# School motivation inventory: development of a short scale in the portuguese educational context

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## ABSTRACT

The present study focuses on the development of a short scale of The Facilitating Conditions Questionnaire adapted to the Portuguese secondary school. Based on the McInerney's School Motivation Inventory (McInnerney et al., 1997), a short form of the instrument with 31 items assesses the following motivation facilitating conditions: valuing school (5 items), affect to school (3 items), influence of teachers (5), positive (6 items) and negative (5 items) parental influence and negative (4 items) and positive (4 items) peer influence (4 items). The sample included 605 students from the secondary school, aged between 14 and 18 years (M = 15.76, SD = 1.14), mostly female (58.7%), attending to different academic courses. Overall, the short version of instrument exhibited good psychometric qualities: good internal consistency (Cronbach's alpha = .85), the extraction of 7 factors through exploratory factor analysis that explain 55.1% of the total variance and the confirmation of this structure by confirmatory factor analysis with good fit indices ($\chi^2$ / 384 = 1.79, CFI = .94, TLI = .93 and RMSEA = .05). The results indicated adequate correlations between the dimensions, with the strongest association between the positive parental influence and negative peer influence (r = -.53) and the lowest between positive peer influence and negative parental influence (r = -.19). The scale also revealed adequate construct validity with the General Achievement Goals Orientation Scale (McInnerney et al., 1997; adapted to the Portuguese context by Gomes et al., 2018), presenting the strongest association between the positive parental influence's dimension and global motivation (r = .66) and general mastery (r =.66) and the lowest associations between the general social dimension and the valuing school (r =.15) and positive peer influence (r =.16) dimensions. These results support the psychometric qualities of the instrument, not excluding, however, the need to replicate this study in larger samples and in other contexts.

**Keywords**: school motivation; adolescence; instrumental study.

## 1. INTRODUCTION

Motivation is of particular interest to educational psychologists because of the crucial role it plays in student learning. Nowadays, research has provided evidence of the effects of motivation on how students learn and behave towards subject matter: Motivation directs behaviour toward particular goals, lead to increased effort and energy, increase initiation of, and persistence in, activities, enhance cognitive processing and lead to improved performance. Thus, motivation, will likely have an important impact on students' behaviour: whether they choose advanced courses or drop out of school, whether they work and persist when facing challenges or procrastinate or whether they set realistic goals or not (Anderman & Midgley, 1997).

Nonetheless, research has found that there is a decline in students' motivation and performance as they move forward in their academic path (Eccles & Midgley, 1989). Research evidenced that the characteristics of the learning environment where students are integrated (Midgley, 1993), when transitioning to different academic cycles might decline, maintain or improve students' motivation and performance. Therefore, more importance has been given to the interaction of both personal and environmental conditions that might facilitate or inhibit students' motivation, as well as, more investment has been raised, particularly in schools, to address the needs of students with different academic, emotional, social and motivational profiles.

In fact, in search for better ways to motivate students, researchers have been focused on the measurement of students' motivation. In the literature numerous measures of motivation have been developed based on the different underlying theoretical backgrounds. However, most of the measurement was dedicated to the examination of internal-referent motivational constructs: e.g., the case of achievement goals (Elliot, 2005), self-efficacy (Bandura, 1997), self-concept (Marsh & Craven 2008), emotions in school (Pekrun et al., 2002) or value for schooling (Bernardo, 2003), among others. Nonetheless, the effects of external-referent motivational constructs are also of significant importance to students' motivation, either enabling or hindering it (Benner & Mistry, 2007). As examples of external sources of school motivation, the case of positive parental influence, through beliefs or parenting styles, the quality of interaction with peers (Wentzel et al., 2004) or the influence of teachers, through positive feedback and relationships (Reeve, 2006) are particular evident (Ganotice et al., 2013).

Therefore, to better capture the school motivation phenomenon and to understand why students may or may not be motivated in school, it is important to explore and analysed the internally and externally referenced factors that modulate students school motivation and, for that, develop valid measurement. However, there are few measures in the field that assess the internal and external factors that condition the school motivation. In this line, the Facilitating Conditions Questionnaire (FCQ) developed by McInerney et al., (1997) it is one example of a measure that evaluates how students perceive the diverse external forces that may shape their motivation in schools together with some internally referenced factors. Nonetheless, this measure has not been adapted to the Portuguese academic context.

## 2. THE PRESENT STUDY

Addressing limitations in the field of school motivation measurement, the present study proposes and assesses a short-form version of the Facilitating Conditions Questionnaire (FCQ, McInerney et al., 1997) among Portuguese adolescents. In particular, it will be explored its psychometric qualities, specifically, through exploratory factor analysis (EFA), confirmatory factor analysis (CFA), internal consistency and discriminant validity with another measure of motivation The General Achievement Goals Orientation Scale (GAGOS; McInerney et al., 1997). The present study is part of a broader project with the objective of developing a

School Motivation Inventory based on an ecological perspective including both student-centered motivational constructs and factors that can influence positively or negatively motivation

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## 3. METHOD

### *3.1. PARTICIPANTS*

A total of 605 students aged between 14 and 18 years (Mage= 15.7; SD= 1.14) were included in a cross-sectional study in the Portuguese academic context. Female students accounted for 58.7% of the sample. The initial sample was randomly divided into two subgroups: subgroup 1 was used to perform EFA and consisted of 313 students (59.0% girls) with a mean age of 15.7 years (SD= 1.11); subgroup 2 was used to perform CFA and consisted of 292 adolescents (58.2% girls) with a mean age of 15.8 years (SD= 1.17). No statistically significant differences were found by gender, $\chi^2$= .04, $p$= .85, or by age, $t(595)$= 2.21, $p$= .138.

### *3.2. MEASURES*

- *The Facilitating Conditions Questionnaire* (FCQ; McInerney et al., 1997) - is a self-report measure with 55 items and 5-point Likert scale (1= *strongly disagree* and 5= *strongly agree*) that assesses the conditions that facilitate school motivation through 11 subscales: University intention: degree to which important others think that one should go to university or not *("I intend to go to college or university"*); School valuing: the degree to which one values school for future outcomes ("*Education is important to me to get a job"*); Affect to school: degree to which one likes school ("*I like studying*"); Parent support: the degree to which one perceives their parents to be supportive of their academic tasks ("*My mother helps me with my school work*"); Negative parent influence: degree to which parents exert a negative impact on one's schooling ("*My father doesn't pay any attention when I bring home report cards*"); Leave school: the degree to which significant others such as parents think that one should leave school ("*My mother doesn't mind if I leave school when I want to*"); Teacher support: the degree to which one perceives their teachers to be supportive of their studies ("*Teachers are positive to me at school*"); Pride from others: degree to which significant others feel proud of one's schoolwork ("*It's important for my father to be proud of my school work*"); Peer help: the degree to which one receives help from their friends in their school work ("*Some of my friends help me with my school work*"); Positive peer influence: degree to which one's friends are engaged in academics ("*Most students in my class will go on to college or university*"); Negative peer influence: degree to which one's friends are disengaged from school ("*Some of my friends tell me I should leave school when I can*"). In this study, the measure presented very good internal consistency ($\alpha$= 0.90).
- *General Achievement Goals Orientation Scale* (GAGOS; McInerney et al., 1997) – is a self-report measure with 26 items and 5-points Likert type answering scale (1= *strongly disagree* and 5= *strongly agree*) that comprises 5 dimensions: General mastery - assesses involvement in tasks and effort; 5 items; General performance - assesses competitiveness, power, competition and extrinsic motivation; 8 items; General social - assesses affiliation and social concern; 5 items; Global motivation - assesses the amount of perceived motivation of a student rather than its quality; 5 items; Valuing motivation - assesses student's perception about the importance of being motivated at school; 3 items. The GAGOS was adapted to the Portuguese context by Gomes et al. (2018) with good psychometric properties: $\chi^2$ / gl=1.780, CFI=.951and RMSEA=.048 and good values of internal consistency between .72 and .86. In this study, the measure presented very good internal consistency ($\alpha$= 0.84).

### *3.3. PROCEDURE*

Schools with secondary school cycle which agreed to collaborate, selected classes to participate in this study according to their availability. The participants filled out the questionnaires individually in collective administrations in their classrooms, during school time. Prior to the administration, students were informed of study's purpose and confidentiality and anonymity were guaranteed. The participants' minors included in the study had authorization by informed consent of their parents or legal guardians. Students' participation was voluntary and no economic compensation was given.

### *3.4. DATA ANALYSES*

The factor structure of the FCQ was explored using EFA in the subsample 1. In the subsample 2, the CFA with ML estimator was conducted to confirm the adjustment of the factorial model previously obtained in EFA. The following goodness-of-fit indices were used: Chi-square ($\chi^2$), Confirmatory Factor Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA) (and 90% Confidence Interval), and Standardized Root Mean Square Residual (SRMR). Relative $\chi^2$ ($\chi^2$/df) should be significant and ≤ 2, RMSEA and SRMR should be 0.08 or less for a good model fit and CFI and TLI should be 0.95 or more (Hu, & Bentler, 1999). The internal consistency reliability was calculated (Cronbach's α and split-half coefficient) on the factorial model. Finally, discriminant validity was calculated between the FCQ and GAGOS subscales. The statistical software used were SPSS Statistics 25.0 and AMOS 25.0.

## 4. RESULTS

### *4.1. EXPLORATORY FACTORIAL ANALYSIS*

The KMO index (0.82) and Bartlett's test of sphericity ($\chi^2(465)$ = 5380.09, $p$ <0.001) demonstrated sample's suitability for conducting EFA. Consequently, an EFA with ML and direct oblimin rotation was conducted ($n_{subgroup\ 1}$= 313). Based on the inspection of the scree plot and on the Kaiser's cut-off criterion, seven factors (with eigenvalues above 1.0) were obtained from the random dataset. Thus, seven factors identified as negative peers influence, positive peers influence, positive parental influence, negative parental influence, affect to school, influence of teachers and valuing school, were successively extracted from the FCQ-SF, explaining 55.1% of the total variance. Table 1 presented all items of the FCQ-SF and their factor loadings and communalities. The criteria for adequate factor loadings were above .30 and communalities above .40.

### *4.2. CONFIRMATORY FACTORIAL ANALYSIS*

A CFA using ML estimation ($n_{subgroup\ 2}$= 292) was performed to evaluate the models fit to the data. The seven-factor model previously identified by the EFA was examined and the fit indices were the following: $\chi^2$= 687.74, $df$= 384, $\chi^2/df$= 1.79, CFI= .94, TLI= .93, RMSEA= .05 and SRMR= 0.072 (cf. Fig 1). The results indicated that the seven-factor model of the FCQ-SF provided a good fit to the data, with all fit indices meeting the minimum acceptable fit criterion. Standardized factor loadings of all items were above 0.60, with exception of item 30, 56, 57 (above .50), 24, 58, 59 (above .40).

Table 1. *Rotated components matrix, communalities ($h^2$), eigenvalue, and explained variance.*

| | Factor I Peers negative influence | Factor II Positive parental influence | Factor III Positive peer influence | Factor VI Positive parental influence | Factor V Negative parental influence | Factor VI Affect to school & Influence of teachers | Factor VII Valuing school | $h^2$ |
|---|---|---|---|---|---|---|---|---|
| Item 26 | -.745 | .015 | -.026 | -.016 | -.143 | .130 | .190 | .83 |
| Item 14 | -.719 | .072 | .016 | -.009 | -.064 | .046 | .123 | .63 |
| Item 4 | -.675 | .012 | -.018 | .045 | -.045 | -.008 | .086 | .54 |
| Item 25 | -.597 | .107 | -.017 | -.053 | -.297 | .066 | .195 | .77 |
| Item 21 | -.590 | -.104 | .080 | .008 | -.100 | .002 | .107 | .52 |
| Item 23 | -.500 | -.020 | -.019 | .056 | -.072 | -.084 | -.120 | .30 |
| Item 24 | -.432 | -.043 | -.009 | .051 | -.017 | .040 | -.131 | .20 |
| Item 58 | .099 | 1.001 | -.010 | .012 | -.067 | -.075 | -.065 | .99 |
| Item 57 | -.107 | .601 | -.009 | .161 | .078 | .034 | -.061 | .50 |
| Item 42 | .048 | -.066 | .910 | .014 | -.041 | .026 | .031 | .83 |
| Item 40 | .027 | -.078 | .782 | .022 | -.031 | .021 | -.154 | .68 |
| Item 56 | -.077 | .199 | .393 | .013 | .082 | .063 | .003 | .27 |
| Item 47 | -.059 | -.090 | -.049 | .866 | .089 | .075 | -.013 | .72 |
| Item 46 | .058 | .059 | -.027 | .809 | -.094 | .048 | -.060 | .72 |
| Item 44 | -.134 | .080 | .047 | .755 | .009 | -.061 | .074 | .67 |
| Item 43 | -.070 | .206 | .141 | .629 | -.032 | -.069 | .084 | .61 |
| Item 48 | .017 | .036 | .327 | .354 | .039 | -.007 | -.101 | .36 |
| Item 32 | -.056 | .016 | -.005 | -.015 | -.969 | .009 | -.020 | .99 |
| Item 31 | -.282 | .019 | .008 | -.017 | -.666 | .058 | .002 | .77 |

| | Factor I Peers negative influence | Factor II Positive parental influence | Factor III Positive peer influence | Factor VI Positive parental influence | Factor V Negative parental influence | Factor VI Affect to school & Influence of teachers | Factor VII Valuing school | $h^2$ |
|---|---|---|---|---|---|---|---|---|
| Item 9 | .008 | -.047 | .006 | -.001 | .017 | .659 | -.019 | .42 |
| Item 7 | -.009 | -.049 | -.027 | .039 | -.056 | .655 | -.160 | .50 |
| Item 28 | -.122 | .027 | .098 | -.032 | .037 | .577 | .141 | .37 |
| Item 38 | -.138 | .088 | .059 | -.093 | -.050 | .570 | -.078 | .43 |
| Item 30 | .077 | .016 | .050 | .102 | -.049 | .551 | -.093 | .43 |
| Item 45 | .070 | .035 | .099 | .297 | -.026 | .436 | .113 | .40 |
| Item 66 | .124 | .050 | -.027 | .155 | -.044 | .344 | -.272 | .34 |
| Item 59 | .184 | .292 | .094 | .111 | -.064 | .303 | .079 | .35 |
| Item 60 | .078 | .208 | -.068 | -.087 | .126 | .296 | -.206 | .30 |
| Item 39 | -.045 | .059 | .199 | -.042 | .055 | .056 | -.765 | .73 |
| Item 41 | .051 | -.006 | .268 | -.029 | .018 | .168 | -.594 | .61 |
| Item 19 | .085 | .159 | -.082 | .030 | .090 | .029 | -.426 | .31 |
| Eigenvalue | 6.53 | 5.92 | 2.42 | 1.74 | 1.38 | 1.24 | 1.06 | |
| % explained variance | 13.40 | 9.83 | 13.60 | 7.82 | 3.88 | 3.75 | 2.78 | |

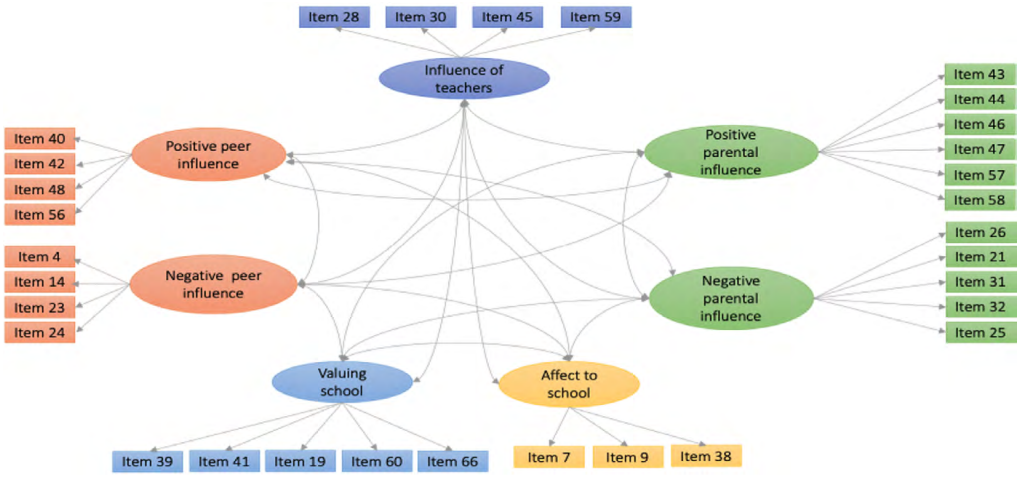


Fig. 1. The seven-factor CFA model of the FCQ-SF for the validation set (n= 292).

### *4.3. RELIABILITY*

The Cronbach's alpha reliability was calculated. FCQ-SF total scale ( = .85) presented high internal consistency values. Half-split coefficient of the FCQ-SF scale were .71. Globally, the different indicators reflected the good internal consistency of FCQ-SF.

### *4.4. CORRELATIONS BETWEEN DIMENSIONS*

The association between of FCQ-SF dimensions was estimated by Pearson correlation coefficients, and, in general, significant and moderate correlations were found for all variables (cf. Table 2). As expected, the negative parental and peer influence dimensions correlated negatively with the other dimensions. The strongest association was found for the negative peer influence and positive parental influence ($r$=-.53, $p$ <.001), whereas the weakest was found for positive peer influence and negative parental influence ($r$=-.19, $p$ <.001).

Table 2. Pearson's correlations between FCQ-SF dimensions.

| The Facilitating Conditions Questionnaire - Sf | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1) Valuing school | 1 | | | | | | |
| 2) Affect to school | .33** | 1 | | | | | |
| 3) Influence of teachers | .47** | .28** | 1 | | | | |
| 4) Positive parental influence | .46** | .40** | .46** | 1 | | | |
| 5) Negative parental influence | -.44** | -.35** | -.38** | -.42** | 1 | | |
| 6) Positive peer influence | .36** | .20** | .35** | .47** | -.19** | 1 | |
| 7) Negative peer influence | -.43** | -.39** | -.37** | -.53** | .38** | -.39** | 1 |

### *4.5. DISCRIMINANT VALIDITY*

In the study of criterion-related validity, discriminant validity of the FCQ-SF was estimated by Pearson correlation coefficients, with General Achievement Goals Orientation Scale (GAGOS). Significant correlations were found for all variables: moderate to strong magnitude correlations between FCQ-SF subscale and GAGOS subscales (cf. Table 3). Moreover, the negative parental and peers influence dimensions correlated negatively with the other dimensions. The strongest association was found for the positive peer influence and global motivation and general mastery ($r$ =.66).

Table 3. Pearson's correlations between FCQ-SF and GAGOS.

| | General Achievement Goals Orientation Scale | | | | | |
|---|---|---|---|---|---|---|
| **The Facilitating Conditions Questionnaire - SF** | | **Valuing motivation** | **Global motivation** | **General mastery** | **General Performance** | **General social** |
| | **1) Valuing school** | .39** | .35** | .46** | .48** | **.15**** |
| | **2) Affect to school** | .18** | .18** | .28** | .42** | .21** |
| | **3) Influence of teachers** | .20** | .25** | .42** | .42** | .16** |
| | **4) Positive parental influence** | .18** | **.49**** | .37** | **.60**** | .20** |
| | **5) Negative parental influence** | -.16** | -.18** | -.37** | -.44** | -.24** |
| | **6) Positive peer influence** | .32** | **.66**** | **.66**** | .18** | .16** |
| | **7) Negative peer influence** | -.28** | -.31** | .41** | -.53** | -.36** |

## 4. DISCUSSION

The aim of this study was to determine the psychometric properties of a short-form of the Facilitating Conditions Questionnaire (FCQ-SF).

The factor analyses (EFA and CFA) indicated a reduction to a 7-factors structure of the FCQ-SF – representing, positive and negative parental influence, positive and negative peer influence, influence of teachers, affect to school and valuing school. Although it was possible to identify the underlying factors in EFA, there was not a clear correspondence of items and the theoretical dimensions: while some of them were clearly defined (valuing school, peers negative influence), two were condensed in one factor (affect to school and influence of teachers), which can be explained because both are school-related and the teachers can influence greatly students' affect to school, while positive parental influence was distributed by two factors (2 and 4), indicating that the correspondent items can reflect different aspects of the same construct. Nonetheless, FCQ-SF presented good explained variance in EFA procedure (55%), and excellent global and relative fit indexes in CFA.

Through the exploration of items indices, although not at very problematic level, the items 24,58 and 59 might need possible refinement in further exploration. Although these items presented lower psychometric proprieties (e.g., communalities, factor loadings), the authors discouraged their exclusion until further studies confirm their psychometric validity.

Regarding internal consistency reliability, it was found that the total scale scores of FCQ-SF demonstrated good reliability (**α**s above 0.85; Half-split coefficient of 0.71).

Furthermore, significant moderate correlations were found between the seven dimensions of FCQ-SF (-.19 > *r* <-.53). The moderate correlations indicate the association between the dimensions, as expected, as both share the assessment of the same construct. Negative correlations were found between the negative spheres of influence (parental and peers) and other dimensions that literature has indicated that facilitate student's motivation (e.g., valuing school, affect to school, teachers influence). In particular, the strongest association was between negative peer influence and positive parental influence (*r* =-.53), demonstrating that the higher the negative influence of peers and friends on student's school motivation, the lower the positive effect of parents and family. This finding supports the important role of peers and friends on motivating colleagues to school learning and achievements.

Finally, the discriminant validity of FCQ-SF was explored, correlating FCQ-SF with other measure of motivation, in the case, General Achievement Goals Orientation Scale (GAGOS). The results evidenced moderate to strong correlations between the subscales of FCQ-SF and GAGOS, confirming the partial association of the two measures of motivation but highlighting the specificity of the construct assessment – internal and external factors that influence motivation vs. achievement goals motivation. Thus, these measures are related but distinct constructs, as supported by the literature. Results highlighted the positive correlation between positive peers and parental influence and global motivation and, general mastery and general performance, respectively, indicating that parental and peers support, guidance and stimulus are particularly relevant to students' achievement goals in the academic context.

Nonetheless, this study presents some limitations. First, the cross-sectional study limits the analyses of scale's temporal validity. Therefore, test-retest reliability and temporal invariance could not be examined. Second, this study only observed secondary students, so the adequacy of FCQ-SF to other students could not be tested. Therefore, the preliminary results of this measure should be further confirmed and validated in different samples, in particular, other academic educational levels, age groups as well as other cultural contexts.

In conclusion, the present study provides an opportunity to further develop the understanding of the internal and external factors that condition the students' school motivation, since it offers empirical evidence for reliability, validity and utility of FCQ-SF in the academic context.

## REFERENCES

Anderman, L.H. & Midgley, C. (1997). Motivation and middle school students. In J.L. Irvin (Eds.), *What current research says to the middle level practitioner* (pp.41-48). Columbus, OH: National Middle School Association.

Bernardo, A. B. I. (2003). Do Filipino youth really value education? Exploring Filipino adolescents' beliefs about the abstract and pragmatic value of education and its relationship to achievement goals and learning strategies. *Philippine Journal of Psychology, 36*, 49–67.

*Eccles, J. S., & Midgley, C. (1989). Stage/environment fit: Developmentally appropriate classrooms for early adolescents. In R. E. Ames & C. Ames (Eds.), Research on motivation in education (Vol. 3, pp. 139-186). New York: Academic.*

Elliot, A. J. (2005). A conceptual history of the achievement goal construct. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52–72). New York: Guilford Press.

Ganotice, F. A., Jr, Bernardo, A. B., & King, R. B. (2013). Adapting the Facilitating Conditions Questionnaire (FCQ) for Bilingual Filipino Adolescents: Validating English and Filipino Versions. *Child indicators research*, 6(2), 237–256. https://doi.org/10.1007/s12187-012-9167-1

Gomes, A., Azevedo, A.S., Dias, P.C., Guimarães, T., Lima, I, & Salgado, A. (2018). Escala de orientações gerais para objetivos de desempenho: Estudos de adaptação para o ensino secundário. *Análise Psicológica, 1*(34), 101-114. https://doi.org/10.14417/ap.1262

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structure Equation Modeling, 6*, 1–55.

Marsh, H. W., & Craven, R. G. (2008). Reciprocal effects of self-concept and performance from a multidimensional perspective. *Perspective on Psychological Science*, 1, 133–163. https://doi.org/10.1111/j.1745-6916.2006.00010.x

McInerney, D. M. Roche, L.A. McInerney, V., & Marsh, H.W. (1997). Cultural perspectives on school motivation. *American Educational Research Journal. 34* (1), 207-236. https://doi.org/10.2307/1163347

McInerney, D.M., Dowson, M., Yeung, A. (2005). Facilitating conditions for school motivation: construct validity and applicability. *Educational and Psychological Measurement, 65*, 1046–1066. https://doi.org/10.1177/0013164405278561

Midgley, C. (1993). Motivation and middle level schools. In P. R.Pintrich & M. L. Maehr (Eds.), *Advances in motivation and achievement, Vol. 8: Motivation in the adolescent years* (pp.219-276). Greenwich, CT: JAI Press.

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of quantitative and qualitative research. *Educational Psychologist*, 37, 91–106. https://doi.org/10.1207/S15326985EP3702_4

Reeve, J. (2006). Teachers as facilitators: what autonomy-supportive teachers do and why their students benefit. *The Elementary School Journal,* 106, 225–236. https://doi.org/10.1086/501484

Wentzel, K. R., Barry, C. M., & Caldwell, K. A. (2004). Friendships in middle school: influences on motivation and school adjustment. *Journal of Educational Psychology*, 96, 195–203. https://doi.org/10.1037/0022-0663.96.2.195