

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/365006963>

Assessing and validating young Kazakhstanis' reading skills in English, the impact of classroom climate, and their engagement on reading skills

Article in *Indonesian Journal of Applied Linguistics* · September 2022

DOI: 10.17509/ijal.v12i1.37321

CITATIONS

0

READS

72

4 authors, including:



Aigul Akhmetova

University of Szeged

8 PUBLICATIONS 0 CITATIONS

[SEE PROFILE](#)



Soeharto Soeharto

University of Szeged

33 PUBLICATIONS 153 CITATIONS

[SEE PROFILE](#)



Benő Csapó

University of Szeged

161 PUBLICATIONS 3,009 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Assessment of reading and listening skills and their relation with self-concept. Azerbaijan case. [View project](#)



Assessing and validating young Kazakhstanis' reading skills in English, the impact of classroom climate, and their engagement on reading skills [View project](#)

Assessing and validating young Kazakhstanis' reading skills in English, the impact of classroom climate, and their engagement on reading skills

Aigul Akhmetova^{1*}, Soeharto², Gaysha Imambayeva³ and Benő Csapó⁴

^{1,2}Doctoral School of Education, University of Szeged, Szeged, Hungary

³Innovative Eurasian University, Pavlodar, Kazakhstan

⁴MTA-SZTE Research Group on the Development of Competencies, Szeged, Hungary

ABSTRACT

Improving reading skills in English for young Kazakhstani learners is a challenging process, but it was unfortunate that teachers in Kazakhstan do not frequently apply and implement assessments in the context of a school or classroom. Following a pilot study conducted in 2018, a continuous assessment was considered necessary to highlight the errors and challenges related to such unfortunate condition. This study performed validation and assessment of reading skills in English as a foreign language (EFL) within a classroom climate and in relation to the engagement of students in grades 6 and 8 in Kazakhstan. The participants were chosen randomly from seven secondary schools in a major city. The first language of all the participants (N = 1,206) was either Kazakh or Russian. Data from 906 students following data screening were analyzed. EFL Reading comprehension tests and a questionnaire regarding the students' classroom climate and engagement were administered via the eDia online assessment platform. The analysis involved an exploratory factor analysis, a confirmatory factor analysis, and an internal consistency test using Cronbach's alpha, composite reliability, and construct validity. To determine the effects of factors detected from the background variables on students' reading results in EFL, a regression analysis was conducted. As results, no gender differences were found for either grade. However, in grade 6, students whose first language was Kazakh performed better than the students whose first language and/or language spoken at home was Russian. In grade 8, the differences between Kazakh and Russian students were negative but non-significant. Nevertheless, despite the weak relationship between the latent factors and reading skills, both grades showed a good model fit to the data and good factor loadings. Implication of the study and further research are also discussed.

Keywords: Classroom climate; EFL; engagement; reading skills; validation

First Received:

4 August 2021

Revised:

25 April 2022

Accepted:

20 September 2022

Final Proof Received:

27 September 2022

Published:

30 September 2022

How to cite (in APA style):

Akhmetova, A., Soeharto, S. Imambayeva, G., & Csapó, B. (2022). Assessing and validating young Kazakhstanis' reading skills in English, the impact of classroom climate, and their engagement on reading skills. *Indonesian Journal of Applied Linguistics*, 12(2), 280-292. <https://doi.org/10.17509/ijal.v12i1.37321>

INTRODUCTION

Assessing reading skills in English as a foreign language (EFL) among young learners is important for the further development of the structure and the methods of teaching and student learning. EFL teachers must be aware of how students' reading

skills develop, and appropriate forms of assessment could help them modify their approaches while teaching young adolescents. Measuring reading skills in a language other than the young learner's native language requires appropriately validated instruments. Thus, assessment and validation are

* Corresponding Author

Email: akhmetovaaigul@edu.u-szeged.hu

among the most significant steps required for managing interventions concerning teaching and learning reading skills in middle school. For this reason, teachers would benefit from access to validated instruments that can be rapidly and frequently administered to form a specific trajectory that would be beneficial for elaborating the framework for the reading skill. A Review of National Policies for Education: Secondary Education in Kazakhstan indicated that teachers in Kazakhstan do not frequently apply and implement assessments in the context of a school or classroom (OECD, 2014). On a similar note, international surveys have showed that 15-year-old students in Kazakhstan are two years behind of the average found in OECD countries (Pons et al., 2015, p. 16).

Empirical research on reading literacy, attitudes, and comprehension among young learners in middle and secondary school has yet to be conducted in Kazakhstan. Hence, to establish a baseline on these issues and develop a research framework for further analyses and recommendations for teachers, policymakers, parents, and students in Kazakhstan, the first pilot study in Kazakhstan on validated tests assessing reading comprehension skills in EFL (Akhmetova & Csapó, 2018; cf. Csapó & Nikolov, 2009; Nikolov & Csapó, 2010, 2018) was conducted among sixth- and eighth-grade learners to explore reading skills in English. Such reading comprehension tests had previously been used in Hungary (cf. Csapó & Nikolov, 2009; Nikolov & Csapó, 2010, 2018) among sixth- and eighth-grade students. Such tests can also play the role of diagnostic tests because the results indicate the achievement type of the tests thus far and provide a clear image of the gaps that must be addressed by both the teacher and the learner. Diagnostic tests help differentiate the problem that requires changes from the progress that should develop (Johnson, 2008). To understand poor results obtained by students in relation to English reading skills, a continuous assessment might highlight the omissions and challenges jeopardizing the results and outcomes.

Assessing the reading skills of young learners in EFL

Researchers (Davison & Leung, 2009; Nikolov, 2016; Roever & McNamara, 2006) indicate that assessment in EFL among young learners is a complex process that depends considerably on beneficial relationships in the classroom. The literature also emphasizes that to facilitate the effectiveness of teaching and learning activities and to diagnose the level of students' progress in EFL reading skills, performing classroom climate assessments as well as assessments of students' engagement, teacher-student relationships, and peer support are crucial (Black & Wiliam, 1998; Nikolov, 2016; Rixon, 2016). Previous studies

reported that incorporating these factors into the assessment process might bring out the strengths and weaknesses of young learners more clearly and define the development of learning in general. Furthermore, Rixon (2016) found that assessments for learning should lead, manage, and develop young learners' language skills and abilities in EFL as the main goal in assessing young learners is to increase the quality of teaching and learning EFL reading skills in a certain context (i.e., in the classroom).

Moreover, Nikolov (2017) suggested that teachers need to provide themselves with the "techniques to tap into what children can and cannot do" (p. 249) while assessing young learners in EFL as this could help those teachers "apply assessment *for* learning rather than assessment *of* learning, allowing them to teach, test, and motivate children at the same time" (p. 249). Nikolov (2017), also claimed that diagnostic tests should be used in learning because such tests may be useful as teachers seek to facilitate the scaffolding process to young learners in terms of how the students are progressing in EFL. In relation to this, Nikolov (2017) highlighted that sometimes teachers cannot provide or manage motivation in a classroom context, which could fade if the child had begun to learn English at a considerably young age but has now lost interest in learning "boring grammar and translation exercises" (Nikolov, 2008 as cited in Nikolov, 2017, p. 251). This might mean that a classroom-based climate should manage motivation, interest, and further engagement even if the child has already obtained a certain level of proficiency in EFL. Therefore, it is necessary to continually provide motivation in the classroom climate and continue the active interaction of young learners in the process of teaching and learning EFL.

Classroom climate and engagement

In a school context, where the teacher-student relationship is an important element of instruction, the emotional climate in the classroom, students' engagement, and their active interaction in the learning process are all essential (Jia et al., 2009; Pianta, et al., 2008; Ryan & Patrick, 2001). For example, it is recognized that students with higher levels of engagement have greater learning achievements than those who are more disengaged (Fredricks et al., 2004). Some researchers (Reyes et al., 2012) also claimed that student-teacher interaction in classroom activities should be positive and/or neutral to support students' achievements; if the teacher-student relationship is poor and/or the classroom climate is negative, student outcomes may be reduced. In addition, several other scholars (Fredricks et al., 2004; Furrer & Skinner, 2003; Wang & Eccles, 2011; Zimmerman, 2000) indicate that school engagement may facilitate success and academic achievement, which can also involve

cognitive, emotional, and behavioral features. Moreover, it was found (Wang & Eccles, 2011; Zimmerman, 2000) that cognitive, emotional, and behavioral indicators in classroom engagement have a significant bearing on the performance of young adolescents in middle and secondary schools. Progress learners' academic achievement in middle and secondary school mainly depends on a positive and/or neutral school environment and the climate of teacher and peer support and learner's engagement level (including behavioral, emotional, and cognitive features). Furthermore, Way et al. (2007) proposed that when students go to the middle school, their beliefs, attitudes, behaviors, and emotions may change in response to the climate, psychological environment, and/or engagement of other students encountered in the classroom. Finally, Wang and Eccles (2011) found that young learners' academic achievements may significantly deteriorate and become unstable over time in the upper grades of secondary school. This may take place if young learners do not engage with the learning process and "if students do not feel that school or education has any purpose or meaning for them, then a sense of school belonging may not motivate them to study hard and enhance their academic performance" (Wang & Eccles, 2011, pp. 37–38).

Another interesting view on classroom climate and engagement in relation to the positive success and achievements of young learners in education is presented in the First National Report of the Canadian Education Association (2009). According to this longitudinal study of engagement, the concept is multidimensional and incorporates social, academic, and intellectual engagement albeit being based on the results of an analysis of the intellectual engagement of the students, which "decreases steadily and significantly from Grade 6 to Grade 12" (Willms et al., 2009, p. 31). The report also found that it is crucial to support students' development of literacy "throughout the school years" (p. 31). Moreover, challenges that students encounter in the classroom might impact engagement their further academic achievement in a certain manner. Thus, if the student has strong skills but considers the learning process to not be challenging, then he or she is less engaged, whereas students who have strong skills and find the learning process challenging are more engaged (Willms et al., 2009, p. 29).

In addition, Fletcher (2015) offered "a wider systematic conceptual model" with several parts to develop the reading skills of young adolescents aged from 11 to 13 years old. All parts of the model are involved in the whole process and may support and promote reading skills for young learners in the school and in the larger social-cultural environment. Furthermore, Fletcher underlined that family, teachers, principals, leaders in literacy, external

agencies, and responsible government bodies should work collaboratively to "feed in and grow a positive and effective learning environment in reading achievement and motivation to engage in reading" (Fletcher, 2015, p. 262).

Research questions

To validate and assess reading skills in EFL and explore the impact of classroom climate and engagement toward young learners' achievements in English reading skills, the following research questions guided the investigation:

- 1) How valid are the latent factors in classroom climate and engagement as assessed by exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) in terms of measuring students' reading skills in EFL?
- 2) How reliable are the latent factors in classroom climate and engagement according to internal consistency, according to Cronbach's alpha, and composite reliability (CR)?
- 3) How do the factors referring to classroom climate and engagement influence students' reading skills in EFL?

The responses to these questions allow us to draw general conclusions on the role of the factors revealed from the items for classroom climate and engagement in reading skills in EFL and provide approaches to improve teaching reading skills in EFL to young adolescents.

METHODS

This study incorporated the common method bias checking, EFA, CFA, invariance analysis, and regression. In addition, the reliability and validity of the instruments were demonstrated. The EFA was performed because the cross-cultural adaptation was used from English to Kazakhstani context. To ensure all the items are in same factor as the original instrument, and all items measure the same construct where the CFA was performed to check model fitness and validity criteria. The performances of the sixth and eighth graders were not compared; however, in the factor designation for the model, the results from both grades were analyzed together. To determine the effects of factors detected from the background variables on students' reading results in EFL, a regression analysis was conducted.

Participants

The participants were students in grades 6 and 8 from seven randomly selected middle schools in Pavlodar, a city in north Kazakhstan. Between two grades (6 and 8), $n = 1,206$ students were available for the study. However, after screening the data,

checking outliers, and assessing missing data, 906 students from grades 6 ($n = 369$) and 8 ($n = 537$) were involved. Information on ethnicity was obtained from the background questionnaire with the question: What is your native language? The participants were homogenized as follows: the students whose native language was given as Russian and Other were taken to speak Russian, because “Russian is considered the language of inter-ethnic communication” (Pons et al., 2015, p. 31); the students whose native language was Kazakh included students who were fluent in Kazakh and Russian from the schools with Kazakh language of instruction (Pons et al., 2015, pp. 31-37). Some ethnic Kazakhs with Russian language of instruction, who are proficient in Russian cannot speak Kazakh fluently but can read it and understand the spoken form. Table 1 provides detailed information on the sample size. The assessed schools have both Kazakh- and Russian-language classes as a medium of instruction. Instruction in mixed schools is designed for both bilingual and monolingual students; however, most students use Russian on a regular basis as Russian-medium schools are dominant in northern Kazakhstan.

Instruments

Questionnaire

The questionnaire assessment used a modified version of the Programme for International Students Assessment (PISA) background questionnaire (cf. OECD, 2017, 2018). The variables related to classroom climate and engagements were adapted from the PISA background questionnaire with some modifications. The questionnaire included 28 items, measured by a 4-point Likert scale with the following statements: 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). The questionnaire was given in the students' native language (Kazakh or Russian). The choice of the language for students was established independently

as not all Kazakh respondents have sufficient ability in Kazakh. The official translation of the questionnaire was presented in PISA sites (OECD, n.d.), although some simple modifications in both the Kazakh and Russian versions were made by five language experts from Kazakhstan to ensure that the language was appropriate for our respondents. Before completing the main part of the questionnaire, the students also responded to some background questions on gender, native language, and age (see Table 1).

Table 1

Participant demographic information

Variables	Grade 6	Grade 8
N	369	537
Gender (male; %)	37.8	62.2
Age (mean, years)	11.99	14.00
Age (SD)	.22	.21
Native language (%) Kazakh	32.0	25.9
Native language (%) Russian	66.9	73.7
Native language (%) Other	1.1	.4

Reading comprehension tests

The reading comprehension tests in English for grades 6 and 8 were adapted from those developed by Hungarian language experts and researchers (for more details see Csapó & Nikolov 2009; Nikolov & Csapó, 2010, 2018). The test battery was developed to evaluate the performances of reading skills among sixth and eighth graders. The instruments had been validated in Hungary and were used for the first time to young Kazakhstani learners in 2018. The format and level of the tests corresponded to the levels of The Common European Framework of Reference for Languages (Council of Europe, 2001). The sixth and eighth grades received different reading tests from the authors. The sixth-grade English reading test included two reading tests with 10 items each; in the eighth grade, the English test involved 36 items with four reading tests in total. The detailed structure of the online tests in English and their reliability are presented in Table 2.

Table 2

Structure and content of the reading tests in grades 6 and 8 (2018)

Grade	Test	Tasks	Number of items	Cronbach's alpha
6	Reading test 1 in English	Match the title of the book.	10	.923
	Reading test 2 in English	Match the missing part of the text.	10	.898
	Reading test 1 in English	Match words with the definition.	10	.893
8	Reading test 2 in English	Match notices with the meaning.	9	.897
	Reading test 3 in English	Match the question to the answer.	9	.871
	Reading test 4 in English	Match the question to the passage.	8	.904

Procedures

Data were collected using eDia platform, an online system for learning and instruction developed by the University of Szeged (Csapó & Molnár, 2019). Before entering the online platform, the students were informed that they were participating in an assessment survey to measure their reading literacy skills in English, their classroom climate, and their

engagement in the reading process in learning EFL. An agreement with the Departments of Education in the region and the city as well as with principals, administrators, and teachers in the randomized schools was reached four months before. The assessment procedure consisted of two sessions. In the first session, the students responded to the questionnaire variables of classroom climate and

engagement. As young adolescents were not proficient in English, the questionnaire was in Kazakh or Russian. In the second session, the students performed reading comprehension tests in English. On the day of the assessment, each participant was given an eDia link and a personal password to enter to complete the questionnaire and take the test. Immediate feedback was given to the students after the reading comprehension test. Taking the tests and the questionnaire took approximately 30–50 minutes for both grades. The Internet connection was good, so the students did not have any difficulties during their assessment process.

The data were analyzed with the IBM Statistical Package for the Social Sciences (SPSS) Version 23 and the Analysis of Moment Structure (AMOS) version 24. To ensure all factors referring to classroom climate and engagement influence students' reading skills in EFL, EFA and CFA were conducted whereby the factor loading and construct validity were assessed (See Appendices A and B). The regression model was utilized to investigate whether classroom climate and engagement have an impact on reading skills in EFL in the Kazakhstani context.

FINDINGS

Common method bias

Harman's single factor was applied and tested, as is typically done in common method bias analyses; all variables in the construct are defined such that if a single variable appears in the covariance between the measures, it is extracted using principal axis factoring (Podsakoff, et al., 2003). The cumulative variance was 21.175%, indicating less than 50% of the threshold. Hence, our study is free of bias.

Exploratory & confirmatory factor analyses

An EFA was used to confirm the relationship between observed variables in the instrument (Brown, 2015; Thompson, 2004). The EFA was used to measure the students' answers to the questionnaire variables, referring to certain background items and composing six factors based on classroom climate and engagement. The results of the EFA testified that the means for Bartlett's test of sphericity derived from $\chi^2 = 11983.557$, $df = 378$, $p < 0.001$, and the KMO measure of sampling adequacy = 0.864; thus, the instrument is distinct and reliable, indicating a good quality for further analysis (Cohen et al., 2007). Maximum likelihood extraction was applied with Promax rotation for

factor analysis, and the computation was not performed for the items in six latent factors as having an absolute value above the threshold of 0.5 (Hair et al., 2010; Kock, 2014) (see Appendices A and B).

Reliability and validity

The Cronbach's alpha of the tests and the background questionnaire variables for both grades showed good measurement indicator from .91 to .96 respectively. The structure and the content of the tests for grades 6 and 8 (table 3), revealed several factors as did the sub-scales of the background questionnaire, and these may impact and/or foster achievements in reading comprehension skills in English. Classroom climate, student–teacher relationship, positive attitudes toward learning EFL, interest in using new technologies, and anxiety concerning new technologies were hypothesized as factors that could influence students' reading and language achievements in EFL, as has been found in other studies (Lee & Schallert, 2014; Reyes et al., 2012).

Table 3

Students' test performance in English (grades 6 and 8)

Grade	Reading Comprehension Test in English			
	M (%)	SD (%)	Min. (%)	Max. (%)
6	23.44	29.09	.0	100
8	45.81	30.84	.0	100

Reading comprehension tests have several tasks. In terms of cognitive operations, the tests for both grades involve information retrieval (IR) and inference (Inf.) tasks. An IR task defines the way of retrieving and determining information, as “a corpus of stored information the portions which are relevant to particular information needs” (Sembok et al., 2008, p. 40). The inference task needs a conclusion from the various recourses and key words around the context to understand the meaning of the word. The Inf. task requires the acquisition of a new meaning from a context, where the test-taker must come to a conclusion and insert the required information. The tasks in the test “Match the title of the book,” “Match words with the definition,” and “Match notices with the meaning” are related to IR. The tasks in the test “Match the missing part of the text,” “Match the question to the answer,” and “Match the question to the passage” are Inf. tasks. The students did better in IR tasks than in Inf. However, in the eighth grade, the mean differences were not significant (see table 4).

Table 4

IR vs. Inf.

Grade	Paired samples t-test	Language	M _{diff} (%)	t	p
6	Information retrieval–Inference	English	5.97	5.94	<.001
8	Information retrieval–Inference	English	.14	.21	n.s.

The correlation of the factors was considered valid where the square root of the average variance extracted (AVE) was higher than the correlation between latent factors (see Table 5). This indicates that discriminant validity has been achieved in this study. However, for convergent validity, the AVE in AICT was 0.482. Generally, an AVE of more than 0.5 is desirable for each factor variable, and CR should be 0.70 or above (Hair et al., 2010). If the AVE is below 0.5 and the CR is more than 0.6, it

still can be considered that convergent validity has met the minimum thresholds (Farrell, 2010; Field, 2009). Convergent validity can be achieved as well using the score for factor loadings in each item in the latent factors if the value is above 0.5 (Kock, 2014). All items have factor loading of more than 0.5, showing that that instrument has achieved convergent validity criteria (see Appendices A and B).

Table 5
Reliability and validity based on the Fornell–Larcker criterion

	α	CR	AVE	MSV	MaxR (H)	CCS	STR	ILE	AEL	UICT	AICT
CCS	0.849	0.834	0.503	0.111	0.840	0.709					
STR	0.830	0.839	0.513	0.084	0.852	−0.232***	0.716				
ILE	0.928	0.926	0.713	0.159	0.927	0.334***	−0.135*	0.845			
AEL	0.881	0.885	0.607	0.084	0.889	0.167**	−0.290***	0.127*	0.779		
UICT	0.818	0.836	0.508	0.159	0.855	0.264***	−0.085	0.398***	0.124*	0.713	
AICT	0.693/ 0.712*	0.724	0.482	0.057	0.822	−0.096†	0.166**	−0.024	−0.092†	−0.240***	0.695

Note: ILE = interest and like of English; CCS = classroom climate reported by student; STR = student–teacher relationship; UICT = usage of new technologies; AICT = anxiety of new technologies; AEL = attitudes of English learning.
† p < 0.100, * p < 0.050, ** p < 0.010, *** p < 0.001

Discriminant validity based on heterotrait-monotrait correlations

Discriminant validity is characterized (Onwuegbuzie et al., 2007) as describing how far a latent variable deviate from another latent variable. Henseler et al. (2015) recommend assessing discriminant validity via heterotrait-monotrait ratio

correlations, where the criteria for the threshold value should be less than 0.9 and 0.85 (see table 6). The findings indicated that variables relating to classroom climate and engagement initiate thresholds to 0.850 for strict and 0.900 for liberal discriminant validity.

Table 6
Discriminant validity based on the heterotrait-monotrait = 0.85

	CCS	STR	ILE	AEL	UICT	AICT
CCS						
STR	0.000					
ILE	0.340	0.000				
AEL	0.169	0.000	0.122			
UICT	0.259	0.000	0.421	0.126		
AICT	0.000	0.176	0.000	0.000	0.000	

CFA showed that the model had a good fit to the data with a six-factor model in both grades. The reason that the grades were combined was to check the model fit in general for both grades (see Table 7 and Figure 1). Based on the results, it was concluded

that the factors for classroom climate and engagement met the criteria for fit indices (e.g., Hu & Bentler, 1999, p. 6; Thompson, 2004, pp. 129–132; Brown, 2015, pp. 71–73). Moreover, $\chi^2/df > 1$, CFI/TLI > 0.95, SRMR < 0.08 RMSEA < 0.06 and

$p < 0.05$; in other words, the factors in both grades fit to the model.

Gender differences

Gender differences did not appear in either the sixth- or eighth-grade groups in the results of the reading comprehension tests (see Table 8). Interestingly that according to PISA 2012 results of Kazakhstan showed non-significant gender differences "... and differences are smaller than on average across the OECD" (OECD & The World Bank, 2015, p. 42).

Reading comprehension in EFL within grades 6 and 8 within language differences

The reading comprehension tests that we administered showed only moderate reading comprehension ability. This may relate to the level of the tests or to their inappropriateness to a Kazakhstani young learners' socioeconomic environment (e.g., Sagintayeva et al., 2014). In addition, the performance could relate to the students' age and the amount of time they had spent learning English. A t-test showed a significant difference in the sixth grade between those whose first language was Kazakh, who performed better than those whose first language was Russian and/or those who spoke Russian at home. However, in the eighth grade, the difference between the two groups was non-significant—although negative (see Table 9).

Table 7

Goodness of fit indices in a six-factor model CFA

	χ^2	df	CFI	TLI	RMSEA
Grade 6	649.671	335	.953	.947	.042
Grade 8	542.916	335	.959	.954	.041
All respondents	587.603	335	.957	.951	.041

Figure 1

CFA after modification indexes, standardized factor loading, and correlation

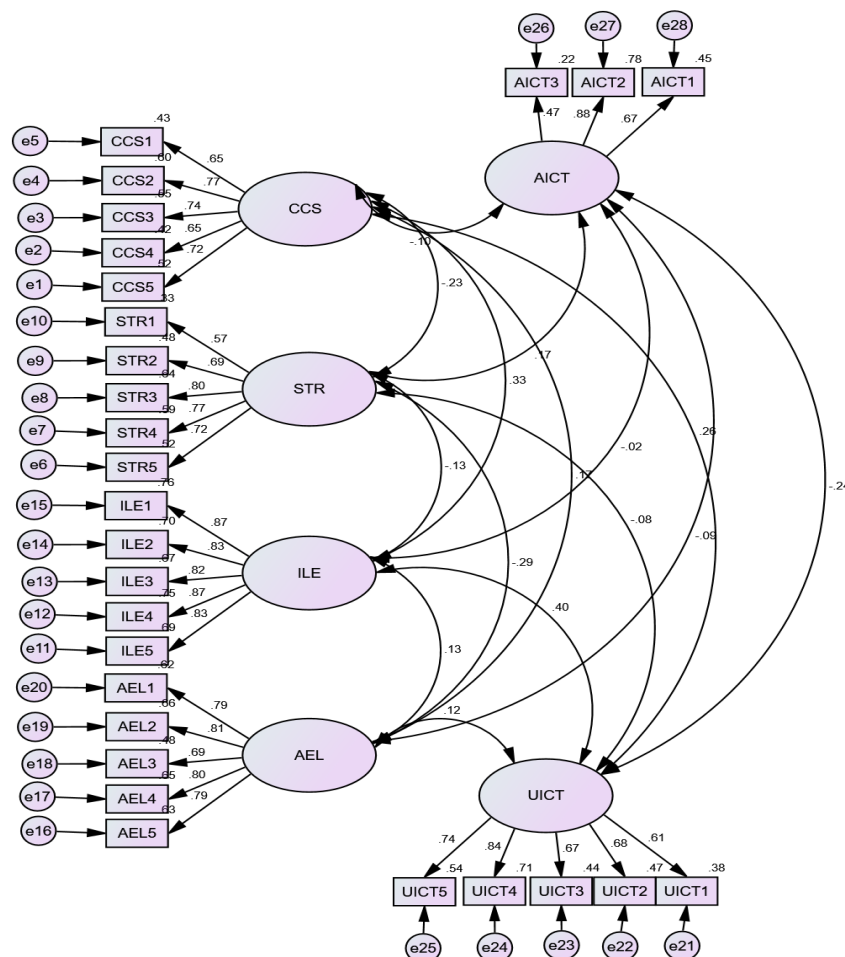


Table 8

Gender differences in tests performances

Grade	Girl		Boy		t	p
	N	Mean (SD)	N	Mean (SD)		
6	199	14.06 (12.06)	170	14.04 (11.82)	0.02	.98
8	257	19.32 (9.99)	280	19.07 (9.78)	0.29	.77

Table 9

Language differences in tests performances

Grade	First language: Kazakh		First language: Russian		t	p
	N	Mean (SD)	N	Mean (SD)		
6	171	15.38 (12.24)	198	12.89 (11.57)	1.99	.04
8	209	19.06 (10.24)	328	19.27 (9.65)	-0.24	.84

Regression

Predicting classroom climate and engagement to reading skills in EFL in the Kazakhstani context

The relationships between the factors and reading achievements in English were examined using a score factor for each latent factor saved from the measurement model in CFA. The integration of the background factors showed the following findings. A regression analysis—with the six factors from the background questionnaire being the independent variables and the English reading tests as the dependent variables for the sixth and eighth

graders—revealed that reading correlation in both grades was non-significant ($p > .05$). This may indicate that the influence of the affective factors as interest and like of English (ILE), classroom climate reported by student (CCS), student–teacher relationship (STR), usage of new technologies (UIC), anxiety of new technologies (AICT), attitudes of English learning (AEL) of young adolescents in the middle school in relation to tests' achievements is extremely low and negative in some variables (see Table 10).

Table 10

Regression analysis

Prediction	Grade 6			Grade 8		
	path coefficient (estimate)	t	p -value	path coefficient (estimate)	t	p -value
ILE on Reading comprehension	.346	.731	.636	-.446	.521	.392
CCS on Reading comprehension	-.116	.693	.867	.047	.565	.934
STR on Reading comprehension	.373	.678	.582	.286	.554	.606
UIC on Reading comprehension	-1.448	.745	.052	-.374	.543	.491
AICT on Reading comprehension	-.170	.713	.812	-.055	.533	.917
AEL on Reading comprehension	.077	.625	.902	.145	.531	.785

Note: ILE = interest and like of English; CCS = classroom climate reported by student; STR = student–teacher relationship; UIC = usage of new technologies; AICT = anxiety of new technologies; AEL = attitudes of English learning.

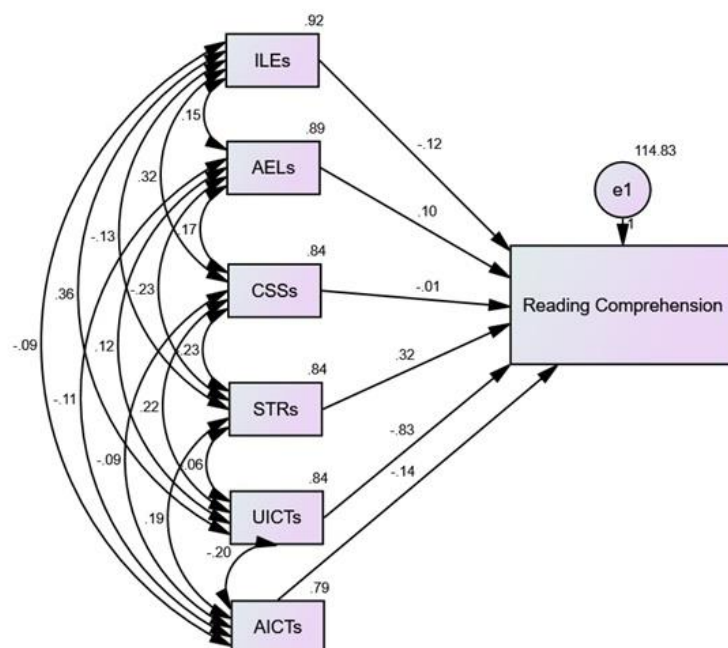
Several researchers (Jia et al., 2009; Pianta, et al., 2008; Ryan & Patrick, 2001) have indicated that the interactions between the teacher and the students as well as of the climate in the classroom influence the learning outcomes of the students. However, if the climate in the classroom is low and/or negative, student outcomes can be expected to be weak (Reyes et al., 2012). The obtained poor results of the students might suggest a mediocre interaction between teacher–student relationships and a moderate motivation of the students to progress in English reading skills. In addition, it could also indicate that the classroom climate in the assessed schools might be insufficient for teaching and learning process and reading skills in EFL.

Figure 2 illustrates the narrow impact of affective factors on English reading tests in both

grades. These results seem to indicate a non-significant relationship between the latent factors and reading comprehension tests in EFL, which could also indicate that classroom climate is a threshold for teacher–student interaction and student engagement. Likewise, researchers and educators (Pianta et al., 2012; Ryan & Patrick, 2001) indicate that teacher's management in the learning process impacts classroom climate, which might further facilitate students' academic achievements. For example, several studies (Djigic, & Stojiljkovic, 2011; Perliger, et al., 2006) have also confirmed that democratic style of management in the classroom may contribute motivation, support for learning, encourage positive attitude and behaviour between students and teacher.

Figure 2

Regression analysis on the English reading skills



DISCUSSION

The results have shown that both grades exhibited the same number of latent factors from the background questionnaire. Although learners from grades 6 and 8 produced poor results in English reading skills, the number of factors did not significantly influence the outcomes of the learners' reading skills in EFL. This might represent that weak teacher–student interaction in the classroom, low support from peers or parents, little intervention from literacy leaders, and an insufficient environment may produce low EFL reading skills. These findings are in accordance with Alsowat (2016), confirming the challenge of teaching using the EFL flipped classroom teaching model in relation to classroom climate and engagement. In addition, several latent factors related to classroom climate and engagement indicated challenges in teaching and learning EFL reading skills, which may provide directions on how to manage and motivate young adolescents to read more in the middle school in Kazakhstan. Parents' level of education was not found to directly correlate to the outcomes of reading skills in English, as has also been established by Myrberg and Rosén (2009), who identified no direct effect of parents' education on reading skills and reading achievement. Thus, young learners should be clearly instructed on the importance and necessity of reading. If children are informed that reading is the path to literacy and knowledge, they can properly evaluate the significance of pursuing it. Moreover, school libraries, librarians, teachers, and policymakers should investigate what books students are interested in and prefer to read. Books in school

libraries should be frequently updated because this could underpin students to visit school libraries regularly.

Dotterer and Lowe (2011), pointed out that school engagement may be mediated between classroom context and the academic achievements of students who did not have previous achievement difficulties. In particular, Dotterer and Lowe (2011) conducted their research study among fifth-grade students, albeit they specified that students with previous achievements problems, the school engagement might not be a mediator between classroom climate and their academic achievement. In this case, Dotterer and Lowe (2011), suggested applying several additional strategies for low achievers. However, Baker (2006) showed that students with learning and behavioral problems performed poorly and that the classroom adjustment did not benefit them relative to those with high achievement or to peers who had a close relationship to the teacher. Although the impact of these factors is considerably low on English achievement, the issue of teaching and instruction in the classroom context might be the reason. Furthermore, Downer et al. (2007) reported that teachers' high quality of instruction in the classroom context facilitates children's engagement with high-risk problems and difficulties in school. Downer et al. (2007) also confirmed that classroom quality provides and supports engagement, which further stimulates motivation and can be a mediator between students' outcomes.

Another indication relates to bilingual and monolingual young learners, who may face problems with phonological awareness, sentence

construction, and reading comprehension in reading and learning English as a foreign language. Researchers and educators (Cline & Shamsi, 2000; Singleton & Vincent, 2004) determine this issue as young learners usually experience limited communication in English and have relatively been provided little time for instruction. In addition, researchers also (Singleton & Vincent, 2004) assume that students who do not have a good “standard of English” and/or experience difficulties at the word level may be dyslexic and may encounter serious problems with literacy. In order to solve the problem and assess reading literacy among bilingual and monolingual children in English, the tests should be “culture-free”. Moreover, translating English-language tests into the student’s native language (Cline & Shamsi, 2000; Stanovich, 2000) should be out of the question, as these tests will not be appropriate to the students’ context. Consequently, the tests should be carefully prepared for a certain age group, and consider context and level of language preparation, which require time and effort from teachers, students, and other stakeholders.

The development of English reading literacy among young Kazakhstani learners has had poor results along with other English reading skills. Therefore, the issue of teaching and learning English must be given serious attention and appropriate instruction. Frequent assessments should take place in the classroom, which will guide teachers in assisting students in terms of their reading comprehension. Moreover, school administration should support teachers in developing teaching reading skills in English. Doing so well should include managing student motivation and enabling young learners to read more for pleasure both in and out of school to actively encourage reading habits in them.

Although this was one of the first studies performed in secondary schools in Kazakhstan, the obtained results should be alarming for the principals, teachers, and even students, who were not familiar with the aim of diagnostic assessment tests and the purpose of the questionnaire. Based on our results, teachers, parents, principles, and other stakeholders should pay considerable attention on how to motivate children to read more in the middle school, be attentive while choosing books for reading, and provide an appropriate classroom climate to increase students’ engagement and develop their reading skills. The process of choosing books and textbooks for teaching reading skills should not be the only source of education; the teachers and school administration should motivate young learners to read more as well as contribute to and develop views regarding the process of teaching and learning so the students can decode and comprehend the information in the languages being learned. Finally, through a validation and assessment of the instruments, the issue of poor

results put forward the prospect of frequent professional development for teachers in middle secondary schools as a pivotal direction for improving the quality of the education system in Kazakhstan.

CONCLUSION

In this study, the influence of classroom climate toward the level of students’ engagement in learning and their learning outcomes was examined. For this reason, several latent factors from background variables related to their engagement and the climate in the classroom (i.e., the classroom climate, student–teacher relationship, positive attitudes of EFL, attitudes of English learning, interest in using new technologies, and anxiety of new technologies) were taken into account. Although the results herein showed poor relationships between classroom climate and engagement toward reading achievement tests, the loadings of the factors indicated a good model fit to the data. It is expected that these results may be considered as an initial step on the path to improve the process of teaching reading skills to young EFL learners. In addition, the revealed results will track benefits to the improvement process of teaching reading skills in English to young learners in Kazakhstan and may be useful for future attempts to improve policy instruction of classroom management in the middle school in the target country. Therefore, further research in this field is required.

REFERENCES

- Akhmetova, A. B., & Csapó, B. (2018). Development of reading skills of 6th and 8th graders in English, Kazakh, and Russian from the perspective of young learners’ backgrounds in Pavlodar. In F. Anikó, S. Krisztján, & M. Helga (Eds.), *XVIII National Conference on Education* (pp. 363-363). http://onk2018.elte.hu/wp-content/uploads/2018/11/Absztrakt-k%C3%B6tet_FINAL.pdf
- Alsowat, H. (2016). An EFL flipped classroom teaching model: Effects on English language higher-order thinking skills, student engagement and satisfaction. *Journal of Education and Practice*, 7(9), 108–121.
- Baker, J. A. (2006). Contributions of teacher–child relationships to positive school adjustment during elementary school. *Journal of School Psychology*, 44(3), 211–229. <https://doi.org/10.1016/j.jsp.2006.02.002>
- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: principles, policy & practice*, 5(1), 7–74. <https://doi.org/10.1080/0969595980050102>

- Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). Guilford publications.
- Cline, T., & Shamsi, T. (2000). *Language needs or special needs? The assessment of learning difficulties in literacy among children learning English as an additional language: A literature review*. Department for Education and Skills. HMSO.
- Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge University Press.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge.
- Csapó, B., & Nikolov, M. (2009). The cognitive contribution to the development of proficiency in a foreign language. *Learning and Individual Differences*, 19(2), 209–218.
<https://doi.org/10.1016/j.lindif.2009.01.002>
- Csapó, B., & Molnár, G. (2019). Online diagnostic assessment in support of personalized teaching and learning: The eDia system. *Frontiers in Psychology*, 10(1522).
<https://doi.org/10.3389/fpsyg.2019.01522>
- Davison, C., & Leung, C. (2009). Current issues in English language teacher-based assessment. *TESOL Quarterly*, 43(3), 393–415.
<https://doi.org/10.1002/j.1545-7249.2009.tb00242.x>
- Dotterer, A. M., & Lowe, K. (2011). Classroom context, school engagement, and academic achievement in early adolescence. *Journal of Youth and Adolescence*, 40(12), 1649–1660.
<https://doi.org/10.1007/s10964-011-9647-5>
- Downer, J. T., Rimm-Kaufman, S. E., & Pianta, R. C. (2007). How do classroom conditions and children's risk for school problems contribute to children's behavioral engagement in learning? *School Psychology Review*, 36(3), 413–432.
<https://doi.org/10.1080/02796015.2007.12087938>
- Djigic, G., & Stojiljkovic, S. (2011). Classroom management styles, classroom climate and school achievement. In Z. Bekirogullari (Ed.), *The 2nd International Conference on Education and Educational Psychology 2011* (pp. 819-828). Elsevier.
<https://doi.org/10.1016/j.sbspro.2011.11.310>
- Farrell, A. M. (2010). Insufficient discriminant validity: A comment on Bove, Pervan, Beatty, and Shiu (2009). *Journal of business research*, 63(3), 324–327.
<https://doi.org/10.1016/j.jbusres.2009.05.003>
- Field, A. (2009). *Discovering Statistics Using SPSS* (3rd ed.) Sage Publications.
- Fletcher, J. (2015). What can we do to support reading for young adolescent students? *Education 3-13*, 45(2), 258–271.
<https://doi.org/10.1080/03004279.2015.1078832>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of educational research*, 74(1), 59–109.
<https://doi.org/10.3102/00346543074001059>
- 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.
<https://doi.org/10.1037/0022-0663.95.1.148>
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2010). *Multivariate data analysis with readings*. Prentice Hall.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
<https://doi.org/10.1007/s11747-014-0403-8>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
<https://doi.org/10.1080/10705519909540118>
- Jia, Y., Way, N., Ling, G., Yoshikawa, H., Chen, X., Hughes, D., Ke, X., & Lu, Z. (2009). The influence of student perceptions of school climate on socioemotional and academic adjustment: A comparison of Chinese and American adolescents. *Child Development*, 80(5), 1514–1530.
<https://doi.org/10.1111/j.1467-8624.2009.01348.x>
- Johnson, K. (2008). *An introduction to foreign language learning and teaching* (2nd ed.). Routledge.
<https://doi.org/10.4324/9781315834603>
- Kock, N. (2014). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. *International Journal of e-Collaboration*, 10(1), 1–13.
<https://doi.org/10.4018/ijec.2014010101>
- Lee, J., & Schallert, D. L. (2014). Literate actions, reading attitudes, and reading achievement: Interconnections across languages for adolescent learners of English in Korea. *The Modern Language Journal*, 98(2), 553–573.
<https://doi.org/10.1111/modl.12088>
- Myrberg, E., & Rosén, M. (2009). Direct and indirect effects of parents' education on reading achievement among third graders in Sweden. *British Journal of Educational Psychology*, 79(4), 695–711.
<https://doi.org/10.1348/000709909X453031>
- Nikolov, M. (2016). A framework for young EFL learners' diagnostic assessment: 'Can do

- statements' and task types. In M. Nikolov (Ed.), *Assessing young learners of English: Global and local perspectives* (pp. 65-92). Springer. https://doi.org/10.1007/978-3-319-22422-0_4
- Nikolov, M. (2017). Students' and teachers' feedback on diagnostic tests for young EFL learners: Implications for classrooms. In M. P. García Mayo (Ed.), *Learning foreign languages in primary school: Research insights* (pp. 249-266). Multilingual Matters. <https://doi.org/10.21832/9781783098118-014>
- Nikolov, M., & Csapó, B. (2010). The relationship between reading skills in early English as a foreign language and Hungarian as a first language. *International Journal of Bilingualism*, 14(3), 315-329. <https://doi.org/10.1177/1367006910367854>
- Nikolov, M., & Csapó, B. (2018). The relationships between 8th graders' L1 and L2 reading skills, inductive reasoning and socio-economic status in early English and German as a foreign language programs. *System*, 73, 48-57. <https://doi.org/10.1016/j.system.2017.11.001>
- OECD (2014). *Reviews of national policies for education: Secondary education in Kazakhstan*. OECD Publishing. <http://doi.org/10.1787/9789264205208-en>
- OECD & The World Bank (2015). *OECD reviews of school resources: Kazakhstan 2015*. OECD Publishing. <http://dx.doi.org/10.1787/9789264245891-en>
- OECD (2017). *PISA 2015 Assessment and analytical framework: Science, reading, mathematics and financial literacy*. OECD publishing.
- OECD (2018). *PISA for development assessment and analytical framework: Reading, mathematics and science*. OECD Publishing. <http://doi.org/10.1787/9789264305274-en>
- Onwuegbuzie, A. J., Witcher, A. E., Collins, K. M., Filer, J. D., Wiedmaier, C. D., & Moore, C. W. (2007). Students' perceptions of characteristics of effective college teachers: A validity study of a teaching evaluation form using a mixed-methods analysis. *American Educational Research Journal*, 44(1), 113-160. <https://doi.org/10.3102/0002831206298169>
- Perlinger, A., Canetti-Nisim, D., & Pedahzur, A. (2006). Democratic attitudes among high-school pupils: The role played by perceptions of class climate. *School Effectiveness and School Improvement*, 17(1), 119-140. <https://doi.org/10.1080/09243450500405217>
- Pianta, R. C., Belsky, J., Vandergrift, N., Houts, R., & Morrison, F. J. (2008). Classroom effects on children's achievement trajectories in elementary school. *American Educational Research Journal*, 45(2), 365-397. <https://doi.org/10.3102/0002831207308230>
- Pianta, R.C., Hamre, B.K., & Allen, J.P. (2012). Teacher-student relationships and engagement: conceptualizing, measuring, and improving the capacity of classroom interactions. In S. Christenson, A. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 365-386). Springer. https://doi.org/10.1007/978-1-4614-2018-7_17
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Pons, A., Amoroso, J., Herczynski, J., Kheifets, I., Lockheed, M., & Santiago, P. (2015). *OECD reviews of school resources*. OECD Publishing.
- Reyes, M. R., Brackett, M. A., Rivers, S. E., White, M., & Salovey, P. (2012). Classroom emotional climate, student engagement, and academic achievement. *Journal of Educational Psychology*, 104(3), 700-712. <https://doi.org/10.1037/a0027268>
- Rixon, S. (2016). Do developments in assessment represent the 'coming of age' of young learners English language teaching initiatives? The international picture. In M. Nikolov (Eds.), *Assessing young learners of English: Global and local perspectives* (pp. 19-41). Springer. https://doi.org/10.1007/978-3-319-22422-0_2
- Roeber, C., & McNamara, T. (2006). Language testing: The social dimension. *International Journal of Applied Linguistics*, 16(2), 242-258. <https://doi.org/10.1111/j.1473-4192.2006.00117.x>
- Ryan, A., & Patrick, H. (2001). The classroom social environment and changes in adolescents' motivation and engagement during middle school. *American Educational Research Journal*, 38, 437-460. <https://doi.org/10.3102/00028312038002437>
- Sagintayeva, A., Bridges, D., McLaughlin, C., Mehisto, P., Drummond, M.J., Ayubayeva, N., Kishkentayeva, M., Kulakhmetova, A., Sadvakassova, M., Gasskov, V., Ganimurat, N., Canning, M., Finney, J.E., Jones, D.P., McGuinness, A.C., Harvey, D., Bilyalov, D., & Sagyndykova, Z. (2014). *Development of strategic directions for education reforms in Kazakhstan for 2015-2020, Diagnostic report*. Indigo print.
- Sembok, T. M., Zaman, H. B., & Kadir, R. A. (2008). IRQAS: Information retrieval and question answering system based on a unified logical-linguistic model. In L. Kazovsky, P. Borne, N. Mastorakis, A. Kuri-Morales, I. Sakellaris (Eds.), *Proceedings of the 7th*

- WSEAS international conference on artificial intelligence, knowledge engineering and data bases (pp. 460-464). World Scientific and Engineering Academy and Society (WSEAS). <https://dl.acm.org/doi/10.5555/1415881.1415954>
- Singleton, C., & Vincent, D. (2004). Assessing literacy: Current challenges and issues. *Journal of Research in Reading*, 27(2), 113–117. <https://doi.org/10.1111/j.1467-9817.2004.00219.x>
- Stanovich, K. E. (2000). *Progress in understanding reading: Scientific foundations and new frontiers*. Guilford Press.
- Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. American Psychological Association.
- Wang, M. T., & Eccles, J. S. (2011). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence*, 22(1), 31–39. <https://doi.org/10.1111/j.1532-7795.2011.00753.x>
- Way, N., Reddy, R., & Rhodes, J. (2007). Students' perceptions of school climate during the middle school years: Associations with trajectories of psychological and behavioral adjustment. *American journal of community psychology*, 40(3-4), 194–213. <https://doi.org/10.1007/s10464-007-9143-y>
- Willms, J. D., Friesen, S. & Milton, P. (2009). *What did you do in school today? Transforming classrooms through social, academic, and intellectual engagement*. Canadian Education Association.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P.R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50031-7>