

# Factors Influencing Students' Motivation and Academic Performance at the Lower Secondary Schools in Cambodia

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## **Abstract**

This mixed-method study aimed to investigate the influence of gender, school location, and family structures on students' motivation and academic performance. A questionnaire and interviews guides were utilized to as research instruments to collect data. This study randomly selected 978 grade seven students at lower secondary education to complete the questionnaire and involve in semi-structured interviews. The results revealed that their academic performance varied by gender and school locations. Family structure did not have a significant effect on their academic performance despite its significant effect on academic amotivation. Moreover, the competence and autonomy support correlated positively and significantly with their academic performance despite the rare occurrence of supervision and guidance from their teachers. Policy implications to strengthen students' motivation and academic performance were also discussed.

*Keywords:* Motivation; Psychological support; Academic performance; Lower secondary school students; Cambodia

## **1. Introduction**

With the ambition of moving Cambodia from a lower-middle-income to an upper-middle-income country by 2030 and a developed country by 2050, the Royal Government of Cambodia (RGC) has strongly emphasized the importance of education sector as stated in the National Strategic Development Plan 2019-2023 (MoEYS, 2014; RGC, 2020). According to the Article four of the Education Law (2007), it highlights the transformation of the individuals to become the valuable assets for themselves, their families, their communities, the nation, and the world. The education sector aims to develop learners physically, mentally, and spiritually with the sets of knowledge and skills to enable them to compete in the local, regional, and global job market.

As a result, the Ministry of Education, Youth and Sport (MOEYS) has engaged various stakeholders in education sectors to take initiative to increase students' enrolment rates and reduce the dropouts in the past few years. However, it has been observed that completion rates at high school remains low compared to the enrollment rates. According to Hang-Chuon (2017a), the enrolment rates was at 97 percent, while the completion rates was 79.9 percent at the primary school level, 42.6 percent at lower secondary school level, and 20.2 percent at the upper secondary school respectively.

Furthermore, the results of national assessments of three subject areas\_ Mathematics, Khmer and Physics of grade eight revealed that 5, 092 students (54.5 percent female) achieved 55.6 percent for Khmer test, 44.0 percent for Mathematics test, and 52.8 percent for Physics test in the academic year 2013-2014. In addition, the national assessments of Khmer and Mathematics for grade six showed that 5939 students (54.6 percent female) achieved 52.1 percent for Khmer test and 48.3 percent for Mathematics test (MoEYS, 2017). These results showed that students' achievement were very low, especially for Mathematics, that was lower than the average scores. Thus, the current study aimed to investigate the influence of various factors that might have significantly influenced students' motivation and especially academic achievement at lower secondary schools in the context of Cambodia. There were specific variables related to students' academic motivation, academic achievement and its determinants included in this study, including academic amotivation, gender, family status, and their institutional construct of motivation regarding the basic psychological need support (relatedness support, competence support, and autonomy support) and their school. There were three research questions as follows.

1. Did gender and school location affect grade seven students' academic performance?
2. Did family structure affect grade seven students' academic amotivation and academic performance?
3. To what extent are school locations and the provision of social-contextual supports (relatedness support, competence support, and autonomy support) were associated with grade seven students' academic performance?

## **2. Review of literature**

Motivation has been defined in relation to the concentrative movements and direction. And it is analyzed both quantitatively and qualitatively. The quantitative notion of motivation is

regarded by the attention and effort of individuals in initiating and sustaining their activities, whereas its qualitative point of view focuses on the types or sources of motivation which can be intrinsically or extrinsically oriented (Dörnyei, 2001, p.7, King & McInerney, 2016, p.275). In addition, Deci and Ryan (2002) claims that another individuals' state of actions relies on the lack of intention to act or to act passively (p. 17).

According to self-determination theory, motivation consists of all the characteristics of activation and intention that includes dynamism, path, determination and equifinality (Ryan & Deci, 2000). Theoretically, students' motivation can be originated from the innate tendency to seek out novelty and challenges, spread and exercise their competence, discover, and learn. This kind of enthusiasm is called intrinsic motivation. However, through the principal motive, students originally participate in the activities because they want to attain some separable outcomes. It is called the extrinsic motivation (Ryan & Deci, 2000). Students are sometimes neither intrinsically motivated nor extrinsically motivated. It is what Ryan and Deci (2002) called amotivation. In addition, Ryan and Deci (2000) also claim that students' choices of action and behavior are encouraged, displayed, or appreciated by other people to whom they feel committed or interrelated. Therefore, the emotion of relatedness, the need to feel belongingness and the connection with others are centrally significant to inspire or initiate the inner composite of motivation.

In consistence with Ryan and Deci (2000), Seifert and Sutton (2009) point out that students' motivations or motivations to learn come from some sort of inner needs that influence their choices and activities. Furthermore, Deci and Ryan (2000, 2002) have developed a framework of self-determination theory (SDT) which is based on the notions of students' basic psychological needs and integrate perspective of organismic dialectal assumptions. According to Seifert and Sutton (2009), SDT proclaims the importance of intrinsic motivation (p. 126). In contrast, in reaching self-determined emotional form of motivation, students' contextual environment must fulfill individual learners' basic psychological needs (Seifert & Sutton, 2009). The notion of SDT possesses quality of natural growth of the students' personality, well-being, and learners' integration in the society through the provision of contextual social supports basic psychological need, including needs for competence, relatedness, and autonomy support. These need supports generate students' aspirations to learn within their own contexts (Ryan & Deci, 2000, 2002). Therefore, motivation given by teachers, parents, and their peers crucially contributes to increasing students' self-determination. Teachers are the key catalysts to support students to meet their basic needs without being interfered by school rules and

regulations or teachers' leadership (Seifert & Sutton, 2009). In addition, students' parents or guidance and peers are also the prominent catalysts in supporting and encouraging students to learn efficiently and effectively.

### 3. Methodology

This research employed a mixed-method approach (see Bryman, 2012, p.628, Creswell, 2005, p.510) to investigate whether students' academic motivation and academic performance were influenced by various factors, including gender, school locations, and family related factors. According to Bryman (2012), the contemporary social researchers are increasingly favorable a mixed method research to fill the research methodology gaps. A mixed-method approach helps reduce the drawbacks of biases of each research method and make much more robust data (Bryman, 2012).

The current study was conducted at lower secondary school level from five purposively selected high schools with twenty-seven different classes in Banteay Meanchey Province to the Northwest of Cambodia. The study randomly selected 978 grade seven students at lower secondary school level of the high schools, in Banteay Meanchey province. In Cambodia, a high school can be a school providing only an upper secondary school or both lower and upper secondary education. The student-teacher ratio varied from 39 to 55, with an average of 47.16. The selected students aged from 11 to 20 years old ( $M = 13.42$ ;  $SD = .98$ ). For quantitative part, there were 520 were females (53.17 percent) and 458 were males (46.83 percent) completing the survey questionnaire. For qualitative part, a semi-structured interview was conducted with 14 males and 15 females as well as seven female teachers and six male teachers.

To collect the data, the survey questionnaire was developed. It consisted of three parts including Academic Amotivation Inventory (AAI), Interpersonal Behaviour Questionnaire (IBQ), and grade seven students' personal background. The AAI was adapted from Legault, Green-Demers, and Pelletier (2006). It consisted of four main constructs, including value of the task, ability beliefs, task characteristics, and effort belief. There were 16 items of the four constructs. The internal consistency of the overall academic amotivation of 16 items accounted for,  $\alpha = 0.85$ . The IBQ was adapted from Rocchi, Pelletier, Cheung, Baxter, and Beaudry (2017). It consisted of level of basic psychological need support in terms of autonomy support, competent support, and relatedness support from teachers. Academic performance was measured with the average grade scores of the first semester result. The average grade scores were range from 0.00 to 50.00 and were classified into four scales ranging from 1=0.00-24.99

for poor performance level, 2 = 25.00-32.49 for satisfactory performance level, 3=32.50-39.99 for fairly good performance level, and 4= 40.00-50.00 for good performance level, in line with the Cambodian grading system. Students' academic performance average scores were used as dependent variables in the analytical models in the current study accordingly.

To collect the qualitative data, this study employed a semi-structured interview and developed two interview guides for teachers and students separately. The interview questions for teachers and students were developed in line with the questionnaire in order for an in-depth analysis through both teachers and students' perspective.

## 4. Results

### 4.1 Reliability test

A reliability test was conducted to determine the reliability of academic amotivation, relatedness support, competent support, and autonomy support. The result showed that the values of Cronbach's Alpha of all constructs accounted above. It was  $\alpha = 0.84$  for academic amotivation,  $\alpha = 0.80$  for relatedness support,  $\alpha=0.80$  for competent support, and  $\alpha = 0.71$  for autonomy support.

Table 1. The overall internal consistencies of the four constructs.

Constructs	Number of items	Cronbach's alpha ( $\alpha$ )
Academic Amotivation	16 items	0.84
Relatedness Support	4 items	0.80
Competence Support	4 items	0.80
Autonomy Support	3 items	0.71

### 4.2 Gender, school location, and the academic performance of the high school students

In order to investigate the influence of school locations and gender on students' academic performance, the Independent-Samples T-tests were computed. Table 2 showed there was significant difference in students' academic performance by school locations ( $t = 4.41, p = 0.000$ ). Inspection of the two group means indicated that the average academic performance for students in the urban area was ( $M = 2.39, SD = 0.85$ ), which was significantly higher than the average academic performance of students in the rural area ( $M = 2.14, SD = .90$ ). The difference between mean was 0.25 on a four-point scale.

Table 2. Influence of school locations on students' academic performance.

Variables	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Academic Performance			4.41	976	.000	.29
Urban	2.39	.86				
Rural	2.14	.90				

Note: 1. Academic performance 1 = 0.00-24.99, 2 = 25.00-32.49, 3= 32.50-39.99, 4 = 40.00-50.00; 2. School location: 0= urban, 1 = rural

Table 3 showed the variation in students' performance by gender. It was found that there was a statistically significant difference in students' performance by gender ( $t = -9.54, p = 0.000$ ). Female students were found to significantly outperform their male counterparts. Moreover, the results of the interview also indicated that not paying much attention to learning, the lack of hard-working, unpreparedness for the next lessons, and their peer academic resistance to their learning appeared to be the major barriers to male students' low academic performance.

Table 3. Gender and students' academic performance.

Variables	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Academic Performance			-9.54 <sup>a</sup>	973	0.000	0.61
Male	1.98	0.82				
Female	2.50 <sup>a</sup>	0.88				

Note: The *M*, *t* and *df* were adjusted because variances were not equal.

1. Academic performance 1 = 0.00-24.99, 2 = 25.00-32.49, 3= 32.50-39.99, 4 = 40.00-50.00; 2. Gender: 0= Male, 1 = Female

A male student reported that most male students were found to be careless during classes and usually spent free time doing nonacademic tasks with their classmates.

...they pay more attention to their learning than I do. I don't pay much attention to my learning during the class. During the break, the female mostly spend time playing with their friends or learning in the class, while I like going out to play football or something. At home, I rarely review my lessons. (H5S2M22)

In line with this finding, one of their teachers also reported that young female students tended to spend their free times such as staying inside the classrooms, playing simple games, or reviewing their lessons for the next classes. In contrast, male students tended to going outside the classroom and spending their time playing sports or even skipped the class. It could be

concluded that female students usually prepared well for the next classes, while the male students were mostly unprepared for classes.

### 4.3 Family structure of students, academic performance, and academic amotivation

In order to investigate the impact of family structure on students' academic performance and amotivation, the One-Way ANOVA tests were computed as shown in the table below. The result revealed that there was a non-significant main effect of family structure on students' academic performance ( $F(2, 972) = 0.93, p = 0.39 > 0.05$ ) as shown in Table 4. Although the findings from quantitative data revealed that family structure did not significantly affect students' academic performance, the result from qualitative data exhibited some contrastive perspectives. According to the result from the interview with teachers and students indicated that only female students maintained that their academic performance was not affected by having parents working abroad,

...they encourage me to try my best in my learning. They go to work in Thailand because they want to help me and they hope I have a good future. So, I must try my best". (H1S3F22)

In addition, there was a significant influence of family structure on students' academic amotivation as shown in Table 4,  $F(2, 972) = 4.63, p = 0.010$ . The result indicated that the students living with their parents and having parents working abroad differed significantly in the academic amotivation. On the other hand, there were no significant differences of academic Table 4. The results of the One-way ANOVA of family structure on students' academic performance.

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Academic Performance				0.93	0.39
Between groups	2	1.48	0.74		
Within groups	972	767.39	0.79		
Total	974	768.87			
Academic Amotivation				4.63	0.01
Between groups	2	1.94	0.97		
Within groups	972	203.88	0.21		
Total	974	205.83			

amotivation between students living with parents and those having dead or divorced parents ( $p = 0.44$ ). Likewise, there also no significant differences in terms of academic amotivation between students having parents working abroad and those having dead or divorced parents ( $p = 0.78$ ).

#### 4.4 School locations, provision of social-contextual support, and students' academic performance

To explain to what extent school locations and the provision of social-contextual support from teachers in terms of relatedness support, competent support, and autonomy support were correlated with students' academic performance, the Pearson Correlation was computed. Table 5 showed that there were significantly negative correlations between students' academic performance and their school locations ( $r = -0.140, p < 0.01$ ). It means that students from rural area tended to perform lower than students from the urban areas. On the other hand, relatedness support did not correlate significantly with students' academic performance ( $r = -0.002, p = 0.946$ ). This result reflected that the feeling of attachment to their teachers did not directly contribute to students' learning outcomes.

Table 5. Correlations between for school location, basic psychological need support variables, and academic performance.

Variables	1	2	3	4	5	<i>M</i>	<i>SD</i>
1. Academic performance	1					2.26	.89
2. School location	-.140**	1				1.54	.50
3. Relatedness support	-.002	-.054	1			3.25	.83
4. Competence support	.155**	-.050	.581**	1		3.81	.70
5. Autonomy support	.067*	-.096**	.586**	.569**	1	3.32	.71

\* $p < .05$ ; \*\*  $p < .01$

Note: 1. Academic performance 1= 0.00-24.99, 2=25.00-32.49, 3=32.50-39.99, 4=40.00-50.00; 2. School location: 0= urban, 1 = rural

However, the findings from qualitative data revealed that the female students were found to have the better relationship with their female teachers compared to the male students. Thus, better teacher-student interaction could possibly offer female students a better access to their female teachers, especially more opportunities to seek for assistance or advice and



guidance on their academic difficulties and challenges. One of the female teachers stated about her better relationship with female students as follows.

...I think I have a close relationship with the 7 grade students, especially female students. I can say it because I usually take my small kid to school everyday. When I arrive at school, they usually come to help me to take my kid and carry all my teaching materials...(H5T1F1)

Furthermore, there were a significant and positive correlation between students' academic performance and the basic psychological need supports of competence supports ( $r = 0.155, p < 0.01$ ), and autonomy supports ( $r = 0.067, p < 0.05$ ). The higher competence and autonomy supports, the better they contributed to the higher students' academic performance. Autonomy support significantly displayed its positive association with students' academic performance. Additionally, school locations were significantly and negatively correlated with the autonomy supports ( $r = -0.096, p < 0.01$ ). The locations were not correlated significantly with relatedness support and competence support. Students at the rural high schools seemed to receive less autonomy support from their teachers compared to students from the urban schools. In addition, the results showed that relatedness support was strongly and positively correlated with competence support ( $r = 0.581, p < 0.01$ ); and relatedness autonomy supports ( $r = 0.586, p < 0.01$ ). Lastly, there was a strongly positive correlation between competence supports and autonomy supports ( $r = 0.569, p < 0.01$ ). The effect sizes were from moderate to strong effect sizes (Caldwell, 2010).

## 5. Discussions and conclusions

Overall, the findings of the current study showed that gender was a crucial factor contributing to students' academic performance. Female students were found to outperformed their male counterparts. Similar to this research finding, numerous empirical studies revealed similar results that female students generally perform significantly better than male students do (see Farooq et al., 2011; King, 2015; Koestner & Zuckerman, 1994; Kusrka et al., 2013; Ratelle et al., 2007; Vansteenkiste et al., 2009; Vecchione et al., 2014; Vecchione et al., 2016). In contrast, in the case of mathematics, Chhinh (2003) empirically found that male grade four students scored significantly higher than did female students in Cambodia. As a result, the findings revealed that variation in gender led to disparities in students' academic performance, and reflected the facts that female students did not always performed better than their male counterparts. Moreover, empirical studies on the effects of academic amotivation revealed that

such result were also contributed by behavior problems (see Allison & Furstenburge, 2012; Legault et al., 2006; Murdock, 1999), emotional distress and isolation (see Murdock, 1999; Smeekens et al., 2012), poor health conditions (see Nathamonkolchai, 2011), and intention of dropping out (see Legault et al., 2006; No et al., 2016; Vallerand & Ratelle, 2002). Additionally, the chance of interactions between the teachers and their students seemed to be less, especially with male teachers. However, relationships with their teachers were found to contribute to students' higher academic performance (see Furrer, 2003; King, 2015; Lee, 2012), better school well-being (see King, 2015), and engagement (King, 2015), while the feeling of ignorance by their teachers resulted in poor academic performance (Furrer, 2003). Additionally, a higher proximity to teachers resulted in better students' academic achievement (Brok et al., 2004; Maulana et al., 2011; Wubbels et al., 2006 as cited in Maulana et al., 2013).

As a result, the current study found that students are learning within an educational context with little basic psychological need supports of relatedness supports and autonomy supports as their teachers emphasized primarily on support of competence and finishing their lessons rather than other forms of support. The supervision, guidance, and scaffolding were found to rarely occur within the classrooms.

## References

- Allison, P. D. & Furstenberg, F. F. J (1989). How Marital Dissolution Affects Children: Variation by Age and Sex. *Developmental Psychology*, 25(4), 540-549.
- Brophy, J. (2010). *Motivating Students to Learn* (3ed.). New York And London: Routledge, Taylor & Francis Group.
- Bryman, A. (2012). *Social Research Method* (4 ed.). Oxford: Oxford University Press.
- Caldwell, S. (2010). *STATISTICS: Unplugged* (3 ed.). San Marcos: WADSWORTH, CENAGE Learning.
- Cameron, J. (2001). Negative Effects of Rewards on Intrinsic Motivation- A Limited Phenomenon: Comment Deci, Koestner, and Ryan. *Review of Educational Research*, 71(1), 29-42.
- Cheon, S. H & Reeve, J. (2015). A classroom-based intervention to help teachers decrease students' amotivation. *Contemporary Educational Psychology*, 40, 99-111. <http://dx.doi.org/10.1016/j.cedpsych.2014.06.004>.

- Chhinh, S. (2003). Effect of Pupil Factor on Mathematics Achievement in Cambodian Urban Primary School. *Asia Pacific Education Review*, 4(2), 151-160.
- Creswell, J. W. (2005). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (2 ed.). New Jersey: PEARSON, Merrill Prentice Hall.
- Doménech-Betoret, F. & Gómez-Artiga, A. (2014). The relationship among students' and teachers' thinking styles, psychological needs and motivation. *Learning and Individual Differences*, 29, 89-97. <http://dx.doi.org/10.1016/j.lindif.2013.10.002>.
- Dörnyei, Z. (2001). Motivational Strategies in the Language Classroom. *Cambridge Language Teaching Library*. Cambridge: Cambridge University Press.
- Elliot, A., McGregor, H. A. & Thrash, T. M. (2002). The Need for Competence. In R. M. Ryan, & E. L. Deci (Eds.), *Handbook of Self-Determination Research* (pp. 361-387). Rochester: The University of Rochester Press.
- Fan, X. & Chen, M. J. (1999). Academic Achievement of Rural School Students: A multi-Year Comparison with Their Peers in Suburban and Urban Schools. *Journal of Research in Rural Education*, 15(1), 31-46.
- Farooq, M.S., Chaudhry, A. H., Shafiq, M. & Berhanu, G. (2011). Factors Affecting Students' Academic Performance: A Case Study of Secondary School Level. *Journal of Quality and Technology Management*, 7(2), 01-14.
- Field, A. (2009). *Discovering Statistics Using Spss* (3 ed.). London: SAGE Publications Ltd.
- Furrer, C. & Skinner, E. (2003). Sense of Relatedness as a Factor in Children's Academic Engagement and Performance. *Journal of Educational Psychology*, 95(1), 148-162. DOI: 10.1037/0022-0663.95.1.148.
- Garon-Carrier, G. et al. (2016). Intrinsic Motivation and Achievement in Mathematics in Elementary School: A Longitudinal Investigation of Their Association. *Child Development*, 87(1), 165-175. DOI: 10.1111/cdev.12458.
- Guay, F., Ratelle, C., Larose, S., Vallerand, R. J. & Vitaro, F. (2013). The number of autonomy-supportive relationships: Are more relationships better for motivation, perceived competence, and achievement? *Contemporary Educational Psychology*, 38, 375-382. <http://dx.doi.org/10.1016/j.cedpsych.2013.07.005>.
- Hang-Chuon, N. (2017a). Improving the quality of education for social development and economic growth in Cambodia. *Cambodia Education Review*, 1(1), 1-4.
- Hang-Chuon, N. (2017b). The Educational Reform Paths. *Cambodia Education Review*, 1(1), 5-32.

- Jang, H., Reeve, J. & Halusic, M. (2016). A New Autonomy-Supportive Way of Teaching That Increases Conceptual Learning: Teaching in Students' Preferred Ways. *THE JOURNAL OF EXPERIMENTAL EDUCATION*, 84(4), 686-701. DOI: 10.1080/00220973.2015.1083522.
- Jeynes, W. H. (2002). Examining the Effects of Parental Absence on the Academic Achievement of Adolescents: The Challenge of Controlling for Family Income. *Journal of Family and Economic Issues*, 23(2), 189-210.
- Kazdin, A. E. (2000). *Encyclopedia of Psychology* (vol. 5). OXFORD: OXFORD UNIVERSITY PRESS.
- King, R. B. (2015). Sense of relatedness boosts engagement, achievement, and well-being: A latent growth model study. *Contemporary Educational Psychology*, 42, 26-38. <http://dx.doi.org/10.1016/j.cedpsych.2015.04.002>.
- King, R. B. & McInerney, D. M. (2016). Culture and Motivation: The Road Travelled and the Way Ahead. In K. R. Wentzel, & D. B. Miele (Eds.), *Handbook of Motivation at School* (2 ed., pp. 275-299). NEW YORK AND LONDON: Routledge: Taylor & Francis Group.
- Koestner, R. & Losier, G. F. (2002). Distinguishing Three Ways of Being Internally Motivated: A Closer Look at Introjected, Identification, and Intrinsic Motivation. In R. M. Ryan, & E. L. Deci (Eds.), *Handbook of Self-Determination Research* (pp. 101-121). Rochester: The University of Rochester Press.
- Koestner, R. & Zuckerman, M. (1994). Causality orientations, Failure, and Achievement, *Journal of Personality*, 62(3), 321-346.
- Koyore, T. (2016). The Influence of School Physical Environment on Secondary School Students' Academic Performance in Bayelsa State. *Asian Journal of Educational Research*, 4(2), 1-15.
- Kusurkar R. A., Ten Cate Th. J., Vos C. M. P., Westers P. & Croiset G. (2013). How motivation affects academic performance: a structural equation modelling analysis. *Advances in Health Sciences Education*, 18, 57-69. DOI:10.1007/s10459-012-9354-3.
- Lee, J. S. (2012). The effects of the teacher-student relationship and academic press on student engagement and academic performance. *International Journal of Educational Research*, 53, 330-340. <http://dx.doi.org/10.1016/j.ijer.2012.04.006>.
- Legault, L., Green-Demers, I. & Pelletier, L. (2006). Why Do High School Students Lack of Motivation in the Classroom? Toward an Understanding of Academic Amotivation and the Role of Social Support. *Journal of Educational Psychology*, 98(3), 567-582, DOI:10.1037/0022-0663.98.3.567.

- Lens, W. (1994). *The International Encyclopedia of Education* (2 ed., Vol. 7). (T. Husen, & T. N. Postlethwaite, Eds.) OXFORD: PERGAMON.
- Luckner, A. E. & Pianta, R. C. (2011). Teacher-student interactions in the fifth grade classroom: Relation with children's peer behavior. *Journal of Applied Developmental Psychology*, 32, 257-266. doi: 10.1016/j.appdev.2011.02.101.
- Maulana, R., Opdenakker, M. C. & Bosker, R. (2013). Teacher-student interpersonal relationships do change and affect academic motivation: A multilevel growth curve modelling. *British Journal of Educational Psychology*, 84, 459-482. DOI: 10.1111/bjep.12031.
- McEown, M. S., Noels, K. A. & Saumure. K. D. (2014). Students' self-determined and integrative orientations and teachers' motivational support in a Japanese as foreign language context. *System*, 45, 227-241. <http://dx.doi.org/10.1016/j.system.2014.06.001>.
- Misbah, Z., Gulikers, J., Maulana, R., & Mulder, M. (2015). Teacher interpersonal behaviour and student motivation in competence-based vocational education: Evidence from Indonesia. *Teaching and Teacher Education*, 50, 79–89. <https://doi.org/10.1016/j.tate.2015.04.007>
- MoEYS (2007, December). Education Law.
- MoEYS (2014, March). Education Strategic Plan 2014-2018
- MoEYS, (2016, March). Education Congress: The Education, Youth and Sport Performance in the Academic Year 2014-2015 and Goals for Academic Year 2015-2016.
- MoEYS (2017, March). Education Congress: The Education, Youth and Sport Performance in the Academic Year 2015-2016 and Goals for Academic Year 2016-2017.
- Nathanmongkolchai, S., Munsawaengsub, C. & Nathanmongkolchai, C. (2011). Comparison of the Health Status of Children Aged Between 6 and 12 Years Reared by Grandparents and Parents. *Asia-Pacific Journal of Public Health*, 23(5), 766-773. DOI: 10.1177/1010539511424535.
- Ne, Y. & Lau, S. (2009). Complementary roles of care and behavioral control in the classroom management. The self-determination perspective. *Contemporary Educational Psychology*, 34, 185-194. DOI: 10.1016/j.cedpsych.2009.03.001.
- No, F., Taniguchi, K. & Hirakawa, Y. (2016). School dropout at basic education level in rural Cambodia: Identifying its causes through longitudinal survival analysis. *International Journal of Educational Development*, 49, 215-224. <http://dx.doi.org/10.1016/j.ijedudev.2016.03.001>.

- Oga-Baldwin, W. L. Q., Nakata, Y., Parker, P. & Ryan, R. M. (2017). Motivating young language learners: A longitudinal model of self-determined motivation in elementary school of foreign language classes. *Contemporary Educational Psychology*, 49, 140-150. <http://dx.doi.org/10.1016/j.cedpsych.2017.01.010>.
- PoEYS, BMC (2016): 2015-2016 Academic Year Report
- Ratelle, C. F., Guay, F., Vallerand, R. J., Larose, S. & Senécal, C. (2007). Autonomous, Controlled, and Amotivated Types of Motivation: A Person-Oriented Analysis. *Journal of Educational Psychology*, 99(4), 734-746. DOI:10.1037/0022-0663.99.4.734.
- Reeve, J. (2002). Self-Determination Theory Applied to Educational Settings. In R. M. Ryan, & E. L. Deci (Eds.), *Handbook of Self-Determination Research* (pp. 183-203). Rochester: The University of Rochester Press.
- Reeve, J., Ryan, R., Deci, E. & Jang, H. (2008). Understanding and Promoting Autonomous Self-Regulation: A Self-Determination Theory Perspective. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and Self-Regulated Learning: Theory, Research, and Applications* (pp. 223-244). New York & London: Routledge: Taylor & Francis Group.
- Rocchi, M., Pelletier, L., Cheung, S., Baxter, D., & Beaudry, S. (2017). Assessing need-supportive and need-thwarting interpersonal behaviours: The Interpersonal Behaviours Questionnaire (IBQ). *Personality and Individual Differences*, 104, 423-433. <http://dx.doi.org/10.1016/j.paid.2016.08.034>.
- Ryan, R. M. & Deci, E. L. (2002). Overview of Self-Determination Theory: An Organismic Dialectical Perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of Self-Determination Research* (pp. 3-33). Rochester: The University of Rochester Press.
- Salkind, J. N. (2008). *The Encyclopedia of Educational Psychology*. Thousand Oaks, California: SAGE Publication, Inc.
- Seifert, K. & Sutton, R. (2011). *Educational Psychology* (2ed.). Zurich: Jacobs Foundation.
- Shumow, L., Lyutykh, L. & Schmidt, J. A. (2011). Predictors and Outcomes of Parental Involvement with High School Students in Science. *The School Community Journal*, 21(2), 81-98.
- Skinner, E. A., Wellborn, J. G., & Connell, J. P. (1990). What It takes to Do Well in School and Whether I've Got It: A Process Model of Perceived Control and Children's Engagement and Achievement in School. *Journal of Educational Psychology*, 82(1), 22-32.

- Smeeckens, C., Stroebe, M. S. & Abakoumkin, G. (2012). The Impact of migratory separation from parents on the health of adolescents in the Philippines. *Social Science & Medicine*, 75, 2250-2257.
- Soenens, B. & Vansteenkiste, M. (2005). Antecedents and Outcomes of Self-Determination in 3 Life Domains: The Role of Parents' and Teachers' Autonomy Support. *Journal of Youth and Adolescence*, 34(6), 589-604. DOI:10.1007/s10964-005-8948-y
- Song, S. (2014). *Regional Differences in Quality of Primary Education in Cambodia: Focusing on Instructional Process in Urban and Rural Schools*. Unpublished Dissertation for the Degree of Ph. D in Education, Hiroshima: Hiroshima University.
- Stroet, K., Opdenakker, M. C., & Minnaert, A. (2015). What motivates early adolescents for school? A longitudinal analysis of associations between observed teaching and motivation. *Contemporary Educational Psychology*, 42, 129-140. <http://dx.doi.org/10.1016/j.cedpsych.2015.06.002>.
- Tian, L., Han, M. & Huebner, E. S. (2014). Preliminary development of the Adolescent Students' Basic Psychological Needs at School Scale. *Journal of Adolescence*, 37, 257-267. <http://dx.doi.org/j.adolescence.2014.01.005>.
- Vallerand, R. J., & Ratelle, C. F. (2002). Intrinsic and Extrinsic Motivation: A Hierarchical Model. In R. M. Ryan, & E. L. Deci (Eds.), *Handbook of Self-Determination Research* (pp. 37-63). Rochester: The University of Rochester Press.
- Vansteenkiste, M., Sierens, E., Goosens, L., Soenens, B., Dochy, F., Mouratidis, A., Aelterman, N., Harens, L., & Beyers, W. (2012). Identifying configurations of teacher autonomy support and structure: Association with self-regulated learning, motivation, and problem behavior. *Learning and Instruction*, 22, 431-439.
- Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K. & Lens, W. (2009). Motivational Profiles from Self-Determination Perspective: The Quality of Motivation Matters. *Journal of Educational Psychology*, 101(3), 671-688. DOI: 10.1037/a0015083.
- Vecchione, M., Alessandri, G. & Marsincano, G. (2014), Academic motivation predicts educational attainment: Does gender make a difference? *Learning and Individual Differences*, 32, 124-131. <http://dx.doi.org/10.1016/j.lindif.2014.01.003>.
- Wigfield, A., Tonks, S. M., & Klauda, S. L. (2016). Expectancy-value theory. In K. R. Wentzel, & D. B. Miele (Eds.), *Handbook of Motivation at School* (2 ed., pp. 55-74). New York And London: Routledge: Taylor & Francis Group.

- 
- Yu, C., Li, X., Wang, S. & Zhang W. (2016). Teacher autonomy support reduce adolescent anxiety and depression: An 18-month longitudinal study. *Journal of Adolescence*, 49, 115-123. <http://dx.doi.org/10.1016/j.adolescence.2016.03.001>.
- Zhu, Y. & Leung F. K. S. (2011). Motivation and Achievement: Is There an East Asian Model? *International Journal of Science and Mathematics Education*, 9, 1189-1212.