

# Understanding Influence of Psychological Capital on Student's Engagement and Academic Motivation

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## Abstract

This study examined the influence of psychological capital on engagement and motivation of college students. The study was conducted on 230 commerce and business students in Bhutan. Using random sampling approach, data were collected on a standard questionnaire all the variables of the study. Correlations and regressions were used to analyze obtained data. Results revealed positive and significant association among psychological capital, engagement and motivation. Regression analysis indicated significant influence of psychological capital on student's engagement and on their motivation. The implications of the study have been explicated in the research.

**Keywords:** Psychological capital, Student engagement, Academic engagement, intrinsic motivation, Motivation

## Introduction

Student's engagement has become the buzz word in educational organization in the same way as in corporate for employees. Issue of student's engagement has got more significance in current times within psychology and education (Lam & Jimerson, 2008; Veiga, 2012). Educational institutions and all stake holders expect that students must get engaged in all activities of their academic life and be motivated in study so as meet current intuitional and future market challenges. High motivation and engagement of students have consistently been linked to various desirable outcomes in students such as high quality of learning (Australian Council of Educational Research, 2008; Krause & Coates, 2008), reduced dropout rates, increased academic success and achievements (Appleton et al., 2006; Dev, 1997; Kushman, 2000), promoting lifelong learning (Sanacore, 2008) in addition to psychosocial development (Reddy, Rhodes, & Mulhall, 2003). Motivation and engagement level can affect how students approach school in general, how much time and effort they devote to their studies, how much support they seek from teachers and their colleagues and how they perform in examination. While there is much research on student's motivation and engagement at primary and secondary level (Sesen & Tarhan, 2011; Swiderski, 2012), researches focusing on students at the post-secondary level is scant (Halm, 2015). Thus, the current study will address engagement and motivation of students at college level.

Psychological capital (PsyCap) is relatively new construct which drew much attention from scholars and researchers. PsyCap is positive psychological state in the person which has positive implications on various desirable outcomes on students such as increased academic performance (Luthans, Luthans, & Jensen, 2012; Malone, 2010; Tjakraatmadja & Febriansyah, 2007), effective coping (Khan, Siraj, & Li, 2011), increased psychological well-being (Zhong & Ren, 2009). These findings are pertinent and significant for researchers and educators, however, study on the relationship between PsyCap and student's engagement and motivation is almost non-existence. Given the increased emphasis on student's engagement and motivation (e.g. Veiga, 2012) and the role of positive psychological resources (PsyCap) in students social, emotional, and cognitive development (Martens & Witt, 2004) in educational setting, it becomes imperative to examine the relationship of PsyCap with student's engagement and motivation. Thus, the current study will examine the relationship between PsyCap and student's engagement and motivation of college students.

## Literature Review

### Psychological Capital

PsyCap has its root in positive organizational behaviour (Luthans & Youssef, 2007; Nelson & Cooper, 2007) and positive psychology (Peterson & Seligman, 2004). According to Luthans, Youssef & Avolio (2007), PsyCap is the individual's positive psychological state of development, consisting of self-efficacy, optimism, hope and resiliency. Self-efficacy is the belief of the person that he has the required capability to carry on specific task. A person with high self-efficacy has faith on his ability and is in control of his actions and performances (Bandura, 1977). Optimism refers to having positive attribution or expectancy for success in the current time as well as in future, a thought and expectation that future will be good. Hope is ability to formulate plan and strategies and keep persevering in achieving the goal. It also refers to, redirecting paths, if needed, to achieve the goals (Snyder, 2002). Hope enables students to set desired goals, identify means to achieve those goals, and find the drive to pursue those goals. Resiliency is the capacity to bounce back psychologically (including emotion and cognition) from adversity, conflict, failure, or even positive events (Luthans et al., 2007). However, the PsyCap, as proposed, is advanced or core construct, compared to the individual dimensions, that has more impact on various desirable outcome (Luthans et al., 2007).

### Link between PsyCap and Student's Engagement

According to Hu and Kuh (2001) student engagement refers to the quality of effort students devote to educationally purposeful activities that contribute directly to desired outcomes. Engagement is a broad phenomenon that

encompasses relationship between students and institutions. PsyCap has been studied in relation to various desirable students' outcome such as academic achievement (Blackwell et al., 2007). However, the current study extended this line of research and examines its relationship with student's engagement. It is proposed in the research that PsyCap is related to and influences student's academic engagement. Relationship between PsyCap and engagement has been established in corporate sectors (e.g. Karatepe & Karadas, 2015; Luthans et al., 2007; Xanthopoulou, et al., 2007), however, there is a lack of direct evidence in examining the role of PsyCap and student's engagement. Keeping in mind the scarcity of research, conceptual link between the two variables can indirectly be drawn by taking individual dimensions of the construct - PsyCap (self-efficacy, optimism, hope and resiliency). According to researchers (e.g. Bressler, et. al, 2010; Kluemper et al., 2009), optimism is positively associated with academic performance (a kind of behavioural engagement). People with high level of optimism have positive outlook and expectations of positive outcome enhances their willingness to put more efforts in academic activities. Student's self-efficacy has been found to have significant effect on students' cognitive engagement (Arabzadeh et al., 2013; Greene et al., 2004). Self-efficacy enables students to positively employ cognitive strategies and to guide their own learning which in turn also leads to behavioural engagement through high performance in the class. Hope, an element of PsyCap can be related to student's engagement. Hope is a motivational state based on: goals, pathways, and agency goal directed thinking (Snyder, 1994). A person with high hope develops the "will" power and creates ways and strategies to achieve the goal (Snyder et al., 1991); and this can't be possible without getting students engaged in the in-class and out-of-class activities. The present researcher found only one study examining the relationship between the PsyCap and student's engagement on Chinese students and found the reciprocal relationship between the two variables (Siu, Bakker & Jiang, 2014). Drawing from the above studies and arguments, current study assumed association between the PsyCap and student's engagement. Thus it is conjectured that –

**H1:** PsyCap positively influences student's engagement

### Link between PsyCap and Academic Motivation

Student's motivation has been an important issue for teachers (Linnenbrink & Pintrich, 2003). Motivation is positively related to students' academic performance and their self-perception of competencies (Blumenfeld & Pokay, 1990, Wiegfield, et. al. 1997). Understanding and developing the knowledge about factors that affect academic motivation can help to improve educational performance because it arouses interest in academic activities. Academic motivation can be said as student's

willingness and desires to achieve academic goal. Extrinsic and intrinsic are the two types of motivation presented in the literature. Extrinsic motivation which is based on behaviorist framework focuses on external factors or stimuli (e.g., rewards, praise, punishments, threats) in producing motivation. Intrinsic motivation refers to the motivation which comes from within the person and gets reflected in term of interest, enjoyment, feeling competent and self-determined (Woolfolk-Hoy & Hoy, 2009). Current study has focused on intrinsic motivation as it is the preferred motivation within the educational system (Ryan & Deci, 2000, Vansteenkiste et al., 2006).

The current study assumed that student's PsyCap is related to intrinsic motivation in them. In other words, student's level of PsyCap determines the level of intrinsic motivation in students. According to some scholars (e.g. Bandura, 1996; Dweck, 2010), Students' beliefs can affect their motivation and this belief comes from self-efficacy. If student's self-efficacy is low, then their motivation to perform will be low (Sanacore, 2008). Optimism has been associated with motivation (Carver & Scheier, 2014). If students believe that they have a high capacity to learn and achieve or feel that they can get success, becomes more energetic and motivated to do the task. Students are motivated when they feel excited and enthusiastic about a task or feel value of the task (Linnenbrink & Pintrich, 2003). An important aspect of hope is the willpower which helps attain goals, ignite potential, and inspire motivation (Synder, 1994). A student with high hope to attain certain goal becomes motivated to achieve that goal. Drawing from the above studies and arguments, it can be stated that PsyCap as core construct, has the ability to create intrinsic motivation in students. Thus it is conjectured that –

**H2:** PsyCap positively influences academic motivation of students

## Method

### Participants and Procedures

The present study is cross-sectional based on survey research. Data were collected from undergraduate business and commerce students in a college in Bhutan. Using random sampling approach, data were collected from 230 students which included both the genders. Out of 230 respondents, 130 were of commerce students and the remaining were business students. Respondent's age varied between 17 and 23 years, with average for the sample being 19 years approximately. Approximately 53 percent of the sample was female. 52 percent of respondents were from urban areas. All the necessary information about the research such as objectives of the study, ways of answering the questionnaire etc., was provided to respondents. In an effort to mitigate the problem of common method variance/errors following steps were taken (Podsakoff, MacKenzie,

Lee, & Podsakoff, 2003). First, respondents were also assured of the confidentiality of their responses. In order to get honest and sincere response, participant's identification was not asked in the questionnaire. Second, respondents were communicated that there is no right or wrong answer. Third, data were collected in two waves, with a lag of 2 weeks time, In Wave 1, questionnaire consisting of perceived parenting styles was administered which was followed by administration of PsyCap scale.

## Measures

PsyCap - The Psychological Capital Questionnaire (PCQ) developed by Luthans et al., (2007) is used to assess student's PsyCap. 24-item PCQ is a self-report questionnaire consisting of all dimensions of the construct, namely, hope, optimism, resilience and self-efficacy, having six items for each dimension. The referent was only changed from 'work' to 'study' in the measure to make the scale relevant to student. Examples for items are 'At the present time, I am energetically pursuing my goals' (hope); 'I am optimistic about what will happen to me in the future as it pertains to study' (optimism); 'I usually manage difficulties one way or another at study' (resilience); and 'I feel confident helping to set targets/goals in my study' (self-efficacy). All the responses for the PCQ are anchored on a five-point Likert -type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher score indicated high level of PsyCap in students. Cronbach's alpha reliability was found to be 0.831 for hope, 0.716 for optimism, 0.701 for resiliency, 0.780 for self-efficacy and 0.880 taken together (PsyCap as core construct) in the present sample.

Students Engagement - Student's academic engagement was measured by scale adopted from the work of Krause and Coates (2008). It is a 10-item scale measuring attitudinal and behavioural engagement of college students. Example of item is "I regularly seek advice and help from teaching staff". Responses were taken on 5-point scale anchoring 1 (strongly disagree) to 5 (strongly agree). Higher score indicated higher engagement. The scale has reliability 0.866 (Cronbach's alpha) in the present sample.

Academic motivation - Academic Motivation Scale (AMS-C) developed by Vallerand et al., (1992) was used in the study to assess student's motivation. The scale is based on the Self-determination theory (Ryan & Deci, 2000). The AMS-C includes seven subscales which measure three types of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation), three types of extrinsic motivation (external, interjected, and identified regulation), and a-motivation. In the current study, only intrinsic motivation sub-scale is used which consisted of 12 items. High scores indicate the student's strength on their intrinsic motivation. Responses were taken on 5-point Likert scale anchoring 1 (strongly disagree) to 5

(strongly agree). The scale has reliability 0.776 (Cronbach's alpha) in the present sample.

## Result and Discussion

The data were analyzed with the help of Statistical Package

for Social Sciences (SPSS Version 21) and correlation and multiple regression analysis were obtained. Correlation was used to see the relationship among variables of the study. Multiple regressions were applied to ascertain influence of PsyCap on engagement and motivation.

**Table – 1: Means, Standard Deviations (SD) and Correlation Coefficients among Variables**

	Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1	Age	18.75	1.48	-								
2	Gender	.55	.48	.07	1							
3	Hope	3.77	.58	.02	.02	1						
4	Optimism	3.62	.59	.17*	-.00	.66**	1					
5	Resiliency	3.53	.47	.18*	.37**	.26**	.44**	1				
6	Self efficacy	3.20	.53	.27**	.25**	.20*	.40**	.86**	1			
7	PsyCap	3.48	.42	.27**	.20*	.71**	.85**	.63**	.65**	1		
8	Engagement	3.57	.34	.18	.23**	.29**	.38**	.60**	.45**	.45**	1	
9	IM	3.58	.42	.01	.15*	.28**	.59**	.63**	.49**	.58**	.47**	1

\* Correlation is significant at the 0.05 level .

\*\* Correlation is significant at the 0.01 level.

IM = Intrinsic Motivation

Means, SDs and Correlations presented in the above table (table 1) showed that PsyCap has positive and significant relationship with engagement ( $r = .45$ ,  $p < .01$ ) and intrinsic motivation ( $r = .47$ ,  $p < .01$ ). Further, the table also revealed

that each dimensions of the PsyCap is significantly and positively associated with the engagement and intrinsic motivation of students of the study.

**Table – 2: Summary of Multiple Regressions on Engagement as a PsyCap**

	B	SE	$\beta$	t-value	<i>p</i>
Hope	.123	.051	.176	2.397	.018
Optimism	.175	.086	.273	2.028	.045
Resiliency	.057	.057	.099	1.008	.316
Self-efficacy	.556	.098	.774	5.664	.000
R Square	.440				
Adjusted R Square	.385				
Std. Error of Estimate	.268				
F – Value	21.50				
Significance	.000				
Collinearity Statistics (Min- Max)	Tolerance : 0.252 – 0.560; VIF: 1.78 – 3.90				
Durbin-Watson	1.78				

Hypotheses of the study were tested using multiple regression analysis. Table 2 summarizes the results of regression analysis for testing Hypothesis 1 of the study. The overall regression was statistically significant,  $F(4, 127) = 21.50$ ,  $p < .01$  and explained 44 percent of the variance in student's engagement ( $R^2 = .440$ ). The findings supported the first hypothesis of the study which stated that PsyCap positively influences student's emotional, behavioural and cognitive engagement. PsyCap in students help them keep engaged with their academic activities. The results of this study were consistent with the findings of Siu, Bakker & Jiang, (2014) in the context of educational institutions, that suggest the reciprocal relationship between the PsyCap and student's engagement, and in organizational context (Xanthopoulou, et al., 2007). One explanation for this association between the PsyCap and engagement can be

understood from the Hobfoll's (1989) conservation of resource theory which explains that people accumulate their resources to meet certain goal. PsyCap provides psychological resources and energy that help students focus on their college activities, keep them engaged in studies and academic efforts. Students with this resource (PsyCap) are able to cope academic challenges and enable them to move towards flourishing and success (Sweetman & Luthans, 2010). College students have relatively clear goals of their life and psychological resources (PsyCap) generate and sustain their efforts to achieve their goals (engagement). Other explanation for this association can be understood from the perspective of self-regulation theory which keeps students to focus on their academic goals and activities. Student's self-regulated behaviour is goal directed and students make plan and strategy to achieve that goal. PsyCap

makes students feel sense of competence (Boekaerts 2011; Winne 2005; Zimmerman 1990) provides sorts of energy to persevere their efforts in achieving the set goal thus keeping students engaged in their academic activities. Self- efficacy ( $\beta = .774, p < .01$ ), hope ( $\beta = .176, p < .01$ ) and optimism ( $\beta = .237, p < .05$ ) is found to be significantly contribute in student’s engagement. Self-efficacy is the person’s beliefs on his capability to do certain activity. A student with high efficacy believe that he has the competency to meet all the academic requirements and challenges and can do successfully and this belief keeps him engaged in academic work. People’s beliefs in their capabilities to produce

desired effects by their own actions keep them engaged (Bandura, 1997). Hope is found to be second predictor in student’s engagement. Reason for this could be that hope to achieve certain goal motivates students and this motivation to achieve the goal (e.g. good academic performance) keep them engaged. Hope enables students to approach problems and challenges with a focus on success (Conti, 2000), thereby making students engaged. Optimistic students have positive expectations of their capability, efforts and success and these expectations keep them engaged in the academic activities.

**Table – 3: Summary of Multiple Regressions on Intrinsic Motivation as a Function of PsyCap**

	B	SE	$\beta$	t-value	p
Hope	.123	.059	.168	2.097	.038
Optimism	.579	.107	.646	5.404	.000
Resiliency	.181	.094	.226	1.918	.057
Self-efficacy	.363	.062	.506	5.867	.000
R Square	.543				
Adjusted R Square	.528				
Std. Error of Estimate	.293				
F – Value	37.88				
Significance	.000				
Collinearity Statistics (Min- Max)	Tolerance : 0.252 – 0.560; VIF: 1.78 – 3.90				
Durbin-Watson	1.57				

PsyCap is found to be influencing on student’s intrinsic motivation. Data presented in table 3 revealed that the overall regression was statistically significant,  $F(4, 127) = 31.88, p < .01$  and explained 54 percent of the variance in student’s intrinsic motivation ( $R^2 = .543$ ). The findings supported the second hypothesis of the study which stated that PsyCap positively influences intrinsic motivation of students. Beta values showed that, optimism ( $\beta = .646, p < .01$ ), Self- efficacy ( $\beta = .506, p < .01$ ) and hope ( $\beta = .168, p < .05$ ) significantly contribute in student’s intrinsic motivation. This finding is in consistent with the previous studies (e.g. Carver & Scheier, 2014; Dweck, 2010). Intrinsic motivations are held internally and are internal process, PsyCap influences this internal process. PsyCap through its positive qualities (hope, efficacy, optimism and resiliency) influences internal process (intrinsic motivation) of students. These qualities and resources probably provide energy in students which generates their intrinsic motivation. When students have faith on their capability and competence to accomplish certain academic activity, expect some positive outcomes and are hopeful about that outcome, they get internally motivated to engage into certain task. Thus PsyCap works as antecedent of student’s intrinsic motivation.

**Conclusion, Implications and Limitations**

The study examined the relationship between PsyCap and engagement of college students. Further, the study also

examined association of PsyCap with student’s intrinsic motivation. The study suggested seeming value of student’s PsyCap on both the outcome variables. Psychological resources in the form of self-efficacy, hope, optimism and resilience have important implications in facilitating their intrinsic motivation and keeping them academically engaged. PsyCap works as personal resources that regulates student’s behaviours and thoughts and keep them working for academic activities. Similarly, PsyCap provides energy and stimulates intrinsic motivation in students which in turn help students achieve academic goal.

The present research has both practical and theoretical implications. Practical implication of the study is that keeping in mind the significant role of student’s engagement and their motivation especially intrinsic motivation in their academic achievement and other desirable outcomes, parents and teachers should also give attention in developing PsyCap in students. The current study revealed that PsyCap positively and significantly influences on both student’s engagement and their intrinsic motivation. PsyCap is personal/ psychological resources that is malleable and can be developed (Luthans, Avey & Paterra, 2008), in students and harness its benefits which may improve their academic performance. The current finding has implication for students as well. They can enhance their PsyCap for their own current and future advantages if they want. Theoretically, the study will extend contribution and enrich

the literature of positive psychology in general and psychological capital in particular from the perspective of educational context.

While the findings of the study were encouraging, it should be taken into account with some limitations. First is that although the two-wave design used in the study alleviates the weakness of common method variance (Podsakoff et al. 2003), the self-report data on all variables of the study cannot entirely avoid the risk of common method variance. Second limitation is that the study is based on small sample and is conducted in one country which may affect the ability to generalize the study results on wider population. Further, the study is co-relational which only assert the association among variables but causality cannot be ascertained. Experimental design can be used to ascertain the causality between the variables of the study. The concept of motivation is difficult to measure (Locke, 1996) especially using survey research, other approaches such as observation, teacher's report data can be used to have better insights on the relationship between PsyCap and intrinsic motivation.

## References

- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology, 44*, 427–445.
- Australian Council for Educational Research. (2008). *Attracting, engaging and retaining: New conversations about learning. Australasian student engagement report.* Camberwell, Victoria: Author
- Arabzadeh, M., ShafyNadery, M., Salami, M.N., & Bayanati, M. (2013). The effects of teaching self-efficacy on students' cognitive engagement. *Basic Research Journal of Education Research and Review, 1*(6), 99-103
- Bandura, A. (1996). Social cognitive theory of humandevelopment. In T. Husen & T. N. Postlethwaite (Eds.), *International Encyclopedia of Education* (2nd ed.). Oxford: Pergamon Press.
- Bandura A (1997). *Self-efficacy: The exercise of control.* New York:Freeman.
- Blackwell, L., Trzesniewski, K., & Dweck, C. (2007). Implicit Theories of Intelligence Predict Achievement across an Adolescent Transition: A Longitudinal Study and an Intervention. *Child Development, 78* (1), 246-263.
- Boekaerts, M. (2011). What Have We Learned about the Social Context-Student Engagement Link? *Teachers College Record, 113* (2), 375-393
- Blumenfeld, P. C., & Pokay, P. (1990). Predicting achievement early and late in the semester: the role of motivation and use of learning strategies. *Journal of Educational Psychology, 82* (1), 41-50.
- Bresslere, L., Bressler, M., & Bressler, M. (2010). The role and relationship of hope, optimism and goal setting in achieving academic success: a study of students enrolled accounting courses. *Academy of Educational Leadership Journal, 14* (4), 37-52.
- Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences, 18* (6), 293–299.
- Conti, R. (2000). College goals: Do self-determined and carefully considered goals predict intrinsic motivation, academic performance, and adjustment during the first semester? *Social Psychology of Education, 4*, 189–211.
- Dev, P.C. (1997). Intrinsic motivation and academic achievement:What does their relationship imply for the classroom teacher? *Remedial and Special Education, 18*(1), 12-19.
- Dweck, C. S. (2010). Mindsets and equitable education. *Principal Leadership, 10* (5), 26-29.
- Greene BA, Miller RB, Crowson HM, Duke BL, Akey CL (2004). Relations among student perceptions of classroom structures, perceived ability, achievement goals, and cognitive engagement and achievement in high school language arts. *Contemporary Educational Psychology, 29*, 462–482.
- Halm, D. S. (2015). The Impact of Engagement on Student Learning. *International Journal of Education and Social Science, 2* (2), 22-34
- Hobfoll, S. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513–524.
- Hu, S. & Kuh, G. D. (2001). Being (Dis) Engaged in Educationally Purposeful Activities: The Influences of Student and Institutional Characteristics. Paper presented at the American Educational Research Association Annual Conference. Seattle, WA, 10–14 April.
- Karatepe, O. M., & Karadas, G. (2015). Do psychological capital and work engagement foster frontline employees' satisfaction? A study in the hotel industry. *International Journal of Contemporary Hospitality Management, 27*(6), 1254-1278
- Khan, A., Siraj, S., & Li, L.P. (2011). Role of positive psychological strengths and big five personality traits in coping mechanism of university students.

- International Conference on Humanities, Society and Culture, 20,210-215. Retrieved from <http://www.ipedr.com/vol20/41-ICHSC2011-M10027.pdf>
- Krause, K. & Coates, H. (2008). Students' engagement in first-year university. *Assessment and Evaluation in Higher Education*, 33(5), 493-505.
- Kluemper, D., Little, L., & DeGroot, T. (2009). State or trait: effects of state optimism on job-related outcomes. *Journal of Organizational Behavior*, 30 (2), 209-231.
- Kushman, J.W., Sieber, C., & Heariold-Kinney, P. (2000). This isn't the place for me: School dropout. In D. Capuzzi & D.R. Gross (Eds.), *Youth at risk: A prevention resource for counselors, teachers, and parents* (3rd ed., pp. 471-507). Alexandria, VA: American Counseling Association.
- Lam, S., & Jimerson, S. (2008, July). Exploring Student Engagement in School Internationally. *The International School Psychology Survey: Data from Austria, Romania, China, Portugal, and Canada*. In XXX ISPA Conference: *School Psychology in a Changing Society*, Utrecht.
- Linnebrink, E.A., & Pintrich, P.R. (2003). The role of self-efficacy beliefs in student engagement and learning in the classroom. *Reading & Writing Quarterly*, 19 (2), 191 - 137
- Luthans, F., Avey, J. B., & Patera, J. L. (2008). Experimental analysis of a web-based training intervention to develop positive psychological capital. *Academy of Management Learning and Education*, 7 (2), 209-221.
- Luthans, B. C., Luthans, K. W., & Jensen, S. M. (2012). The impact of business school students' psychological on academic performance. *Journal of Education for Business*, 87, 253-259.
- Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behavior. *Journal of Management*, 33, 321-349.
- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*. New York, NY: Oxford University Press.
- Malone, L. D. (2010). Individual differences and stress reactions as predictors of performance in pilot trainees (Master thesis). Available from ProQuest Dissertations and Theses database.
- Nelson D, Cooper CL. (Eds.) (2007). *Positive organizational behavior: Accentuating the positive at work*. Thousand Oaks, CA: Sage.
- Locke, E. A. (1996). Motivation through conscious goal setting. *Applied & Preventive Psychology*, 5, 117-124
- Martens, B. K., & Witt, J. C. (2004). Competence, persistence, and success: The positive psychology of behavioral skill instruction. *Psychology in the Schools*, 41, 19-34.
- Peterson C, Seligman ME. (2004). *Character strengths and virtues*. Oxford, UK: Oxford University Press.
- Podsakoff, P., MacKenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.
- Ryan, R. M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54-67
- Reddy, R., Rhodes, J.E., & Mulhall, P. (2003). The influence of teacher support on student adjustment in the middle school years: A latent growth curve study. *Development and Psychopathology*, 15, 119-38.
- Sanacore, J. (2008). Turning Reluctant Learners into Inspired Learners. *Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 82(1), 40-44.
- Sesen, B. & Tarhan, L. (2011). Active learning versus teacher-centered instruction for learning acids and bases. *Research in Science & Technological Education*, 29(2), 205-226.
- Siu, O.L., Bakker, A.B. & Jiang, X. J (2014). Psychological Capital Among University Students: Relationships with Study Engagement and Intrinsic Motivation. *Journal of Happiness Studies*, 15 (4), 979-994
- Snyder, C. R. (2002). Hope theory: Rainbows of the mind. *Psychological Inquiry*, 13, 249-275.
- Snyder, C.R. (1994). *The Psychology of Hope*. New York, NY: Free Press.
- Snyder, C.R., Irving, L., & Anderson, J. (1991). Hope and health: Measuring the will and the ways. In C.R. Snyder & D.R. Forsyth (Eds.), *Handbook of social and clinical psychology* (pp. 285-305). Elmsford, NY: Pergamon.
- Swiderski, S. M. (2011). Transforming principles into practice: Using cognitive active learning strategies in the high school classroom. *A Journal of Educational Strategies, Issues And Ideas*, 84(6), 239-243.

- Sweetman, D., & Luthans, F. (2010). The power of positive psychology: Psychological capital and work engagement. In Bakker, A.B., & Leiter, M.P. (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 54–68). New York: Psychology Press.
- Tjakraatmadja, J. H. & Febriansyah, H. (2007). The Influence Differences of National Admission Test (SPMB) Psychological Capital and Learning Environment toward the Academic Achievement Index (GPA) Of Engineering and Management ITB Students. *Proceeding of the 24th Pan Pacific Conference, New Zealand*
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14 (2), 121.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and a-motivation in education. *Educational and Psychological Measurement*, 52, 1037-1019.
- Vansteenkiste, M., Lens, W., & Deci, E. L. (2006). Intrinsic versus extrinsic goal contents in self-determination theory: Another look at the quality of academic motivation. *Educational Psychologist*, 41(1), 19-31
- Veiga, F. H. (2012). *Autoconceito e disrupção escolar dos jovens: Investigação diferencial* (Rev. ed.). Lisboa: Editora Fim de Século.
- Wigfield, A., Harold, R.D., Freedman-Doan, C., Eccles, J.S., Yoon, K.S., Arbreton, A.J.A. & Blumenfeld, P.C. (1997). Change in children's competence beliefs and subjective task values across the elementary school years: A 3-year study. *Journal of Educational Psychology*. 88 (3), 451-469
- Winne, P.H. (2005). Key Issues in Modeling and Applying Research on Self-regulated Learning. *Applied Psychology: An International Review*. 54 (2), 232-238
- Woolfolk-Hoy, A., & Hoy, W. K. (2009). *Instructional leadership: A research-based guide to learning in schools*. (3rd ed.) Boston: Pearson.
- Zhong, L., & Ren, H. (2009). The relationship between academic stress and psychological distress: The moderating effects of psychological capital. Paper presented at the 2009 International Conference on Management Science and Engineering. Retrieved from <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=05318122>
- Zimmerman, B.J. (1990). Self-regulated Learning and Academic Achievement: An Overview. *Educational Psychologist*, 25 (1), 3-17.