinal studies (Ntotal =2707) from three countries (Germany, Brazil, Finland), using two different passion measures (Moeller & Grassinger, 2014; Vallerand et al., 2003) in five different activity contexts and different age groups from adolescents to young adults. With all samples and methods we replicated that HP and OP are aligned (either both high, or both low), in all subgroups. Discrepancy profiles with high OP but low HP were not found in any sample. HP raw scores were generally higher than OP raw scores, so very few, lowly passionate, participants reported higher raw scores in OP than HP. Standardization of these differently difficult items/subscales led to misinterpretations of subgroups in previous studies, as we will discuss.
Recent research has suggested significant negative effect of the Global Financial Crisis (GFC) on the mental health and well-being of Australians, Britons, and Americans. In this paper we suggest that emerging adults, given the many developmental tasks they face and as a period of considerable uncertainty, may be at particular risk of such an effect. Harmonizing, two longitudinal cohorts of Australian youth (N = 24,540), one who went through the GFC and one who did not, we estimate the effect of economic uncertainty on 12 domains of well-being. These domains cover all major life domains including satisfaction with future prospects, social life, leisure, study/work and general well-being. Utilising a difference-in-differences logic, we found significant differences in well-being in 11 of 12 life domains; with those going through the GFC being between .10 to .20 standard deviation units lower on well-being than the non-GFC cohort. To further test the robustness of this effect we re-estimated these models within a propensity score matching paradigm finding similar results. These results suggest that emerging adults may be particularly susceptible to economic hardship and that the effect of hard times on well-being covers most domains of young people's lives.
Performance and Ability Evaluations by the Self and by Teachers: Investigations of Accuracy

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Discussant: Steinmayr, Ricarda (Technische Universität Dortmund, Germany)

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Evaluations of academic performance or academic ability play a pivotal role in educational settings. On the one hand, teacher evaluations are crucial for students: teachers grade student performance, give recommendations in a tracked school-system, or nominate students for gifted education programs. Therefore, the teachers' accuracy in evaluating students' performance is an integral part of teachers' diagnostic competence. On the other hand, students' self-evaluations have also been shown to play an important role as evidence suggests that they can predict achievement, learning behavior, or choice of study subjects. However, these evaluations may represent two sides of the same coin: both teacher and self-evaluations reflect estimations of students' capabilities. Thus, they are related and may interact in complex ways. As such, it is promising to investigate them together. Following this idea, the main aim of this symposium is to discuss both students' and teachers' evaluations with a special focus on their accuracy in predicting objective academic performance and ability. Furthermore, a second important focus is to highlight and investigate key processes and factors that contribute to the accuracy in different forms of judgments.
This work presents a meta-analysis on teachers' judgment accuracy of students' cognitive abilities. The array of cognitive abilities includes intelligence, giftedness, other cognitive abilities, and creativity. Relevant studies were identified by a multimodal search strategy. It involved both electronic and manual database searches as well as cross-reference-checks with all eligible studies. Integration of 106 effect sizes out of 33 studies with a meta-analytical multilevel approach lead to a mean judgment accuracy of cognitive abilities at $r = .45$. Moderation analyses revealed accuracies for intelligence at $r = .50$, for giftedness at $r = .36$, for other cognitive abilities at $r = .42$, and for creativity at $r = .34$. Moderation analyses revealed lower judgment accuracy for preselected student samples and for judgments without eligible frames of reference. A school achievement bias could be shown as six studies included information on higher correlations between judgments of intelligence and school achievement measures ($r = .61$).
Accurate, Inaccurate, or Biased Teacher Expectations: Do Dutch Teachers Differ in Their Expectations at the End of Primary Education?

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Realizing meaningful placements in classes in the first year of secondary education depend in several tracked educational systems on the accuracy of teacher expectations. The aim of the present study was to investigate between-teacher differences in their expectations of the academic performances of their students, based on a large scale dataset that consisted of 7,550 students in 500 classes in the final grade of Dutch primary education. Multilevel analysis showed considerable differences between teachers in expectations for students with equal performance records and that teachers seem biased in expectations with respect to the students’ gender and socio-ethnic background. The differences among teachers in expectations for Turkish, Moroccan, and other foreign students with low-educated parents were larger than the average teacher expectation bias for these groups in the sample. The teachers in our sample had higher expectations for students in high-performing classes or classes with only a small proportion of students from low-SES families. Teacher expectation bias for demographic groups, however, was found to be independent of the class population. The results of this study indicate the importance of the teacher and the necessity of using multilevel models when investigating the complex nature of between-teachers differences in expectations of student performance.
Students often seem to overestimate their performance on high stakes exams and tests, yielding a “postdiction bias” (postdiction of test performance is higher than their actual score). However, given that empirical support for a positive postdiction bias has been mainly based on lab experiments, samples that were lacking representativeness, or studies using university students, it is unclear to what extent postdiction biases are actually found in natural school environments. Moreover, the determinants of overly positive or negative postdiction scores are largely unknown. Consequently, the present study examined the extent to which postdiction scores are positively biased in a representative sample of 5,566 high school students. Moreover, individual and institutional predictors of postdiction biases were examined. The study used the most important test in the German school system (the Abitur, which is the final test in schools serving as university entry qualification) as achievement criterion and assessed student postdiction scores about 8 weeks after the test. Altogether, students were on average unbiased and gave accurate postdictions. Nevertheless, there were students with overly positive postdictions. Postdiction bias was predicted by male gender, low competence, and narcissism.
Are All Kinds of Narcissism Equally Related to Intellectual Self-Enhancement? A Dimension- and Subdomain-Specific Approach to the Overclaiming-Narcissism Link

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Narcissism is a personality trait that describes individual differences in the propensity to desire "ego goals" (grandiosity, fame, appearance, status, power, and superiority) above "non-ego goals" (affiliation, self-acceptance/growth, and community feelings). Such a narcissistic motivation often leads to "intellectual self-enhancement" (i.e., unrealistically positive self-evaluations of one's own knowledge compared to one's actual knowledge level). For example, narcissism has been found to correlate positively with overclaiming bias, that is, illegitimate claims of familiarity with (non-)existent general knowledge items (persons, concepts, places etc.; e.g., Paulhus, Harms, Bruce, & Lysy, 2003). The present large-scale online study (N = 1682) shows that not all kinds of narcissists engage in intellectual self-enhancement. In particular, assertive narcissism was positively related to overclaiming bias, whereas antagonistic and vulnerable narcissism were not. Furthermore, social dominance specific assertive narcissism was more positively related to overclaiming bias than physical attractiveness specific assertive narcissism. The findings illustrate that people can express a narcissistic motivation in different ways and subdomains. Implications for our understanding of the narcissism-self-enhancement link are discussed.
D3/Symposium: Academic Self-Concept, Achievement Motivation and the Role of Socio-Emotional Aspects in Late Childhood and Adolescence

Academic Self-Concept, Achievement Motivation and the Role of Socio-Emotional Aspects in Late Childhood and Adolescence

Chair: Raufelder, Diana (Freie Universität Berlin, Germany)
Discussant: Zeinz, Horst (Universität Münster, Germany)

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The self is inextricably relational. Over the course of its development into a coherent concept during adolescence, selfhood is profoundly affected by interactions with significant others (e.g. Harter, 2012; Mead, 1934). Therefore, as argued in self-categorization theory (SCT; e.g. Turner, 1985; 1999), no satisfactory understanding of the self is possible without considering the social influences on the self, in addition to the interpersonal functions of the self (Guimond et al., 2006; Onorato & Turner, 2004). Particularly in the school context, peers and teachers are essential for students’ academic self-concept (Chen et al., 2011; Gest et al., 2008; Trautwein et al., 2009). Accordingly, the present symposium considers the role of different socio-emotional aspects, such as students’ perceived social support, socio-motivational relationships with peers and teachers, as well as loneliness, for students’ academic self-concept, achievement motivation, and school engagement in late childhood and adolescence. To examine this interplay, diverse quantitative approaches as well as functional magnetic resonance imaging (fMRI) were used. Thus, combining studies with a diverse spectrum of approaches and contexts, this symposium analyses ways in which social-emotional factors interact with student’s academic self-concept and other critical school-related variables in late childhood and adolescence.
In the current study, we compared the academic self-concept (in German and mathematics) and enjoyment of learning of students with special educational needs (SEN) in special education schools (n = 433) and regular schools (n = 762) at the end of 4th grade. Multilevel regression analyses were performed with school achievement and perceived social support on the individual level and school type, class-average achievement and class-average social support on the classroom level. SEN students in special education schools reported higher academic self-concepts and enjoyment of learning than their peers in regular schools. Class level achievement was negatively related to academic self-concept and enjoyment of learning. After controlling for class level achievement, no additional placement effects were found. Perceived social support by peers on the individual level also contributed to higher achievement motivation. In contrast to academic self-concept, enjoyment of learning was also positively influenced by higher social support in the classroom. Results indicate that aspects of the learning environment are differentially linked to SEN students' motivation.
Do Socio-Motivational Relationships at School Predict Motivation in Adolescents With Low and High Academic Self-Concept?

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The study aimed at exploring possible similarities and differences among students with high and students with low academic self-concept concerning the association of socio-motivational relationships with peers and teachers and achievement motivation after the transition to secondary school. The sample consisted of 1088 7th and 8th grade students (Mage = 13.7) in Brandenburg, Germany. The constructs used were approached with the help of the following measurement instruments: SESSKO Scales (Schoene et al., 2002), FLM 7-13 (Petermann & Winkel, 2007), PISA (Kunter et al., 2002), and REMO (Raufelder et al., 2013). Multi-group SEM was used to examine the associations between the variables of socio-motivational support and achievement motivation. The findings reveal that students with high academic self-concept reported a higher level of socio-motivational support. At the same time a teacher had more impact on the motivation of students with low academic self-concept. Therefore the results underline the importance of adjusting the support from a teacher to the level of a student’s academic self-concept, which could be further implemented in prevention and intervention strategies targeted at boosting achievement motivation after the transition to secondary school.
Loneliness as a Predictor of Adolescents’ Neural Processing of the Self, Friends and Teachers: Which Consequences Arise for the Academic Self-Concept?

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The present interdisciplinary study explored how ventromedial prefrontal cortex (vMPFC) activation during self- and social processing (friends and teachers) is associated with the academic self-concept. Moreover, we examined whether vMPFC-activity can be predicted by perceived loneliness. To this end, adolescent students (N = 85; MAge = 15.03) judged during functional magnetic resonance imaging (fMRI) whether different trait adjectives described themselves, their friends or teachers. Results from structural equation modeling indicated that perceived loneliness predicted lower neural response to all social judgment conditions. In turn, high response to self-judgments predicted a higher academic self-concept, whereas high neural response to teachers predicted a lower one. In sum, this study presents neural data supporting the idea that lonely adolescents keep a greater psychological distance to their friends and teachers. Moreover, our results suggest that a high vMPFC response to teachers may entail primarily negative consequences for the academic school self-concept.
The Mediating Role of Social Relationships in the Association of Adolescents’ Individual Academic Self-Concept and Their School Engagement, Belonging and Helplessness in School

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It is well known that teachers frequently observe a decline in the scholastic motivation of many adolescent students, which in turn is often associated with a decline in students’ individual academic self-concept. In contrast, less is known about the association between students’ individual academic self-concept and school engagement, or the related concepts of school belonging and helplessness in school. The current study explored social relationships as mediators in the association between individual academic self-concept and adolescents’ school engagement, belonging to school and helplessness in school in a large sample of 7th and 8th grade students (N = 1088; MAge = 13.7) in secondary schools in Brandenburg, Germany. The results of two structural equation models showed that the teacher–student relationship mediated the association between individual academic self-concept and school engagement, belonging to school and helplessness in school, respectively. In contrast, the student–student relationship did not mediate any of these associations.
In this study we analyzed if student self-efficacy in mathematics mediated the effect of students’ grades and perceived teacher support on mathematics motivation. The motivational variables were intrinsic motivation and three behavioral measures of motivation (effort, persistence, and help seeking behavior). The participants were 823 students from five middle schools (grade 8 to 10) located in one of the large cities in Norway. Data were analyzed by means of multiple regression and SEM analysis. The SEM model had acceptable fit to the data ($X^2 (212, N = 823) = 743.37$, $p < .001$, $\text{CMIN/DF} = 3.506$, $\text{RMSEA} = 0.052$, $\text{IFI} = 0.965$, $\text{TLI} = 0.954$, and $\text{CFI} = 0.965$). The relations between students’ grades and motivational variables were partly mediated through self-efficacy. For instance, the zero order correlation between grades and persistence were .47 whereas the standardized regression coefficient when controlled for emotional support and self-efficacy was .07. Furthermore, when controlled for emotional support and self-efficacy grades were not significantly related to effort or help seeking behavior. The relation between self-efficacy and the behavioral measures of motivation were partly mediated through intrinsic motivation.
The Important Role of Self-Efficacy for Beginning Teachers: Testing the JD-R Model With Longitudinal Data

Self-efficacy is an important resource for (beginning) teachers; it diminishes stress and strain directly, but also indirectly by buffering the effects of stressors on strain (Schwarzer & Hallum, 2008). These findings are in line with the Job-Demands Resources model (JD-R model; Bakker et al., 2007), which postulates direct effects of stress on strain, of resources on engagement, and of strain and engagement on occupational outcome variables. Further, the model assumes moderating effects of resources on the stress-strain relationship and of stress on the resource-engagement relationship. However, these assumptions have not been tested simultaneously. With a series of longitudinal autoregressive SEM models (N = 1,700 beginning teachers) we tested all assumptions of the JD-R model. We assessed three time waves of self-reports; at the beginning and end of pre-service and one year later. Results revealed significant direct effects of resources (self-efficacy) on engagement and of demands (classroom disturbances) on strain (emotional exhaustion), while strain and engagement in turn predicted commitment. Results also showed a significant reverse path of engagement on self-efficacy. Additionally, results provided evidence for both moderation effects; self-efficacy buffered the stress-strain relationship, while self-efficacy predicted engagement, especially when stress was high. Results are discussed regarding methodological and theoretical implications.
The current study investigated the factorial structure of a new constructed efficacy belief scale that was designed to examine pre-school teachers' efficacy beliefs. Building on social cognitive theory (Bandura, 1997) and recent measures of efficacy beliefs (Tschannen-Moran & Woolfolk Hoy, 2001), the researcher constructed a new efficacy scale that focuses on the context of pre-school. New items were generated to represent five subscales related to different important aspects of pre-school teachers' efficacy beliefs. These included efficacy for instruction, management efficacy, engagement efficacy, assessment efficacy, and efficacy for emotional interaction. Three hundred and eighteen teachers participated in the study from three Omani districts. The five subscales showed good reliability coefficients (0.91, 0.87, 0.91, 0.84, and 0.90), respectively. Using exploratory factor analysis, the 5-factor model explained 59% of variance and many items showed cross loadings in more than one factor. The findings are discussed based on social cognitive theory to explore the role of efficacy beliefs when teaching preschoolers.
Parents` and teachers` support are considered as important prerequisites for children’s learning. One important factor for children’s learning is feedback on learning outcomes and learning processes. Several studies indicate the importance of feedback for the development of children’s self-concepts and self-efficacy beliefs. In this context, there are hardly any studies which concern children’s perceptions of feedback. For this reason, our study examines whether differences in primary school children’s reading motivation, self-concept and self-efficacy can be predicted by their perceptions of their parents’ and teachers’ positive feedback on reading processes. For this purpose, N=684 third and fourth grade students completed a questionnaire concerning their reading motivation, self-concept and self-efficacy. In addition, they were asked to give information about their perceptions of their parents’ and teachers’ positive feedback on reading processes. The results of a structural equation model show that children’s perceptions of their parents’ feedback predict their intrinsic reading motivation. The correlation between children’s perceived parental feedback and their extrinsic motivation is mediated by their reading self-efficacy beliefs. Children’s reading self-concepts can better be explained by the perceived teachers’ feedback as by the perceived parental feedback.
In this study, we investigated whether students who perceive themselves as competent, tends to perceive their teachers as supportive and thus, motivated to learn and have higher wellbeing. Using the Self-Determination Theory and the Social Relation Model as theoretical frameworks, we investigated a model in which differences in perceived competence, predicts differences in the perception of the teachers as supportive, which mediates the relation to positive motivational outcomes. 407 5th–6th grade students participated in this study. Students completed questionnaires assessing their motivation to learn, their perception of their teachers as supportive, their sense of competence, and their emotions and well-being in school. The results of a path analysis indicated that students who perceive themselves as more competent, tend to perceive their teacher as more supportive than students who perceive themselves as less competent, and that this mediates motivation and emotional experience in school. The results highlight the importance of understanding students' characteristics and their influence on students' perception of teachers' behavior. Knowledge about students' characteristics that affects their perception of teachers, adds information about the role of teachers in students' motivation, beyond the known contribution of the need for a supportive environment, and can help promote students' adaptive motivation.
D5/GOALS: DEterminants and Consequences

High School Students' Motivation Profiles: Predictors, Outcomes, and Gender Comparison

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Adopting a person-centred approach, this study aims to identify subgroups of students who present similar motivational profiles differing quantitatively and qualitatively from one another. A total of 7848 high school students from Hong Kong (53.8% male) participated in this three-year longitudinal study. These students all completed the Inventory of School Motivation at Time 2 (McInerney & Ali, 2006), which was used to measure eight achievement goal orientations: task, effort, competition, social power, affiliation, social concern, praise, and token. Analyses followed three main steps. First, latent profile analyses were conducted to identify optimal number of profiles for each gender group. These profiles were based on students' achievement goal orientations. Second, we systematically tested the invariance of these profiles across gender. Finally, we assessed the relations between these profiles and: (1) Time 1 predictors (e.g., school value and affect, parent, peers and teacher support); (2) Time 3 outcomes (i.e., perseverance, future goals, and learning strategies) of each profile. Results suggested five distinct profiles in both males and females subsamples, four of which proved to be completely equivalent across genders. These profiles presented a meaningful pattern of relations with predictors and outcomes, to be discussed more fully at the conference.
The present study examined the associations between students’ achievement goal profiles and school achievement before and after their transition from elementary to secondary school (from Grade 4 to Grade 7), focusing on the question whether there is evidence for a pattern of differential effects across time. Latent class analyses were conducted on the basis of a large-scale, four-wave assessment (TIMSS Transition Study) of German students (N = 1069). Four types of achievement goal profiles were identified as mastery-oriented, mastery with moderate performance-approach, low mastery with moderate performance-approach, and high multiple. Our results revealed that mastery-oriented students showed higher school achievement than students who exhibited a mastery with moderate performance-approach profile in Grades 4 and 5, whereas, in Grades 6 and 7 those students who endorsed mastery with moderate performance-approach goals begun to outperform students who were primarily mastery-oriented on school achievement in both academic and non-academic school tracks. These findings indicate the potential benefits of the simultaneous endorsement of mastery-approach and performance-approach goals on school achievement as students enter secondary school.
Parental Involvement and the Development of Achievement Goals During Early Adolescence

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Previous research on the determinants of students' academic motivation has shown that parental involvement in children’s education contributes to the process of students' achievement goals adoption. However evidence from longitudinal studies remains very limited. The purpose of the present study is to examine the predictive relationship between parental involvement (structure, autonomy support, relatedness, control) in grade four and achievement goals (mastery goals, performance-approach goals, performance-avoidance goals) in grade seven among 1783 German students who participated in a large-scale longitudinal study (TIMSS Transition Study). Analysis of covariance revealed that parental autonomy support predicted the change of mastery goals ($\beta = .10$) whereas parental control was found to be positively associated with the change of performance-approach goals ($\beta = .11$) and performance-avoidance goals ($\beta = .15$). Additionally a positive effect of structure on the change of performance-avoidance goals ($\beta = .10$) was found. The findings remain stable even after controlling for gender, academic achievement and socioeconomic status. Overall the study emphasizes the impact of parental involvement on the development of achievement goals and underlines the importance of different dimensions of parental involvement by which parents might shape their academic motivation during early adolescence.
Communication between parents and their children represents an influential factor of family socialization. Nevertheless, little is known about why parents communicate in different ways and how these qualitative differences in parent-child communication may affect the child. Building on self-determination theory, the present study focuses on motivational antecedents of need-supportive communication as a function of long-term goals that parents have set for their children (i.e., parental goals for children) and normative expectancies of the child’s activities in terms of allocation of time. Moreover, the effect of need-supportive communication on children’s prosocial behavior and behavioral difficulties will be addressed. Three waves of data from 1125 mothers and adolescents aged between 10 and 17 were analyzed using growth-curve modeling. Results show that extrinsic parental goals for children positively predict parents' dissatisfaction with their child’s activities ($\beta = .81$) and negatively predict need-supportive communication ($\beta = -.41$). Parents' dissatisfaction with their child’s activities also lead to decreasing need-supportive communication ($\beta = -.75$). As expected, need-supportive communication predicts prosocial behavior ($\beta = .23$) and externalizing behavioral difficulties ($\beta = -.23$). When need-supportive communication decreases over time, both externalizing ($\beta = -.44$) and internalizing ($\beta = -.54$) behavioral difficulties increase. These results suggest that motivational antecedents of parent-child communication are an important factor in preventing behavioral difficulties.
When analyzing the correlations between motor abilities and physical self-concept of children, most studies concentrate on direct interrelations between performance and self-evaluation. There is evidence that in sport external frame of reference might moderate the interrelationship. Aim of the study is to analyze the correlation pattern of motor performance (MT), physical self-concept (PSC), and reference norm orientation (RNO). This study of 128 (female 44.5%; Mage = 11.57; SD=.622) 5th and 6th graders examines the differences in physical self-concept (PSC-C, Dreiskämper et al., 2015), preferred RNO, and MT (DMT 6-18, Bös et al., 2008) in respect to age, gender, sports club membership, as well as their interrelationship. Structural equation modeling were conducted. With regard to PSC, significant gender differences (F(8, 103)=3.32, p<.001 \( \eta^2=.205 \)) are confirmed in MANOVAs in favor of boys on strength and endurance as well as significant differences concerning club membership (F(8, 104)=3.32, p=.006 \( \eta^2=.181 \)) in almost all scales. SEM shows that internal (\( \beta = .40 \)) and external reference norms (\( \beta = .30 \)) moderate the interrelation between MT and PSC. The results indicate that children in this age group use both internal and external frames of reference to evaluate their performance independently of their sport activity.
Within the context of adolescents' subjective well-being (SWB) the focus has been on education only recently. Concerning the relationship between SWB and academic achievement, the question whether reciprocal relations exist is still open. Another important variable for emotions in school is test anxiety, which has neither been investigated as a determinant of SWB. The present study investigated to what extent academic achievement, test anxiety, and SWB influence each other over time. A sample of N = 290 11th grade students (n = 138 female; age: M = 16.54 years, SD = .57) completed measures of Emotionality and Worry as well as SWB in the time span of six month. Grade Point Average (GPA) was used as a measure of academic achievement. For analyzing reciprocal relations we used cross-lagged models. The model fit was satisfactory for all computed models. Results indicated that worry negatively and GPA positively predicted changes in the cognitive component of SWB. Worry also had significant negative influences on the changes regarding the affective component of SWB and negatively predicted changes in students' GPA. Directions for future research are discussed with regard to potential underlying processes.
Although recent studies have indicated the detrimental effects of contingent self-esteem for individuals' well-being, research concerning its motivational implications is scarce. In two studies, we aimed to investigate the relations between contingent self-esteem and motivational achievement-related outcomes. In Study 1, we examined the motivational correlates of contingent self-esteem in the academic domain among 2nd year high school students (N = 626). We hypothesized that academic contingent self-esteem would represent a mixed blessing, as it would relate to internally pressuring forms of motivation (i.e., introjection) and test anxiety, yet also relate to behavioral academic engagement. Results generally confirmed these hypotheses. In Study 2, we investigated the effect of contingent self-esteem on university students' (N = 72) enjoyment, competence and stress experienced during a specific task (i.e., a tangram puzzle task) as well as their continued persistence after task completion. Contingent self-esteem related to more stress, less experienced competence and less task perseverance, and, finally, more introjected reasons for persevering in the task. These effects were not moderated by the type of provided feedback (i.e., positive vs. negative). Theoretical and practical implications of these results will be discussed.
Extending Expectancy-Value Theory
Predictions of Achievement and Aspirations in Physics, Chemistry, Earth Sciences and Biology: Internal Comparison Processes and Expectancy-by-Value Interactions

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Based on TIMSS data (18,047 Grade 8 students from four OECD countries), and extending expectancy-value theory (EVT) in relation to four science domains (physics, chemistry, earth science, biology), this study tested new predictions about how self-concept and task value are related to students’ achievement and their coursework aspirations. Consistent with recent attempts to integrate dimensional comparison theory (DCT) and EVT, the effects of achievement in one domain on self-concept and intrinsic value were found to be highly domain specific; achievement in each domain had a positive effect in the matching domain (e.g., physics achievement è physics self-concept), but a negative effect in a contrasting domain (e.g., physics achievement è biology self-concept). Similarly, there was also support for the internal comparison process posited in DCT, in the effects of self-concept and value constructs on course aspirations (i.e., positive effects in matching domains, negative effects in contrasting domains). Consistent with recent moves to reintroduce expectancy-by-value interactions into EVT, synergistic self-concept-by-value interactions contributed to the prediction of aspirations beyond the contributions of self-concept and value first-order (main) effects. The results were consistent across the four OECD countries, offering support for the robustness and generalizability of the findings.
Unique Effects of Self-Esteem Level and Contingency on Psychopathology

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Previous research has shown that self-esteem (SE) contingency, which refers to the degree to which one’s SE depends on meeting particular standards, is positively related to indicators of psychopathology, such as depression and anxiety (e.g., Burwell & Shirk, 2006; Lawrence & Williams, 2013). However, little is known about whether and under which conditions SE contingency has a unique effect on the development of psychopathology, above and beyond SE level. In the present study, we aim to extend previous research by examining the unique longitudinal relations of these two aspects of SE with depressive and anxiety symptoms. Hypotheses were tested among 272 late adolescents using two-wave longitudinal data with a three-month interval and cross-lagged path models. Controlling for within-time correlations and stability, global SE contingency had the strongest effect on generalized anxiety symptoms, whereas only global SE level had a unique effect on depressive symptoms. Additionally, when focusing on the academic domain, only SE contingency had a unique effect on test anxiety symptoms, whereas only SE level had a unique effect on depressive symptoms. The present findings thus call for more longitudinal research examining the relative effects of different self-esteem aspects on various psychopathology outcomes.
Frame-Of-Reference Effects: Cross-Cultural Generalizability of the Negative Effects of Acceleration and Positive Effects of Retention (Year in School Effects) on Academic Self-Concept

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The negative effect of school-average achievement on academic self-concept (ASC; the Big-Fish-Little-Pond-Effect, BFLPE) is one of the most robust findings in educational psychology. Extending its theoretical (frame-of-reference) basis to encompass year in school effects (YiSEs) for math constructs in PISA2003 (276,165 fifteen-year-old students from 10,274 schools across 41 countries), there were negative YiSEs on ASC; negative effects of de facto acceleration (e.g., starting early or skipping grades) and positive effects of de facto retention (e.g., starting late or repeating grades). Although they are based on a similar theoretical rationale as the BFLPE, YiSEs were almost uncorrelated with BFLPEs. Negative YiSEs were: • cross-culturally robust across all 41 PISA2003 countries (significantly negative in most, not significantly positive in any); • neither substantially explained by nor moderated by a diverse range of control variables (e.g., Gender, school starting age, repeating grades, home language, immigrant status, SES, achievement); • generalizable to a range of other psychosocial variables (e.g., anxiety, motivation, learning styles); The highly robust, negative YiSEs on a range of psycho-social variables have important implications for policy/practice related to acceleration/retention in school systems around the world.
Internal/External Frame of Reference Model Among Omani Students

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Marsh (1986) presented the relationship between achievement and SC in a novel and unique fashion with his phenomenal internal/external (I/E) frame of reference model. The model clarifies the cross-links between math and verbal achievements and math and verbal self-concepts. According to the I/E frame of reference model, Marsh (1986, 1988) argued that math and verbal self-concepts are influenced by internal and external comparisons. The internal comparison process predicts that good math skills lead to lower English self-concept and good English skills lead to lower math self-concept; while the external comparison process predicts that good math skills lead to high math self-concept and good English skills lead to high verbal self-concept. These predictions of the I/E model have received considerable support with Western samples and partially, with some non-Western samples. In the present study 1061 Omani middle school students (500 boys and 561 girls) responded to the SDQ-I and the predictions of the I/E model have been supported. Our findings replicate previous findings among Arab students.
The development of physical self-concept/pc and the extent of physical activity/pa are strongly related to the environment and the culture. Wästlund et al. (2001) have already shown that African adolescents show a more positive self-concept than Asian or American. Such differences cannot be explained solely in terms of cultural dimension such as Individualism-Collectivism. It is important to unpack the culture at the level of individuals. As known from western research, pc is reciprocal related to physical fitness/pf and pa (Marsh et al., 2006). Consequently different cultural context like the different pa lifestyle may produce differences in self-concept. The study aims to analyze cultural differences and similarities in pc, pf and pa-level (organized, self-organized, daily). Data are collected from Nigerian t1=369, t2=252, t3=162 and German t1=345, t2=327, t3=301 adolescents. Structural-equation-model/test-of-invariance confirmed the reciprocal-effect between pc, pf and pa (p<.05, .13<β<.28, CMIN/DF=2.694, CFI=.966, TLI=.946, RMSEA=.049). The fit indices allowed us to accept the hypothesis of metric and structural invariance (CFI-differences=.01). Adolescents in both countries, who are more active, have a more positive physical self-concept than those who are inactive. These results support the cross-cultural generalizability of the REM. The higher pa could be the reason for the higher self-evaluation of the Nigerian adolescents.
Seeding Science Success: Relations of Secondary Science Students' Self-Concepts With Their Achievement and Aspirations

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Science is integral to improving the quality of life for humankind. Every sphere of life has been revolutionised by advances in science. Thus, science understanding is an increasingly precious resource throughout the world. Despite the recognised need for better science education, the numbers of students pursuing science continue to decline internationally. Past research has shown that the decline is related to many interrelated factors. However, the relations of students' science self-concepts, achievement and aspirations in different domains in science have not been examined. Thus, this study investigates the relations of secondary science students' self-concepts in different disciplines of science with their academic achievement and aspirations. The sample consisted of three hundred and ninety five students (females = 208, males = 187) from Year 7 to Year 12 (aged from 12 years to 17 years) from three schools in New South Wales, Australia. The results show that students' year level, biology self-concept, and physics self-concept are significant predictors of students' science educational and career aspirations while students' biology self-concept and general science self-concept are significant predictors of students' achievement. These findings advance our understanding of how best to bolster students' interest and achievement in science to secure success for future generations.
The Interplay of Ability Self-Concept and Intelligence in Predicting Test Performance and School Grades in Reading

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Numerous studies demonstrate that both ability self-concepts (ASC) and intelligence are important predictors of scholastic achievement. However, little is known on the interplay of both constructs in general and when predicting different achievement criteria. The aim of the present study was to investigate whether the unique and shared variance explained by ASC and intelligence in predicting school achievement (i.e. reading literacy) differs depending on the achievement criterion. A sample of N = 458 German students (age: M = 12.0, SD = 0.6; 215 female) from 6th grade in elementary school was investigated. Performance in a standardized reading test and school grades in reading served as achievement criteria. ASC in reading and general intelligence served as predictors. Using structural equation modelling, performance in reading test was best predicted by intelligence, whereas ASC was the best predictor of reading grades. In both models, a substantial portion of variance in the achievement criteria was jointly explained by ASC and intelligence. Thus, the importance of ASC and intelligence depends on the chosen achievement criterion and that both constructs overlap in the prediction of scholastic achievement independent from its operationalization. We discuss the role of ASC and intelligence in explaining and improving school achievement.
Social Context and Motivational Resources: Application of Self-Determination Theory to Understand Students' School Experiences

Chair: Guay, Frédéric (Laval University, Canada)
Discussant: Vallerand, Robert J. (Université du Québec à Montreal, Canada)

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Self-determination theory (SDT; Ryan & Deci, 2009) is an important theoretical approach to understand the social conditions leading to the development of students' self-motivation and potentialities at school. In this symposium, we present a collection of ground-breaking studies applying SDT to the educational context. The four papers will focus on the role social contexts play in students' motivation or on the consequences associated with students' motivation. Specifically, the first paper shows that students who perceive the activity leader as autonomy supportive are more motivated toward their extracurricular activity. Furthermore, their motivation toward their extracurricular activity has an added value for their motivation at school (i.e., a generalization effect). The second paper focuses on students' vocational development and shows the differentiated role of mothers and fathers for students' motivational resources and adjustment during their vocational development. We close this symposium with two papers revealing that students regulated by controlled forms of motivation (introjected and/or external regulations) do not always experience affective, cognitive and behavioral difficulties. Under some circumstances, they could even experience positive outcomes. Our discussant will elaborate on theoretical and practical implications of these studies' results.
In this longitudinal study, we tested a sequential model: 1) students’ perceptions of autonomy support provided by the extracurricular activity leader would predict higher levels of students' autonomous regulation for the extracurricular activity, but lower levels of controlled regulation, and 2) both types of regulation toward the extracurricular activity would have generalization effects for autonomous and controlled regulations toward school. Even though each of these associations has received both theoretical and empirical support (Ryan & Deci, 2007; Vallerand, 1997), they have not been tested simultaneously. To test this model, we surveyed 279 adolescents from disadvantaged neighborhoods (54.5% girls, Mage = 14.56) who participated in at least one extracurricular activity (e.g., sports, performance and fine arts, school clubs). We used a longitudinal design with two time points at a one-year interval (N = 186). Youths completed self-reported questionnaires to assess key constructs. Results from CFA/SEM partly supported our hypotheses: after controlling for prior levels of autonomous regulation and controlled regulation in the school context, students' perceptions of leaders' autonomy support predicted higher levels of autonomous regulation and controlled regulation in the activity, which in turn predicted higher levels of autonomous regulation and controlled regulation in the school context a year later.
Comparing the Contribution of Mothers' and Fathers' Need Supporting Behaviors for Predicting Adolescents' Motivational Resources During Vocational Development

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Choosing a career is crucial for the course of students' professional lives and is considered as one of the most important life decisions (Gati & Asher, 2001; Gati & Tal, 2008). However, youths can experience challenges and difficulties when formulating a concrete career plan and committing to the academic steps involved in attaining this goal. To better understand how youths successfully adjust during vocational development, we focused on their motivational resources (autonomy, competence, and relatedness) and their adjustment levels (academic, social, and emotional). We also examined the contribution of mothers' and fathers' behaviors in promoting these outcomes by targeting specific behaviors (autonomy support, involvement, and structure). Data comes from a longitudinal study on parenting and youths' vocational development. A total of 522 adolescents (233 boys, 389 girls), their mothers (n = 535), and fathers (n = 296) participated in the first data wave. Adolescents' perceptions of their mother's and father's behaviors were controlled for, being the strongest predictors of their motivational resources and adjustment. We found fathers' self-reported behaviors to have a unique and direct contribution to motivational resources and adjustment. The findings were similar for mothers' contribution to youths' adjustment, but the picture was more complicated for motivational resources.
Motivation and Academic Achievement in Self-Determination Theory: How Specificity Explains why Controlled Motivation is not Link to Grades

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In the educational context, one of the important questions about motivation is to know how it influences academic performance. Self-determination theory framework describes various regulations supposed to be positively or negatively linked to students’ grades depending on its position on a continuum of motivation. However, these direct links have been rarely investigated and little evidence exists about links with controlled regulations (introjected and external) whereas a lot exist with autonomous ones (intrinsic and identified). The objective of this talk will be 1) to present results about links between types of regulations and grades at the academic level and in four different school subjects and 2) to give an explanation for the weak evidence of a link between controlled motivation and grades. Advanced structural equation modeling is used to propose different conceptualizations of the structure of academic motivation based on the Hierarchical Model of Intrinsic and Extrinsic Motivation (HMIEM) (Vallerand, 1997). Results show that differences in links between controlled/autonomous motivation and grades could be related to the degree of specificity of the regulations. Controlled motivation appears to be less specific than autonomous one resulting in lower links between regulations types and grades at the school subject level.
Do Students Regulated by Introjection Experience Negative Educational Outcomes? A Closer Look at Cognitive, Affective, and Behavioral Consequences

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According to Self-determination theory (SDT; Deci & Ryan, 2002), various types of regulation prompt human behavior. These regulations lie on a continuum of autonomy where some types are autonomous (emanating from individual’s interests and values) and others are more controlled (emanating from internal or external impetuses). Introjected regulation is a form of controlled regulation that prompts behaviors in the absence of environmental cues. This regulation originates from within the person and is based on internal esteem concerns, shame, or guilt. While an internal motivation, introjected regulation is not harmoniously integrated within the person’s self. According to SDT, introjected regulation is accompanied by experiences of pressure and anxiety and tends to produce negative consequences. In this study, we tested this assumption in the education context, using the Academic Motivation Scale (Vallerand et al., 1989), in several cross-sectional and longitudinal studies involving more than 5000 students. Motivational outcomes in these studies included self-reported and objective ones. Results provided mixed support for this assumption: in some studies, the hypothesis was supported, but in other studies, we observed positive relations between introjected regulation and adaptive educational outcomes. However, for many outcomes, we did not find statistically significant relations. The discussion explores conceptual and methodological implications for these mixed findings.
Perseverance is defined as the disposition to continue in projects with serious effort, for an appropriate amount of time, and despite obstacles in the pursuit of intellectual or moral goods (King, 2014). In recent years, this construct has come into focus as a so-called noncognitive factor that is supposed to predict success in life (Duckworth et al., 2007, 2010). PISA 2012, for example, showed that students who report high levels of perseverance attain higher scores in mathematics than students with lower levels (OECD, 2013). Several conceptions of perseverance have been proposed that mostly differ in terms of the intended goal (self-determined versus not self-determined), the time span (long- versus short-term), and the label (tenacity, drive, engagement, zeal, grit, self-control, etc). This symposium focuses on the similarities and differences of these diverse definitions and operationalizations. We hope to contribute to an integration of the somehow scattered research on the issue of perseverance and its relevance for achievement and success.
Grit can be defined as trait-level perseverance and passion for long-term goals. In addition to cognitive abilities and domain-specific competencies, it is a relevant factor for success in life (Duckworth et al., 2007, 2010). This study reports on the psychometric properties, structural validity, and measurement invariance of the German Grit scale (BISS; Fleckenstein, Schmidt, & Möller, 2014) as well as its external correlates. Grit is often considered a sub-dimension of conscientiousness and it shows substantial overlap with self-control. However, grit has shown incremental predictive power for academic success. To establish an empirical basis for this debate we focus on the differentiation of grit from these two constructs. Thus, we conducted three studies with an overall sample of N = 870 university and high school students to investigate whether grit is a subordinate facet of conscientiousness or rather an independent construct, and to what extent grit corresponds to self-control. Moreover, cognizant that a sub-dimension of grit is passion for long-term goals, we analyse the differential relationship of grit and several life goals (Pöhlmann & Brunstein, 1997): Power, Achievement, Prestige, Altruism, Intimacy, and Affiliation. Implications for further research endeavours are discussed with reference to the mentioned constructs.
Perseverance and Passion? Relating the Grit Scale to Measures of Commitment, Passion and to Experience Sampling Method Expectancy-Value Experiences

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The grit scale (Duckworth et al., 2007) consists of two subscales named persistence and passion. While perseverance describes the endurance in long-term goal pursuit, ‘passion’ describes whether an individual pursues one interest intensely or spreads rather thin between many and changing activities. This notion of passion as consistency of interests differs from other passion definitions in the literature which include liking (intrinsic task value), finding important (utility value) and identification (attainment value) as central passion components (Vallerand et al., 2003; Fredricks, Alfeld, & Eccles, 2010). Therefore this study examined how grit relates to the commitment and passion scale (Moeller & Grassinger, 2014) and to situational experiences of effort, task values and competence beliefs in an Experience Sampling Method (ESM) approach. 225 German undergraduate students provided (ESM) data of situational task values, effort and competence beliefs over the course of one semester, and also Paper-and-pencil measures of grit and passion. We found the overall grit score positively correlated with all subscales and the main score of the com.pass scale. Regarding the ESM measures, we found the grit main score positively correlated with the person-averages of effort and utility value, and negatively correlated with average costs. We will discuss insightful facet-level correlations.
Grit describes why individuals persevere in effortful courses of action and predicts desirable outcomes such as educational attainment, achievement, retention (Duckworth et al., 2007), well-being and low burnout (Salles et al., 2014). Therefore, high levels of grit seem desirable person characteristics in learning settings. Then again, recent studies found that highly perseverant individuals experience greater decreases in life satisfaction and well-being in situations in which they fail to achieve important life tasks (Boyce et al., 2010). Assuming that this might apply also to highly gritty individuals, we investigated how grit related to positive and negative aspects of well-being at school. Since previous studies (Tuominen-Soini & Salmela-Aro, 2014) showed that latent profile analyses reveal insightful inter-individual differences, we used this approach to examine how grit related to profiles of engaged, exhausted, and simultaneously engaged and exhausted individuals in a longitudinal sample of more than 1000 Finnish high school students. We particularly focus on individuals that are highly engaged but also exhausted in their school tasks, assuming that this constellation describes ‘the darker side of grit’. While grit describes rather stable dispositions, we discuss its relation to malleable aspects of engagement and disengagement / burnout.
Perseverance in Achievement Tests: How Ego Depletion Undermines Performance Over the Course of Testing

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To perform well on achievement tests, students have to exert self-control to stay focused on the items while inhibiting task-irrelevant thoughts. Self-control research (e.g., Baumeister, Vohs, Tice, 2007) has found that participants performed worse on tasks that require central executive operations such as working memory or impulse inhibition when they exerted self-control on an unrelated initial task, whereas participants of the control group did not. This Ego Depletion (ED) effect is defined as a short-term lack of the mental energy that is needed to perform well on tasks requiring central executive operations. ED might offer a convincing explanation for item position effects—i.e., worse performance on items located at the end of a test rather than at its beginning—in large-scale assessment studies. In the present study, we combined experimental manipulations of ED and psychometric modeling of position effects in order to investigate students' (N = 120) performance trajectories in a standardized computerized mathematics test. Compared to the control group, students' performance decreased more strongly over the course of testing when they exerted self-control on an initial task. Our results were robust when controlling for fatigue, effort, and time-on-task, implying that self-control resources play a key role in achievement test perseverance.
Academic Self-Concept Formation: Broadening Our Perspectives

Chairs: Preckel, Franzis (University of Trier, Germany); Möller, Jens (Kiel University, Germany)
Discussant: Marsh, Herbert W. (Australian Catholic University, Australia; Oxford University, United Kingdom; King Saud University, Saudi Arabia)

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Given its central role in student learning and development, it is essential to understand how academic self-concept (ASC) develops. Research has identified important factors that influence ASC development (e.g., internal/dimensional and external/social achievement comparisons) and consistent relations with other motivational constructs (e.g., interest, value). In this symposium, we present studies that integrate and extend these findings. This approach will contribute to a fuller understanding of ASC formation. The first paper establishes a model that simultaneously considers internal and external comparisons to explain ASC thereby extending the research to elementary school students – a group for which ASC studies are rare. The second paper proves the transferability of the I/E model to Arab students and extends the research by differentiating between competence and affect factors of ASC. The third paper broadens our perspective on ASC by investigating ASC within its nomological network of affective-motivational constructs. The fourth paper presents an experimental study dealing with the interesting question whether a value intervention on STEM affects value, self-concept, and effort in the verbal domain. A fifth paper integrates the nested Marsh/Shavelson model and the I/E Model investigating a large and representative group of elementary school students.
The Formation of Academic Self-Concept in Elementary Education: A Unifying Model for External and Internal Comparisons

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Given its important role in student learning and development, it is essential to understand how academic self-concept (i.e., how one perceives oneself in an academic context) is formed. Both internal and external comparisons are considered key antecedents: Students form their academic self-concept to a considerable extent by (externally) comparing themselves with others and by (internally) comparing their own performance in different academic domains. Building on previous research in secondary education, the main goal of this study was to test a model integrating both comparison processes in elementary education using a large sample of Grade 4 students (N = 4,436; 241 classes). Including the proposed internal and external reference effects in one integrated model, the study provided evidence for the presence of both comparison effects on two academic self-concept domains (i.e., math and verbal self-concept). Specifically, individual achievement was positively related to academic self-concept within domains and negatively across domains, whereas class-average achievement was negatively related to academic self-concept within each domain and positively across domains. This study thus highlights the need for further integration of the major models on academic self-concept formation in a unifying theoretical framework.
Internal/External Frame of Reference Model With Science and Math Self-Concept and Achievement Among Omani Eighth Graders

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We tested the assumptions of the internal/external frame of reference model for 326 eighth grade students in the Al-Dhahra school district in Oman. The sample was a subsample from TIMSS 2011 (N = 741) that responded to a short version of the SDQ-I. We tested two self-concept (SC) models, one in which competence and affect items were conflated and one in which competence and affect items built separate factors. Both models produced good fit to data. In the conflated model, math achievement (taken from TIMSS) had a significant positive effect on math SC and a negative effect on science SC. Science achievement (taken from TIMSS) had a significant positive effect on science SC but no significant effect on math SC. In the model with separate competence and affect factors, math achievement had a significant positive effect on competence and affect math SC and a negative effect on science affect SC. Science achievement had a significant positive effect on competence and affect math SC and a negative effect on science affect SC. The study provides partial support for the internal/external frame of reference model. The data from TIMSS produced weak relations between achievement and SC supporting that academic SC is more associated with teacher assessment than with standardized tests.
Towards an Integrative Model of Students' Affective-Motivational Experience

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The nested Marsh/Shavelson (NMS) model formally represents structural characteristics of academic self-concept. Specifically, it conceives academic self-concept as multidimensional with respect to different school subjects and hierarchically organized with a general component at the apex of the hierarchy. Moreover, the NMS model accounts for the ipsative achievement comparisons between different school subjects. Relative to academic self-concept, there has been little research on the hierarchical characteristics of academic interest and academic anxiety. Given theoretical considerations and consistent correlational patterns of the measures, there are some indications that academic interest and academic anxiety are structurally similar to academic self-concept. In the present study we develop and test new structural models for academic interest and academic anxiety as well as replicate the findings of the NMS model of academic self-concept in four large-scale samples of ninth-graders (N = 866 to 6,146). Further, based on these structural models of the specific constructs we propose a new structural model that integrates in a parsimonious way the structural similarities of different affective-motivational constructs and simultaneously accounts for the substantial correlational overlap between the constructs. The integrative model thus provides a fuller understanding of students' affective-motivational experience and opens manifold avenues for future research.
Adverse or Desired Side Effects of STEM Interventions? Effects of a Motivational Math Intervention on Motivation in Verbal Domains

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One way to address the leaking pipeline towards science, technology, engineering, and mathematics (STEM) related careers is intervening on students’ STEM motivation in school. Previous studies have shown that value interventions can be effective in promoting motivation within STEM (e.g., Hulleman & Harackiewicz, 2009). However, drawing on the internal/external frame of reference model, a neglected question in intervention research is how such interventions affect motivation in subjects not targeted by the intervention. This question was addressed using data from a cluster randomized study, in which a value intervention was successfully implemented in 82 ninth grade math classrooms. Side effects on value, self-concept, and effort in German as students' native language and English as a foreign language were assessed six weeks and five months after the intervention. Negative effects on value for German, but not for English, were found five months after the intervention. Less support of intervention effects was found for self-concept and effort, which were not directly targeted by the intervention. The discussion focuses on intraindividual hierarchies in motivation and the question if negative side effects on non-targeted subjects are to be seen as a desired outcome.
Research on the structure and development of academic self-concept (ASC) in elementary school students is scarce. We assessed ASC (general, math, reading, writing) in a representative sample of N = 3005 German elementary school children in Grade 1 to 4. Our research questions were threefold: (1) How differentiated is ASC, (2) how do cross-domain, internal comparisons contribute to the development of ASC profiles, and (3) what is the impact of school-grades for the development of ASC profiles? Compared to alternative models, a nested Marsh/Shavelson model (NMS model; Brunner et al., 2010) with a general ASC at the apex and reading, writing, and math ASCs as nested factors fit the data best. With increasing grade level, ASC profiles became more differentiated (decreasing correlations between nested ASC factors). When including school grades in Math and German as ASC predictors, the assumptions of the I/E-Model were supported: Grades had positive effects in corresponding domains and negative effects in non-corresponding domains. In addition, their interaction significantly contributed to the explanation of ASC. Theoretically, the effects of cross-domain, internal comparisons should rise with the difference of achievements in non-corresponding domains. However, the difference between grades in Math and German affected writing ASC only.
The Relationship Between Omani Students' Science Motivation and Their Science Teachers' Teaching Styles

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Following the Self-Determination theory framework, this paper examines the relationship between Omani students' science motivation and their perceptions of their science teachers' teaching styles. Particularly, it examines the predictive role of three teaching styles (authoritative, authoritarian, & permissive) as perceived by grade 10 students on predicting these students' science intrinsic and extrinsic motivation. The sample consisted of 163 participants (51.5% were females) from different school districts in the Sultanate of Oman. The participants responded to the Science Motivation Scale (SMS) that was constructed based on the self-determination framework (Jalal et al., 2012) and to the Teaching Style Scale (Aldhafri & Alrajhi, 2014). The researchers used separate regression models to predict intrinsic and extrinsic motivation. After controlling for gender effects, the results showed that students' science intrinsic motivation can be predicted by authoritative and authoritarian teaching styles but not by permissive style. This model explained only 11% of variance in students' science intrinsic motivation. In the extrinsic motivation regression, authoritarian and permissive styles along with gender seemed to be the significant predictors of students' science extrinsic motivation. The model explained 13.6% of variance. The findings are discussed within self-determination theory framework while considering the Omani social context.
Passion is something that drives people and makes them willing to invest time and energy (Vallerand et al., 2003). Students may gain psychological resources due to carrying out personally meaningful activities beyond the study context, through autonomous motivation and vitality (Ryan & Deci, 2008). Aim of this study is to explore the relations between higher education students’ passionate interests, academic and psychological well-being. Participants were Finnish beginning stage university students (n=833) from several faculties. Questionnaire data consist of qualitative reports of passionate interests and quantitative measures of study engagement: energy, dedication and absorption (Salmela-Aro & Upadyaya, 2012), study burnout: exhaustion, cynicism and inadequacy (Salmela-Aro et al., 2009), satisfaction with life (Diener et al., 1985), depressive symptoms (Salokangas, Poutanen & Stengård, 1995) and subjective health. Passionate interests were classified based on self-determination theory and ANOVAs were conducted to determine the relations between passionate interests and measures of well-being. The analysis will be complemented with records of academic performance. The content of primary passionate interest was related to absorption, cynicism and inadequacy with regard to studies as well as depressive symptoms, satisfaction with life and subjective health. Little spare time use on primary interest was related to lower scores of psychological well-being. Interplay between formal and extra-curricular activities of students needs to be further studied.
Drawing from the self-determination theory (Deci & Ryan, 2000), the study aimed to examine a theoretical model testing hypothesized relationships between the perceived peer-climate, self-determined motivation, and indices of well- and ill-being among students in a higher education setting. Employing a cross-sectional design, 172 undergraduate psychology students (Mage = 20.19; SD = 2.29) volunteered to participate in the study. Participants responded to adapted measures of the Learning Climate Questionnaire (Williams & Deci, 1996) and an Interpersonal Control Scale (Assor, Kaplan & Roth, 2002), the college version of the Academic Motivation Scale (Vallerand et al., 1992-1993), the Work Engagement Scale for Students (Schaufeli et al., 2003), and the Maslach Burnout Inventory Student Survey (Schaufeli et al., 2003). Regression analyses revealed that a perceived peer-autonomy supportive climate was a positive predictor of self-determined motivation, whereas the perceived peer-controlling climate was found to inversely link to autonomous motivation. In turn, higher levels of autonomous motivation were associated with higher levels of engagement, and with lower levels of burnout symptoms among the student participants. The findings demonstrated support for the theoretical model, and point towards the potential applied implications of peer-learning on self-motivation, and the subsequent well-being of students in higher education.
Based on self-determination theory (Deci, E. & Ryan, R., 1985) the present study proposes to report data of Uruguayan students of Psychology who completed the Spanish version (Nuñez, J., Martin-Albo, J., & Navarro, J., 2005) of Échelle de Motivation en Éducation (EME) (Vallerand, R., Blais, M., Brière, N., & Pelletier, L., 1989). Such results are compared to others obtained by Spanish and Paraguayan samples (Nuñez, J., et al, 2005, 2006). The scale is composed of 28 items subdivided into seven subscales of four items each of which assesses three types of intrinsic motivation (to know, to accomplish things, and to experience stimulation), three types of extrinsic motivation (external, introjected, and identified regulation) and amotivation. Thus this scale represents the reasons why students go to university and the response choices for each item were rated on a 7-point Likert-type scale. The sample was composed of 699 university students, 128 males and 571 females with a mean age of 24.55 years (SD= 8.34). The internal consistency was satisfactory in all subscales with a Cronbach alpha of .90. Finally differences in gender were obtained, which in general indicate that girls have a more self-determined profile than boys.
Further Tests of the Self-Equilibrium Hypothesis: A Growth Mixture Analysis of Adolescents' Body Image Trajectories Over the High School Years

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Self-concept has long been recognized as a key indicator of person-environment fit and a critical predictor of multiple desirable outcomes (e.g. Marsh & Craven, 2006). However, seminal work by Kernis (2003, 2005) suggested that stability of self-concepts may prove to be more critical than levels. Recently, Morin et al. (2013) showed that global self-esteem levels and stability co-occurred, so that higher self-concepts tended to be more stable, reflecting the presence of a strong core self. Unfortunately, this self-equilibrium hypothesis has yet to be cross-validated. In this study, we conduct an additional test of the self-equilibrium hypothesis focusing on another critical component of self-conceptions during adolescence: Body image. In this study, we thus estimate self-equilibrium trajectories of body image using a sample of 1006 adolescents followed over a 4 year period. Our results support the self-equilibrium hypothesis, showing strong associations between levels and stability of body image trajectories, and also show the importance of intervening early to stabilize body image levels in order to present decreases over the course of adolescence. To guide the development of such interventions, we investigate the role of relations with parents and peers at the beginning of adolescence as predictors of membership into the trajectory groups.
Adolescents' Self-Worth: The Contribution of Physical Education and Other Movement Contexts

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Self-worth may be considered one of the psychological influences that, according to social ecological theory, guide human development. Several researchers have investigated the relationship between basic psychological need (BPN) satisfaction, self-determined motivation and self-worth. This study aims to build on existing research to increase the understanding of how BPN satisfaction in PE and two other movement contexts (organized youth sport and self-organized movement activity) contribute to adolescents' development of self-worth. 3049 adolescents participated in the study and data from 703 adolescents (average age 15.0) formed the basis for subsequent analyses (listwise deletion). Multiple regression analysis confirmed that BPN satisfaction predicted 16% of total variance in global self-worth (Adj. R² = .16). BPN satisfaction in PE contributed the most to self-worth (β = .26 [.11 – .21], p = .001) followed by BPN satisfaction in self-organized physical activity (β = .18 [.05 – .16], p = .001). However, BPN satisfaction in organized youth sports did not significantly predict global self-worth in our sample (β = .05 [-.02 – .09], p = .310). These findings highlight the need for PE teachers who support adolescents' basic needs and thus adolescents' development of positive self-worth.
Fragile Self-Esteem Among Children: Examining Multiple Facets of Fragile Self-Esteem and Their Relation With Well-Being

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Fragile self-esteem is characterized by unstable evaluations about the self that are easily affected by positive as well as negative events. Although previous research has indicated the detrimental effects of this type of self-esteem for individuals' psychological functioning, these studies have often focused on only one aspect of fragile self-esteem (e.g., contingent self-esteem, which is characterized by evaluations that depend on specific internal or external standards). This study included multiple facets of fragile self-esteem to (a) examine to what degree these different facets are related with one another and (b) to examine the associations between these facets and indicators of well-being. Elementary school-aged children (N ≈ 150) filled out questionnaires concerning their global level of self-esteem (explicit as well as implicit) and the contingency of their self-esteem. To assess the stability of their self-esteem, children filled out questionnaires concerning their self-esteem level during five consecutive days. Additionally, children and their mothers filled out questionnaires about the child’s well-being (i.e., affect and quality of life). Preliminary results showed that, in general, the different facets of fragile self-esteem are not or only modestly related to one another but do relate to ill-being. Theoretical and practical implications of these results will be discussed.
Meta-analyses indicate that physical activity has an impact on self-esteem (see Ekeland et al., 2009). The EXSEM-Model (Sonstroem, 1997) explains underlying processes in detail: Physical activity leads to a higher self-concept, which in turn has a positive effect on self-esteem (“Bottom-Up-Effect”). On the other hand, self-esteem has also an effect on physical activity, as mediated through sport-specific self-concept (“Top-Down-Effect”). However only a few longitudinal studies exist that examined these processes. The study is based on the longitudinal SET-study (Gerlach & Brettschneider, 2012). Cross-lagged structural equation analyses were applied to test top-down and bottom-up processes over a period of five years. The model with freely estimated cross paths achieved a good model fit (Chi2=1659; df=682; CFI=.95; TLI=.94; RMSEA=.030; SRMR=.048). The results indicated that student’s sport specific self-concept and self-esteem revealed a high temporal stability whereas stability of physical activity was much lower but consistently increased over time. Support for the “bottom-up” and “top-down” perspectives was limited, rather an inside out mechanism was found. The sport-specific self-concept has a powerful influence “up” towards self-esteem and “down” to physical activity and seemed to be the key variable for the prediction both well-being and behaviour.
The goals of this paper are to identify implicit theories of romantic love and to find indications about the stability resp. transformability of these theories. Such information is essential in order to find basic cognitive representations for developing personal identity and related social skills, especially for relationship education programs. The analysis is based on a human developmental model consisting of 5 developmental steps (from awareness, acceptance, care, trust to love) and 15 related instructional strategies (like, for example, establishing knowledge-based interactions or maintaining novelty). Fifty-two undergraduate students had to answer two times (within several weeks) three questions about features, causes, and the learnability of love for exploring their implicit theories. Content analysis has been applied for categorizing the developmental steps and instructional strategies within their reports. Results indicate that all elements of the human developmental model of love can be identified, but vary inconsistently within the implicit theories. Also, an instructional intervention, i.e., a lecture on love, has not changed these theories significantly indicating a high stability resp. a low transformability. Finally, shortcomings, additional conditions for changing implicit theories, and future research activities are outlined.
For decades, Indigenous Australian students have experienced disadvantages in many aspects. Using structural equation modelling, this study investigated the effects of identity (Indigenous vs. non-Indigenous), gender (boys vs. girls), and identity x gender interaction on five domains of academic self-concept (i.e., school, reading, math, art, and music), and affective (school belonging) and cognitive educational outcomes (self-rating of school competence, and reading and math achievement). Participants were 1268 Australian primary school students. Indigenous (n=496) and non-Indigenous students (n=772) were found to have similar ratings on liking of school, but Indigenous students were more negative in school belonging. In the domains of reading and math, Indigenous students performed significantly lower and their cognitive self-concept was also lower in reading compared to non-Indigenous students. Contrary to expectation, identity had no effect on art and music self-concepts, but gender effects were significant, favoring girls in both cognitive and affective self-concepts. Indigenous Australian children in primary school seem to need some assistance in reading both in terms of self-concept and performance. There is also a need to promote a sense of belonging in school.
Reducing the Achievement Gap in Germany – Does Self-Affirmation Work?

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Membership in valued social groups is one source of individuals’ sense of self-integrity. Consequently, negative characterizations of one’s group can be threatening. Because people are aware of this stereotype threat, they often perform poorly. Studies in the US have shown that self-affirmation buffers the effects of stereotype threat. In Germany, students with Turkish or Arab background perform less well than their classmates. Our study tested whether a self-affirmation intervention would enhance the academic achievement of these stereotyped students. Seventh grade students (N = 132) were randomly assigned to either a self-affirmation or to a control condition. Students who self-affirmed were asked to indicate values that were important to them and to write an essay indicating why those values were important. Students who did not self-affirm indicated their least important values and wrote an essay why those values might be important to others. Students were randomly assigned to the conditions. Teachers were blind to students’ condition assignments. The interventions were performed at the beginning of the school year and again two and four months later. To evaluate the effects of the intervention, we analyzed the grades of the students and their performance in a standardized achievement test.
"He Who Can, Does; He Who Cannot, Teaches?": Stereotype Threat and Pre-service Teachers

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Stereotype threat is defined as a situational threat that diminishes performance, originating from a negative stereotype about one’s own social group. In three studies, we determined that there are indeed negative stereotypes of students who have chosen a career in teaching, and that the performance of these students is indeed affected by stereotype threat. Responses to open-ended questions (Study 1, N = 82) and comparisons in closed-ended response format (Study 2, N = 120) showed that pre-service teachers are perceived as having a low level of competence and a high level of warmth, in keeping with the paternalistic stereotype of the stereotype content model (Fiske et al., 1999, 2002). In Study 3 (N = 262), a group of pre-service teachers was subjected to stereotype threat. In keeping with the stereotype threat model, that group performed worse on a cognitive test than a group of pre-service teachers who were not under stereotype threat; the performance of psychology students did not differ in response to the threat condition. This study is the first to show the effects of stereotype threat on students preparing for a teaching career.
The Dualistic Model of Passion (DMP; Vallerand et al., 2003) proposes two types of passion, namely harmonious passion (HP; where one has control over the activity that one loves) and obsessive passion (OP; where one is being controlled by the activity). The DMP posits that the activity becomes part of one's identity. However, little research assessed the relationships between the two types of passion and how they relate to different identity styles. Berzonsky (1989) described two types of identity: informational identity (II; where one builds identity through openness) and normative identity (NI; where one builds identity with close-mindedness). The present research assessed these types of identity as predictors of passion and how passion leads to life satisfaction. We hypothesized that NI would predict OP, whereas II would predict HP. In turn, HP was expected to predict life satisfaction. Participants (N = 108) completed a questionnaire that contained the Identity Style Inventory-3 (Berzonsky, 1992), the Passion Scale (Vallerand et al., 2003), and the Satisfaction With Life Scale (Diener, 1985). Results of a path analysis supported the hypothesized model. Implications for the passion and identity models are proposed.
Knowledge about the self is generated in everyday communicative encounters. As bilinguals speak two languages their self-knowledge can be assumed to be organized in a more complex manner, i.e., subdivided according to language or language contexts. The spill-over hypothesis (Linville, 1985) postulates that the organization of self-knowledge moderates the impact of self-threatening experiences on self-esteem, with numerous, disjoint self-aspects serving as a buffer. Drawing on this notion we expected bilinguals to profit from their more complex organization of self-knowledge in self-threatening situations. In our study bilingual participants worked on an adapted, bilingual version of the trait sorting task (Linville, 1985). Trait sorts were analyzed to yield a coefficient indicating the degree of self-knowledge organization along language lines. Participants were given negative bogus feedback on a language proficiency task, with explicit and implicit self-esteem being measured beforehand and afterwards. The results revealed that, to the extent that participants organized self-knowledge along language lines, they were less affected in their self-esteem by the negative feedback. These findings are in line with the spill-over hypothesis and suggest that speaking several languages is not only a cognitive resource but also a protective factor supportive of well-being.
The present study examines and compares the developmental trajectory of self-esteem for students with learning difficulties (N = 138) and typically achieving students from a matched sample (N = 553). Students with learning difficulties scored one standard deviation under the mean on standardized achievement tests completed by all grade 7 students in the state of New South Wales, Australia (e.g., Ciarrochi, Heaven, & Skinner, 2012). Self-esteem was measured annually from grade 7 to 12. The results supported the measurement invariance of the self-esteem measure across time waves and subgroups, and the superiority of a quadratic growth model (also invariant across groups) to depict students' longitudinal trajectories of self-esteem. Gender was found to predict the initial level (intercept) of self-esteem with boys displaying higher initial levels than girls, but only for typically-achieving students. Gender was not related to the growth rate (linear or quadratic slopes) of self-esteem in either group. Students' negative attitudes toward school also predicted the intercept (but not the slope) of the self-esteem trajectory in the sample of typically-achieving students, but not in the sample of students with learning difficulties. The results are discussed considering previous findings with respect to the development and importance of self-esteem.
Self-concept research in sports science currently uses social, dimensional and temporal effects in order to explain the ambiguous results concerning the impact of physical activity on self-concept. Individual importance is another postulated mechanism. The individual importance hypothesis can be traced back to William James (1890), who suggested that the importance people attribute to components of self-concept influences how general self-esteem is affected. Although intuitively attractive, this hypothesis has weak empirical support. Thus, we examined whether the influence of the physical self-concept on general self-esteem is moderated by the subjective importance of physical activity. For this purpose, N = 1680 students (14.5 ± 1.66 years) from all different types of schools were administered a standardized questionnaire. We applied state-of-the-art methodology, including latent moderated structural equations modelling. Our analysis showed a direct and distinct connection between physical self-concept and general self-esteem. However, against prior assumptions, this relation was not moderated by the subjective importance of physical activity. In line with current research evidence these findings suggest to revise the model of individual importance. The results are discussed within the context of youth-specific social norms: In the present case these social norms communicate social expectations that sport is important.
Exploring the Link Between Self-Esteem and Relationship Quality: Interpersonal Behavior as a Mediator

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Previous research has shown a link between self-esteem and relationship quality in romantic couples. However, only little research has focused on the psychological processes that might be underlying this link. The present study considered the mediating role of behavior in relevant social situations. Romantic couples (N = 137) filled in personality questionnaires, including the Multidimensional Self-Esteem Scale, at home. They were then invited to the laboratory and videotaped during 10-minute discussions about their relationship. The participants were asked to complete questionnaires about their relationship quality. Additionally, the couples' behavior during the discussions was rated by two independent coders. Applying Actor-Partner Interdependence Mediation Models, these dyadic data were analyzed considering intrapersonal, as well as interpersonal, effects. The results indicate that interpersonal behavior (e.g., perspective taking) mediates the link between self-esteem and relationship quality.
Perceiving oneself in an overly positive way has considerable implications for one's well-being and social relationships. Previous findings on the intra- and interpersonal consequences of self-enhancement have been controversial. On the one hand, it has been shown that self-enhancement is linked to mental health and liking, whereas, on the other hand, self-enhancement is related to maladjustment. On the basis of new methodological approaches with respect to the assessment and analysis of self-enhancement, the present symposium provides new insights into the intra- and interpersonal outcomes of self-enhancement. Using data from the Berlin Speed Dating Study, Michela Schröder-Abé, University of Darmstadt, presents findings on the relation between attractiveness self-enhancement and mating success. Katrin Rentzsch, University of Bamberg, presents a study on the interpersonal consequences of self-enhancement by providing a new strategy of analysis of self-enhancement on two levels of analysis. Jenny Wagner, IPN Kiel, presents results from a large longitudinal study testing whether self-enhancement in liking is beneficial for the longitudinal development of self-esteem. Michael Dufner summarizes previous findings on the controversial link between self-enhancement and psychological adjustment by presenting results from a large meta-analysis. At the end, methodological implications for the study of self-enhancement and psychological adjustment will be discussed.
**Good Enough for an Affair. Attractiveness Self-Enhancement, Interest in Potential Mates, and Popularity as a Mate**

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If you were after a date, would you prefer someone who overestimates his or her attractiveness or someone with more modest self-views? And would a self-enhancer be choosier or more indiscriminate when looking for a date? Using data from the Berlin Speed Dating Study, we tested rivaling hypotheses regarding the effects of attractiveness self-enhancement on dating outcomes: Are self-enhancers more or less choosy than others? Are self-enhancers more or less popular as potential mates? 383 participants took part in one of 17 speed-dating sessions. After each speed-dating interaction, participants indicated how interesting they found the respective person as long-term and short-term partner. Using Social Relations Analyses, we computed actor effects (being less choosy) and partner effects (being rated as more interesting) on long-term and short-term partner ratings. Self-enhancement was operationalized as the discrepancy between attractiveness self-ratings and “actual” attractiveness (i.e., observer-rated facial and vocal attractiveness, height, and BMI). Results indicated that self-enhancers were more indiscriminate with respect to their interest for short-term partners, but more choosy with respect to long-term partners. With regard to popularity as a mate, others indicated that they found self-enhancers more interesting as short-term partners, but not as long term partners.
Self-Enhancement 2.0: An Integrated Approach to Measuring Dyadic Self-Enhancement at Two Levels

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The present research integrates and extends existing approaches to measuring self-enhancement in interpersonal relationships. We composed a dyadic self-enhancement index by contrasting self-perceptions with the academic achievements of both dyad members and disentangled the effects of the perceivers, the targets, and the relationships by using social relations analyses. At two different levels, we examined the interpersonal consequences of self-enhancement in 330 eighth-grade students. Results revealed that, at a habitual level, the more students tended to feel unrealistically superior to other students, the more they tended to dislike others, yet this did not affect how much others disliked them. However, at a relationship level, we found different effects in specific relationships between individuals: The more a student felt unrealistically superior to a specific other student, the less he or she liked the other student, and the less he or she was liked by that student.
Different psychological notions link liking with self-esteem. Considering social belonging as a basic human need, self-esteem appears to be fueled by a sense of being liked by others. In the current paper, we address liking in an interpersonal fashion, testing whether self-enhancement in liking is beneficial for the longitudinal development of self-esteem. One additional goal of this paper is the implementation of Social Relations Models (SRM) in the context of self-enhancement studies. Research of the last decades illustrated both relevance and consequences of different forms of self-enhancement. However, up-to-date there is no widely accepted operationalization of self-enhancement. Based on a longitudinal study of \( N = 846 \) 5th graders nested in 46 German school classes (TRAIN, Trautwein et al., 2010), we aim to implement the interpersonal approach of self-enhancement (cf., Kwan et al., 2004) in the classroom context. Based on round-robin data of liking, the SRM approach allows for the immediate separation of perceiver and target effects, as well as the inclusion of additional covariates or outcomes, such as self-esteem. Preliminary results suggest that self-evaluations of liking are confounded by several components. We discuss our findings both on the methodological as well as content level.
Is it better to maintain an overly positive self-view, or to have a realistic perception of oneself? Potential costs and benefits of self-enhancement have been hotly and controversially debated for more than three decades. It was the aim of the current meta-analysis to systematically evaluate the evidence that has been gathered so far on the association between self-enhancement and indicators of both intrapersonal and interpersonal adjustment. To accomplish this goal, we analyzed 685 effects from 305 different studies. We examined both cross-sectional and longitudinal effects and considered both studies using exclusively self-report and studies using observer-, or peer-reports of adjustment. Furthermore, we addressed the possibility that the links between self-enhancement and adjustment might be dependent on cultural factors. Overall, results indicate that self-enhancement is positively linked to intrapersonal adjustment whereas the association to interpersonal adjustment is more complex. We will discuss the implications of these results for prominent theoretical positions.
Self-explanations of higher education students have been analyzed as an indicator of the students' learning and understanding mainly in mathematical or science domains (e.g. Chi et al., 1989; Neuman & Schwarz, 1998); few studies have examined the self-explanations in the domain of business and economics (e.g. Bodvarsson, 2005; Renkl et al., 1994). These studies usually analyze self-explanations in greater detail, looking at variation in students' cognitive processes. The WiwiKom project (Zlatkin-Troitschanskaia et al., 2014) assesses higher education students' understanding in business and economics using internationally proven test instruments in a mixed-methods approach that integrates findings from quantitative field studies and think-aloud interviews. For the concurrent and retrospective think-aloud interviews, 19 items, selected according to IRT-based item parameters, were administered to 20 students, selected through a purposeful random sampling (Patton, 2002) according to the distribution of students' study progress in the field studies (N=1,113). The think-aloud interviews enabled a detailed analysis of individual processes of understanding. The verbal protocols showed evidence of cognitive, meta-cognitive, and affective processes as well as of test-taking strategies, which varied depending on students' study progress. The quantitative and qualitative findings will be shared and discussed critically in the presentation.
The Role of Self-Compassion in Response to Rejection

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Considerable empirical evidence demonstrates that self-compassion predicts positive outcomes in response to negative events. Little research has examined whether self-compassion predicts responses to interpersonal rejection. The present research tested the hypothesis that self-compassion predicts relatively less negative responses to rejection. In Study 1, participants completed a recall task that induced a sense of rejection. Results revealed that self-compassion significantly negatively correlated with state depression, negative affect, and state anxiety, and positively correlated with state self-esteem and positive affect. Study 2 manipulated whether participants recalled rejection or acceptance. Self-compassion positively correlated with state self-esteem and (marginally) with positive affect. Study 3 employed a diary methodology to capture responses to daily rejection/acceptance. Over two weeks, participants completed daily diaries in which they reported on the event that most made them feel accepted or rejected. Results revealed that perceived acceptance significantly predicted state self-esteem and affect, and self-compassion moderated the relationship between acceptance and affect. Specifically, the acceptance/positive affect relationship was significantly weaker, and the acceptance/negative affect relationship was significantly stronger, for participants relatively high in self-compassion. Overall, self-compassion significantly predicted state self-esteem and affect. Results suggest some promise for self-compassion as a self-regulation strategy in coping with rejection.
Purpose: The Test of Performance Strategies, TOPS 2 may be perceived as too long, especially when used in conjunction with a battery of other instruments (Marsh, Martin and Jackson, 2010). Therefore the purpose of this study was, to develop, a robust, reliable, and valid short form of this instrument. Design and Method: The recommended criteria (see Marsh, et al., 2010) were applied in selection of items for TOPS 2 short form (TOPS 2-S). A minimum of three items per factor was recommended by Kline (2005) and Marsh et al. (2010), which the present study adopted. Confirmatory factor analysis (CFA) and exploratory structural equation modelling (ESEM) was conducted with Mplus using maximum likelihood estimation to investigate the factor structure of TOPS 2 and the (TOPS 2-S). Results and conclusion: The TOPS 2 and TOPS 2-S reliability estimates were consistently high for all factors. The overall alphas for the TOPS 2 (.95) was marginally higher than the TOPS 2-S (0.94). The CFA and ESEM showed that the confirmatory fit indices met the cutoff in the criteria advocated by Hu and Bentler (1999). Moreover, the multitrait multimethod analysis showed that TOPS 2-S had met the criteria for convergent and discriminant validity.
Teachers’ attitudes toward inclusion are important conditions for establishing an inclusive school system. In recent years, research focused on several prerequisites of teachers’ attitudes toward inclusion. For example, research has shown that teachers’ self-efficacy beliefs and their experience in joint education are correlated with their attitudes toward inclusion. While the importance of several prerequisites of teachers’ attitudes toward inclusion was investigated over the last two decades, there is a lack of studies with a more integrated view. In this study, we investigated N=201 primary school teachers’ attitudes toward inclusion in primary school and their interests in inclusive teaching. As prerequisites of primary school teachers’ attitudes we regarded their prior experiences in inclusive teaching, their views on inclusion and their self-efficacy beliefs. The results of a structural equation model indicate that teachers with prior experience in joint education of children with and without special educational needs, a reasonable view on inclusion and high self-efficacy beliefs have significantly more positive attitudes toward inclusive teaching in primary school than teachers without these prerequisites. Furthermore, the results show that the effects of attitudes on primary school teachers’ interests in inclusion are moderated by their self-efficacy beliefs.
Fostering Motivational Regulation and Meta-Cognitive Control While Learning With Digital Media Using SRL Prompts

Motivational aspects play an important role in self-regulated learning (Schunk & Zimmerman, 2012). This is also true for learning with digital media, a learning medium that generally offers many promising instructional benefits. However, learners often struggle when studying in such environments, as they do not possess the required self-regulation of learning. In previous research, prompts were proven to be effective scaffolds in supporting learning with digital media. The present research examines the auspicious potential of motivational regulation prompts, which are assumed to additionally support self-regulated learning processes. During a 50 min learning session in a digital media learning environment, N = 215 university students received either no prompts, only meta-cognitive prompts, only motivational regulation prompts, or both types of prompts. Students' learning motivation, meta-cognitive control, learning behavior, and knowledge were gathered at three different measurement points (pretest, posttest, follow-up). The results confirmed the positive effects of meta-cognitive prompts, and the assumed incremental effects of motivational regulation prompts on learning motivation, meta-cognition, learning behavior, and learning results. They also indicate that there are two types of effects of motivational regulation prompts on students' learning: direct effects and effects modeled through meta-cognitive control. Implications for the practical employment of prompts are discussed.
Teachers' Personality Traits and Their View Upon Students' Emotional and Behavioural Difficulties

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Teachers' views upon students are known to influence their academic development and outcome of schooling. Teachers often rely on experiences, dispositions and personal values when assessing students' behaviour as this is seldom stressed in teacher education. Literature has shown that personality plays a significant role in these assessments. Distinguishing between an accuracy model hypothesising that personality traits actually influence behaviour and a distortion model hypothesising that personality traits only influence how behaviour is perceived, this study examines how teachers' personality traits influence their view on 2nd grade students' level of internalizing and externalizing behaviour as expressions of emotional and behavioural difficulties. Previous research in personality traits have found agreeableness and extraversion related to social processes, while conscientiousness have been shown to be related to how people rate. Using growth-curve modelling, the study finds that the teachers' level of extraversion and conscientiousness influences their view on students' level of internalizing and externalizing behaviour, while the effect of agreeableness is vaguer. The study only finds support for the distortion model, as teachers' personality traits only seem to influence their view on students' level of internalizing and externalizing behaviour, but has no influence on how they view the development of behaviour over time.
Why Don’t They Fight for Their Rights? The Role of Self-Respect in Explaining Differences in Assertiveness

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Past research has demonstrated that people differ in terms of perceived entitlement to stand up for their rights. So far, this phenomenon has not been linked to a person’s self-concept. This is primarily reflected by the fact that neither global self-esteem (e.g. Rosenberg, 1965) nor two-dimensional conceptions such as self-liking vs. self-competence (Tafarodi & Swann, 1995) have been hypothesized or found to predict claim making or assertiveness. Inspired by social philosophical reasoning we introduce the concept of self-respect to fill this explanatory gap. Self-respect is defined as a person’s ability to see him- or herself as someone of equal worth and dignity. In a study (N = 343) we were able to disentangle self-respect from self-confidence and from an achievement-based self-esteem and demonstrated its predictive role in assertive behavior. Moreover, we took a closer look at the often reported gender difference in assertiveness. As expected self-respect, but not self-esteem or self-confidence, mediates the gender effect on assertiveness. We discuss self-respect as a dynamic internalization of equality recognition experiences, which helps to illuminate why women currently show lower levels of self-respect.
The present paper aims to validate the suggestion from SSMMD (e.g. Skinner & Pitzer, 2012), that basic need satisfaction, as understood in SDT (e.g. Deci & Ryan, 2000), predicts engagement. Detailed knowledge of this suggested relation can help inform future school interventions aimed at improving students learning. Previous studies have confirmed the relation (Skinner, Furrer, Marchand, & Kindermann, 2008; Skinner, Chi, & The Learning-Gardens Educational Assessment Group, 2012). However, no studies have focused on a Danish context. In February and June of 2014, 679 students (4th-6th grade) (excluding all missing and partly missing) from six different schools responded, in class, to a self-report questionnaire consisting of mainly SRQ-LD (Autonomy: Deci, Hodges, Pierson & Tomassone, 1992), SARAC (Engagement: Wellborn, 1991) and BPNS (Competence & Relatedness: Ryan & Deci, 1998), where all questions had been focused towards the subject “Danish” to minimize ambiguity. Danish translations of all measures have been validated in three waves using three different samples. Multiple regression controlling for engagement in February showed that competence in February significantly predicted engagement in June, $\beta=.142$, $p<.001$, $\Delta R^2=.016$. The low predictive value of autonomy ($\beta=.011$, ns) and relatedness ($\beta=.047$, $p=.085$) was surprising – SEM analyses will be done to look into this.
A substantial body of research has shown that academic intrinsic motivation/cognitive engagement decreases from grades three through eight (Lepper, Iyengar, & Corpus, 2005). This phenomenon is troubling if education is to be viewed as a process through which learning goals become gradually internalized and connected with one’s sense of self. Although substantial research addresses motivational means through which achievement can be increased, few studies problematize the unintended consequences of these approaches. From a larger quantitative study of the relationship between engagement and achievement (5,392 students in grades 3-12), eight high-achieving, cognitively disengaged middle-school students were interviewed to understand their motivation towards learning. Classroom observations, teacher/principal interviews, and parent surveys contextualized the findings. Thematic analysis was organized according to the sub-scales of autonomy, competence, and relatedness, as described in self-determination theory (Deci & Ryan, 1985). Findings suggest that the student participants experienced a single-minded focus upon grades, which manifested itself through rigorous homework routines and academic competitiveness. In alignment with Baumrind’s (1968) construct of authoritative parenting, students described a gradual removal of parental supervision with respect to their academic responsibilities. However, this emergent trust in the students was based upon measurable academic success, rather than upon evidence of self-endorsed learning.
Motivational Sequences of Self-Determination: Two Sides of Basic Psychological Needs

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The motivational sequences of social factors-needs-motivation-outcome were proposed by Vallerand and Losier (1999) and later examined by other researchers. However, basic psychological needs satisfaction and thwart were not clearly examined or its influences on motivational outcome. The aims of present study was to investigate both needs satisfaction and thwart produced by leadership behaviors to self-determination motivation and outcome. 241 university students-athletes were involved in this study after ethic approval was gained. Cross-sectional design and questionnaires were applied on team sport participants. Hierarchical regressions, person correlations and internal coefficients were conducted to analyses data. Results showed that need satisfaction was influenced by coaches' moral leadership behavior and leaded to more self-determining motivation and adaptive outcome such as subjective vitality. In contrast, need thwart was influenced by more controlled leadership behavior and further lead to less self-determining motivation and maladaptive outcome such as burnout symptoms. Suggestions and conclusion were proposed respectively.
For people studying music at the university level, and indeed at any level, practice is the key activity for improving musical performance ability. Understanding students’ motivation for practice is important, because universities may be able to create social environments that are conducive to effective motivation. Currently, university music environments tend not to be so. This study used self-determination theory to examine university music student psychological needs fulfilment and self-regulation. Participants were 409 university music students from universities in Australia and New Zealand. CFA results confirmed good psychometric qualities for the adapted instruments used in the study. Path analysis showed relations between psychological needs fulfilment, self-regulation, and the quantity and quality of practice. The results have implications for understanding the effectiveness of student wellbeing, the quality of their learning, and ways to maximise music performance ability in these environments, pointing particularly to competitive, controlling, and authoritarian nature of music conservatory environments. The results are contextualised within a broader program of research to examine longitudinal relations between self-determined motivation, self-regulated learning, performance ability, and wellbeing in students learning music performance at the highest levels of ability.
Interest at the Domain, Course and Task Level: An Applied Model of Interest

How are students' interests triggered and supported across a yearlong course? Within the autonomous environments of tertiary education, this question is of paramount concern and stands ready for exploration. Overlapping with, but also extending Hidi and Renninger's four-phase model (2006), the current research tests a preliminary model of interest development applicable to compulsory university curricula. This study explores how the different phases of interest development are implicated at three levels of interest: domain, course, and task. An initial pool of items for both a task and course measure of interest were developed based on existing interest literature and then tested at three time points (10-months) to generate a reliable measure. Participants were 408 students at one mid-sized private university in Western Japan. Three forms of the measure representing domain, course and task interest were piloted and tested using Exploratory and Confirmatory Factor Analyses. Employing Structural Equation Modelling, a mass confirmatory analysis tested the convergent/divergent validity of domain, course, and task interest and achieved acceptable fit. Finally, a longitudinal auto/cross-lag model (8 and 16-months) was tested and achieved acceptable fit. Domain level interest had a substantial predictive effect on course and task interest after four, eight, and sixteen months.
Who'd Like to Learn New Things? Compiling PIAAC Items Used in 21 Countries Into a Scale to Measure Adults' Motivation to Learn

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Despite the importance of lifelong learning as a key to individual and societal prosperity, little is known about adults' motivation to engage in learning. In educational psychology, Eccles et al.'s expectancy-value approach represents an established theoretical framework to predict educational task choice such as participation in learning activities. Task value has been identified as a key factor of task choice. Our aim is to build a scale that reflects adults' motivation to learn—that is, task value—based on items from the Programme for the International Assessment of Adult Competencies (PIAAC) background questionnaire used in over 20 OECD countries. Based on a review of the conceptualization of task value, we claim that four items measuring meta-cognitive abilities capture adults' general task value of learning in terms of skill development. Multiple-group confirmatory factor analyses that assumes strong measurement invariance reveals good factorial validity across 21 countries (N=149,243; $X^2(102)=3045.267$, $p<.001$, CFI=.992, RMSEA=.064) and within countries across other demographic variables such as gender, age group, migration background and levels of education. As expected, motivation to learn predicts individuals' learning activity in terms of participation in non-formal education over the last 12 months. Finally, we discuss the potential of this motivation-to-learn-scale in future PIAAC analyses.
Identity Motivation in Australian Indigenous Students

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The present study investigated the contextual factors that contribute to the educational resilience and success of urban and rural Australian Indigenous youth. Individual factors such as affect, are striking, but this study focused on the home, school, and community protective factors that mitigate against school failure, particularly among Indigenous students from low-income families. How and under what circumstances do school-focused identities matter? How does the development of racial identity interact with and influence perceptions of school and the future? This study examined the impact of a specific academic domain (identity-based motivation as the participant’s likelihood of participating in extra academic behaviours, Oyserman, 2007, 2009) and non-academic domain (racial-ethnic identity measures, Gfeller and Armstrong, 2013), as found in the Marsh-Shavelson model of self-concept (Leung, Marsh, Craven, Yeung and Abduljabbar, 2013). The social support construct is distinguished by its function mode, of high parent-school involvement in the promotion of future possible selves. The relative effects of academic and social domains of support on these two specific domains of adjustment were clarified. Where the two self-concepts were significantly correlated, children who viewed their adult selves as education dependent were four times more likely to change their school behaviours, such as complete take-home work.
Physical activity is increasingly being used to improve aspects of school engagement in youth; however, evidence supporting this use of physical activity is often contradicting and constantly debated by policy makers, educators, and parents. The purpose of this review was to systematically review studies that have assessed the association between physical activity and behavioural (e.g., time on-task), emotional (e.g., lesson enjoyment), or cognitive (e.g., academic motivation) school engagement. We searched electronic databases in December 2014, extracted data, rated the risk of bias, and examined the strength of the effects within studies to determine the effect of physical activity on school engagement. Overall, results of the 40 included studies indicated that physical activity was positively associated with school engagement. Of the many types of interventions, physical activity breaks (e.g., classroom lesson breaks) were the most effective in improving school engagement, especially behavioural engagement. Given the differences between studies and moderate risk of bias, these results should be interpreted cautiously. However, results from this review suggest that physical activity has a positive effect on school engagement. Policy makers, educators, and parents could use this evidence to improve school engagement and the successful development of youth in society.
Testing the Four-Dimensional Model of Academic Motivation Among Early and Middle Adolescents in Serbia

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According to Self-determination theory, academic motivation plays a crucial role in adolescents' development of self. Results of previous research in Serbia, based on a modified version of Academic motivation scale, revealed four stable dimensions of academic motivation, labeled as Intrinsic, Extrinsic, Introjected motivation and Amotivation. However, most of this research was conducted among younger adolescents. In this research four-dimensional model was further tested through confirmatory factor analyses (CFA) on two separate samples of younger and middle adolescents. A Serbian version of the Academic Motivation Scale (32 items) was administered to two samples of 1106 (50% girls, average age = 13) and 945 (61% girls, average age = 17) respondents. The data was analyzed using a CFA on the full configural level and the established criteria for acceptable fit. Results yielded a very good fit of the measurement models in both samples. However, in the older sample, fit estimates for the Introjected motivation were somewhat lower. The paper concludes that the four-dimensional configural equivalence was justified on both samples. Future research should focus on testing the full measurement invariance of the model with multiple group CFA comparing different age-groups and genders.
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