

# Impact of Teaching with Controlling Attention Diversion Behaviour on Students' Achievement at Elementary Level: An Experimental Study

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The purpose of the study was to investigate the impact of teaching with a focus on attention diversion behaviours of students on their achievement in Geography at Grade VIII level. This was an experimental study and a true experimental design was employed. The research was conducted in a well reputed school of Lahore. Students of grade VIII were invited to take part in the study and all relevant ethical requirements were fulfilled. The students were randomly assigned to either control or experimental groups. All possible measures were adopted to ensure randomisation. As this was a true experimental design so the pre and post tests were conducted for both control and experimental groups. The treatment was provided only to the experimental group whereas the control group was taught Geography with a normal routine where no specific focus was on controlling deviant behaviours of the students. The treatment was comprised of teaching with a special focus on strategies being used to control deviant behaviours of students. These behaviours are those which keep on diverting students' attention away from the task. The treatment continued about 8 weeks and after the treatment the post tests were conducted. The test was developed from the content taught during the period of intervention. The test was validated by experts in the field of Geography and reliability was ascertained prior to implementation. The researchers conducted the item analysis prior to finalisation of the instrument. Independent sample t-test and paired sample t-test were used to analyse the data. The students who were taught by controlling their deviant behaviours performed well in Geography as compared to those where no special focus was placed on controlling deviant

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behaviours. The study has implications for teacher training institutes both pre-service and in-service.

**Key Words:** *Learning time, On-task & Off-Task Behaviours, Achievement, Experimental.*

## **Introduction**

Teaching learning process is at the core of school functions as it plays an important role in shaping learning of the students. The quality of this process is dependent on many factors associated to both teachers and students. Since decades the teaching learning process remained a focus of researchers to identify its effectiveness and efficiency and one of the indicators is academic achievement of students. It is usually assumed that academic achievement of the students is an outcome of this process and informs about how healthy the process is. Literature is very rich with studies that investigated the teaching learning process by looking at its micro aspects especially related to students, teachers, psychosocial milieu, physical setup and leadership. The current study has taken a different perspective by investigating the impact of teaching by controlling deviant behaviours of students on their academic achievement. It seems well justified to consider strategies and intentions to increase attention of the students on task and decrease deviant behaviours and thus informing their academic achievements. Researchers have consistently identified the need of exploring influences of different practices of teachers to enhance attention on task by minimising deviant behaviours on academic achievements of elementary school students (Godwin et al., 2013; Sabourin et al., 2011).

## **Literature Review**

School time is usually divided into allocated school time, allocated class time and academic learning time (Silva, 2007). Academic learning time is significant as it predicts learning of students. Student's engagement with the task remains maximised during academic learning time (Appleton et al., 2008). Although most of the researchers have identified that increasing instructional time improves student achievement the same was not the case where it was identified that academic achievement of all of the students could only be improved not just by increasing instructional time but by improving quality of teachers and teaching (Gromada & Shewbridge, 2016). Allocated time improves academic achievement of students if it is used to maximise engagement of students which in turn ensures effectiveness of academic learning time (Aronson, Zimmerman & Carlos, 1999). Lobez-Agudo and Marcenaro-Gutierrez (2020) have conducted an analysis of data from 24 countries who participated in Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS). The analysis came with very striking findings which refuted the claim that duration of instructional time is associated with academic achievements of all students. It further indicated that if instructional time is not effectively used and students are not motivated and engaged then there will be no benefit of increasing instructional time.

Academic achievements are positively correlated with time on task and students' active engagement (Godwin et al., 2012). Student achievement was significantly related to their behaviour and time spent during instruction. On-task behaviours enhance academic performance (Kelly & Shogren, 2014). The students use more strategies to regulate their on-task behaviours when they know that the teacher will motivate and encourage them (Patrick, Ryan & Kaplan, 2007). Hand raising to increase student's participation has a positive effect on their achievement (Caldwell, 2007). Response cards reduce 86% disruptive class behaviours. Response cards increase times on task from 12.5% to 100%. Reducing unwanted behaviours by actively responding to students during class is one way of enhancing their engagement.

Elementary teachers are expected to use strategies to minimise distraction in their classes to maximise academic achievement (Kelm et al., 2014; Flannery et al., 2014). Student's achievements in reading and mathematics were increased by controlling deviant behaviours of students (Johnson et al., 2013). Teachers may benefit from using strategies to prevent inappropriate behaviours/time wasters to maximise academic (Funches, 2017). Helping students to self-manage their avoidance behaviours during class enhances their academic achievement (Flannery et al., 2014). Strategies employed by teachers during instruction to control deviant behaviours could enhance academic skills of the students. Reinforcement particularly praise improves on task behaviours of students and their academic achievement. Teacher need to clearly define and articulate the activity segment in term that the student will understand, monitor the students and use unobtrusive language (Solomon, Tobin & Schutte, 2015). Academic achievement improves through better students-teacher relationships, student social relations and the feeling of safety and security in the class. Student engagement in class is a strong predictor of their achievement in mathematics (Akey, 2006). Frequent and corrective feedback keeps students engage on-task and thus results in high academic achievement (Hurst, 2013; Nadeem & Nadeem, 2013; George, 2016). Cognitive and emotional engagement results in high Grade Point Average (GPA) (Patel, Franco & Lindsey, 2013). Teachers who engage students in academic tasks by using different strategies which enhance student's connectedness with class, and they feel pleasure in learning, enhance their academic achievement (Sullo, 2007). Confirming responses of students by positive reinforcement, discouraging students' evaluation publicly, relationship building, caring relationship, safe and cared (Hargreaves, 2003; Weinstein & Mignano, 2003).

On-task behaviours increased when student feels connected with teachers. Teacher characteristics, instructional practices, classroom discipline, teacher-student relationship, and challenge in the curriculum are mostly associated with learning of students (Gentilucci & Gentilucci, 2016). Fan (2012) has identified a positive relationship between class climate and student achievement. Positive emotional climate and teaching that keeps students engage in class are associated with higher student achievement (Allen et al., 2013)

Academic achievements of students are dependent on one important factor that is teacher-child relationship (O'Connor & McCartney, 2007). Lack of positive interaction between student and

teacher and healthy relationship, needs to build consistent nurturing relationships (Myers et al., 2008). Interventions aimed to improve children academic achievement should focus on child-teacher relationship (O'Connor & McCartney, 2007)

Positive relationship with teachers enhances on-task behaviour of students and their achievement (Pianta et al., 2002). Teachers who fail to handle socio-emotional needs of students in class face more off-tasks behaviours (Lindo et al., 2014).

Students disengage in class due to various reasons and one of them is off-task behaviours. Children spend 10-50% of their time off-task (Lee, Kelly & Nyre, 1999). It is assumed that learning time may also be lost due to disruptive behaviour of students (Karweit & Slavin, 1981). Such behaviours not only impede student's ability to learn but their peers as well (Thomson, 2012). There is a strong positive correlation between deviant behaviours of students and their low academic achievement (Martella & Marchand-Martella, 2015). Off-tasks behaviours of students negatively impact learning and ultimately academic achievements of students (Nash, Schlosser & Scarr, 2016; Martella & Marchand-Martella, 2015; Claessens & Dowsett, 2014; Sezer, 2017). Students will engage in disruptive behaviours if there are no expectations, lessons are not properly planned, classrooms are not supervised, appropriate behaviours of students are not acknowledged or inappropriate behaviours were not promptly responded to (Simonsen, Sugai & Negron, 2008). Off-task behaviours are strongly associated with poor learning (Rybachuk, 2009) about one fourth of classroom time is spent off-task which gradually impacts teaching and academic achievements of the students (Fisher et al., 2015). Off-task behaviours impact academic achievement negatively as compared to on-task behaviours (Rybachuk, 2009). Off-tasks behaviours are linked to reduced academic engagement (Sabourin et al., 2011). Frustration and confusion occur when students experience challenging tasks (Sabourin et al., 2011).

The literature has identified a need to align teaching with academic achievements of students by focusing more on controlling behaviours of the students which influence their on-task attention. The researchers have identified less researchers globally and no research locally that investigates the impact of such teaching on academic achievement of students in Geography. This triggered the need to conduct the present research.

## **Hypotheses**

Following hypotheses were formulated to further guide the study:

1. Null Hypothesis 1: There is no difference in mean scores on pre-test of control and experimental groups. ( $H_{o1}: \mu_1 = \mu_2$ )
2. Null Hypothesis 2: There is no difference in mean scores on post-tests of control and experimental groups. ( $H_{o2}: \mu_1 = \mu_2$ )

3. Null Hypothesis 3: There is no difference in mean scores on pre-test and post-test of experimental groups. ( $H_{o3}: \mu_1 = \mu_2$ )
4. Null Hypothesis 4: There is no difference in mean scores on pre and post-test of control group. ( $H_{o4}: \mu_1 = \mu_2$ )

## Methodology

This was an experimental study and the researchers used pre-test post-test control group design.

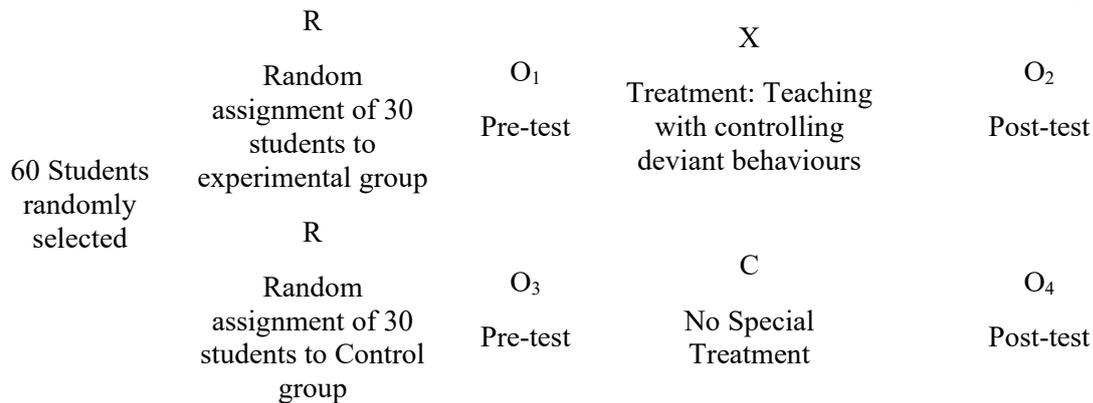


Figure 1: Randomised pre-test post-test control group design

The groups were selected through randomisation. The average age group of the students was thirteen years. The randomisation took place on the basis of the prior result of all of the subjects. Since the treatment period was right in the beginning of the new session, the last result of their annual examination was taken for this purpose. The result also showed the level of achievement of each and every student which was almost the same. One of the major reasons for choosing the randomisation is because it yields the best and the appropriate results and on the other hand, the factor of biasness is also removed or controlled. Regardless of the other factors the measurement of the effect is more efficient either of the control group or of the experimental group. This would ensure the maximum possible chances of the difference in the treatment of both the control and the experimental group. The population of this study was comprised of six sections of grade VIII students of a well reputed private school system of Lahore. The sample size was comprised of two sections out of six of which each section was comprised of thirty students. The age group of most of the students was 13 years  $\pm$  2 to 3 months. The academic year of the school closes in June and the report cards of the sample were used for matching purposes. Furthermore, the faculty members who taught these sections were also consulted to know anything significant about their performance which is not evident in their report cards. After getting all this information the process of randomisation was executed, sixty students were randomly assigned to control and experiment groups.

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## Treatment

The participants i.e., the students of the experimental group were given the treatment. Each treatment session was held two times a week, once in a session of thirty minutes and the other in a block lesson of sixty minutes. The total time for the interventions was almost 8 weeks and was executed in 16 lessons.

The main purpose of these interventions was to keep the students focused and “in the class” rather they were diverted in some random activities or virtual world. The interventions applied were all instructions, but they play a vital role in keeping the students “in the class” and did not let them loose or divert their attention. On the other hand, the interventions were applied as per the requirement or in the segments of the lessons where there were chances of disruption in the class which would have ultimately led to the distraction of the students diverging their attention and losing their focus from the lesson. One of the researchers is teaching Geography to grade VIII in the aforesaid school and was teaching the same in all six sections of the grade VIII. The investigator taught both the control and experiment group. While teaching Geography in the experimental group he planned the lessons and focused on the following strategies to minimise disruptive behaviours of the students and maximise engagement of students on-task:

1. Expectations about academic and social behaviors were made clear to the students.
2. Procedures for interaction were set, modelled and reinforced, especially for questions and answers during the session and interactions with teachers and fellow students.
3. Use of prompts and clues to help students to build answers.
4. Use of frequent proximity, withitness, pacing of momentum and eye contact.
5. Use of a wide variety of reinforcement strategies: praise, thumb up and recognition of efforts.
6. Expectations of seatwork and group work especially during video sessions of the lesson.

## Data Collection Instrument

Pre-test and post-test were used to collect data from control and experimental groups. The test was developed from the content of the Geography the investigators taught to both of the groups. The topics covered in the test content were: Plate Tectonics, Earthquakes and the Rocks and the Rocks Formation. The test was comprised of multiple-choice questions, completion type items, matching exercise and map study. The content validity of the test was ensured by developing table of specification and getting expert opinion from two senior teachers of Geography. The researcher’s pilot tested the instrument to check its reliability and conducted item analysis: item difficulty and discrimination. The reliability of the instrument was 0.98 which is excellent. According to Quagrain, Arhin and Hui (2017) item analysis is a process of

collecting, summarising and using information from students' responses to judge the quality of the test items. The pre-test comprised of 59 items and after item analysis 8 items were rejected.

## Findings

The four null hypotheses were tested by using independent samples t-test and paired samples t-test.

**Table 1: Comparison of mean scores on pre-test between control and experimental groups**

Test scores of pre-test	<i>N</i>	<i>M</i>	<i>S.D</i>	<i>t</i>	<i>p</i>
Control Group	30	37.93	11.83	0.974	0.334
Experimental Group	30	35.30	8.92		

Table 1 showed the comparison of scores on Geography between control and experimental groups based on pre-test. Independent sample t-test was applied to identify the differences. Independent sample t-test results showed that there were no statistically significant differences ( $t = 0.974$ ,  $p = 0.334$ ) in scores on Geography between control and experimental groups. Both control ( $M = 37.93$ ,  $SD = 11.83$ ) and experimental ( $M = 35.30$ ,  $SD = 8.92$ ) groups have equivalent scores on pre-test. The null hypothesis was failed to reject as the analysis did not find any evidence against it ( $H_0: \mu_1 = \mu_2$ ).

**Table 2: Comparison of mean scores on post-test between control and experimental groups**

Test scores of post-test	<i>N</i>	<i>M</i>	<i>S.D</i>	<i>t</i>	<i>p</i>
Control Group	30	39.53	14.99	-2.051	0.045
Experimental Group	30	46.58	11.39		

Table 2 showed the comparison of scores on Geography between control and experimental groups based on post-test. Independent sample t-test was applied to identify the differences. Independent sample t-test results showed that there was a statistically significant differences ( $t = 2.051$ ,  $p = 0.045$ ) in scores on Geography between control and experimental groups. Score of students included in experimental group ( $M = 46.58$ ,  $SD = 11.39$ ) was significantly different

from score of students who were part of control group ( $M = 39.53$ ,  $SD = 14.99$ ). The null hypothesis was rejected and the alternative hypothesis was supported ( $H_{o2}: \mu_1 \neq \mu_2$ ). This further indicated that teaching with controlling deviant behaviours of students have significant effect on achievement of students in Geography.

**Table 3:** Comparison of mean scores on pre-test and post-test of control group

Total Score	<i>N</i>	<i>M</i>	<i>S.D</i>	<i>r</i>	<i>Sig</i>	<i>t</i>	<i>p</i>
Total scores of pre-test	30	37.93	11.83	0.522	0.003	-6.54	0.518
Total scores of post-test	30	39.53	14.99				

Table 3 shows the result of pre-test and post-test of control group. Paired sample t-test was applied to investigate if any significant difference existed between the pairs regarding achievement in Geography. Paired sample correlations value was ( $r = 0.522$ ,  $sig = 0.003$ ) and it showed that there was a statistically significant relationship between pre-test and post-test of the control group. Paired sample t-test further indicated that there was no statistical significance difference ( $t = 6.54$ ,  $p = 0.518$ ) in the results of pre-test ( $M = 37.93$ ,  $SD = 11.83$ ) and post-tests ( $M = 39.53$ ,  $SD = 14.99$ ) of the control group on their achievement in Geography of Grade VIII. The null hypothesis was failed to reject as the analysis did not find any evidence against it ( $H_{o3}: \mu_1 = \mu_2$ ).

**Table 4: Comparison of mean scores on pre-test and post-test of experimental group**

Total Score	<i>N</i>	<i>M</i>	<i>S.D</i>	<i>r</i>	<i>Sig</i>	<i>t</i>	<i>p</i>
Total scores of pre-test	30	35.30	8.90	0.478	0.008	-5.83	0.000
Total scores of post-test	30	46.58	11.39				

Table 4 shows the result of pre-test and post-test of experimental group. Paired sample t-test was applied to investigate if any significant difference existed between the pairs regarding achievement in Geography. Paired sample correlations value was ( $r = 0.478$ ,  $sig = 0.008$ ) and it showed that there was a statistically significant relationship between pre-test and post-test of the experimental group. Paired sample t-test further indicated that there was a significant statistical difference ( $t = 5.83$ ,  $p = 0.000$ ) between the results of pre-test ( $M = 35.30$ ,  $SD = 8.90$ ) and post-tests ( $M = 46.58$ ,  $SD = 11.39$ ) of the control group on their achievement in Geography of Grade VIII. The null hypothesis was rejected, and the alternative hypothesis was supported ( $H_{o4}: \mu_1 \neq \mu_2$ ). This further indicated that teaching with controlling deviant behaviours of students have significant effect on achievement of students in Geography.

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## Conclusion

The results of the experiment actively reflected on the teaching practice and the techniques adapted for this experimental study which was designed to measure the impact of teaching with controlling attention diversion behaviours of the students. It was during this experimental study that the researcher explored that there was some instructional time that was not being used effectively or was not utilised to its full potential. This led to better and sound lesson planning and making the students involved in the classroom in the designed activities and making their time increased on task. With the incorporation of the interventions applied in the classroom during the experiment the students' attention was made highly focused and did not allow them to divert their attention away from the lesson. All this was shown in the analysis of the results as the students' achievement was highly significant.

The performance of control and experimental group was almost similar in pre-test and no statistical difference was found. After the intervention, which was based on teaching Geography by using certain strategies to control off-task behaviours of the students the achievement of experimental group was significantly different from the control group. This proved that teaching with controlling deviant behaviours of students' effect on their achievement.

## Discussion

The present study was in coherence with the study conducted earlier, discussed in chapter two, by Witt and Wheelless (2001) on the achievement levels of the students where the effect of low verbal and nonverbal immediacy affected the achievement of the students. This shows that when the students are under a proactive teacher who proves to be effective through their lesson planning and the use of strategies to keep the students focused and intact in the class. The ultimate result that yields is the high achievement of the students in their academics for the teacher is the one to give all the credit.

The present research has demonstrated that the cognitive gain of a student gains a higher level and is directly affected when an educator is able to identify the problem and when he or she works on correcting the learning problem. This leads to the concept discussed in the experimental study (Tubin, Likritz & Chen, 2004) on the interventions applied during the experimental study and the achievement of the students which showed that there is a net gain in the cognitive and the co-curricular achievement of the students if the applied interventions are planned and are in accordance with the context of the study.

The significant results of the study shows that the independent variable effects of teaching methods, class effects and patterns of cognition, has an effective impact on the dependent variable which were students of grade eighth (Einsiedler & Treinies, 1997) and in this study

since the results were significant, the teaching has affected the achievement of the students in Geography under their controlled attention diversion behaviours. This study goes parallel in the results with the experimental study, discussed earlier in chapter two, conducted by Einsiedler and Treinies (1997) showing that the teaching techniques and the effectiveness of the teacher directly links with the achievement of the students.

To reduce the gap in achievement of students, researchers are continuously studying and analysing the (Lindsay & Creswell, 2015) practices and techniques of improving educational area and by working on the quality of teachers and monitoring classroom size. Huang (2015) has suggested that to narrow down the gap of achievement of the students, the teacher has to play the key and vital role and is the major element and agent that can directly affect it. Teaching effectively by adapting all the possible strategies and the techniques is one of the only ways to control the attention diversion behaviour of the students (Cicekci & Sadik. 2019).

### **Implications**

Keeping in view the findings of the study the following implications were drawn for the concerned stakeholders:

1. Importance of lesson plan cannot be denied particularly in this context where every second counts. Teachers are supposed to plan lessons in such a way that no dead time penetrates when students have to deviate from the task.
2. Teaching is a conscious activity and a little deviation from the activity can invite students to exhibit off-task behaviors and that can impact on their learning and achievement.
3. Teacher education institutes should emphasize the importance of using such strategies which help teachers to enhance attention span of students during lessons.
4. School principals are expected to regularly observe the classes and identify instances when students deviate from task so that the maximum class time should be academic learning time.
5. Novice teachers are supposed to observe classes of seasoned and accomplished teachers to learn ways and means to reduce or minimize off-task behaviors of students during lessons.

### **Recommendations for Future Research**

To meet the requirements of the educational mandates by the teachers which are placed upon schools, the researcher has analysed that changing the instructional practices can directly impact on the learning and achievement of the students. Certain ideas were developed during the analysis of the results that can be helpful for the teachers and for the researchers to work with.



1. This study was conducted in a well reputed private school of the town with boys only. The study should be conducted with female students or within a setup where both boys and girls are in the same class so that gender as a mediator could be studied.
2. The study can be replicated in public schools of Lahore so that the comparison could be made between public and private institutions.
3. The study is calling the need to have more studies related to teaching learning process particularly classroom interaction patterns.



## REFERENCES

- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*(5), 369-386.
- Aronson, J., J. Zimmerman, and L. Carlos. (1999). Improving student achievement by extending school: Is it just a matter of time? *ERIC Working paper N° ED435127*. San Francisco, CA.
- Cicekci, M. A., & Sadik, F. (2019). Teachers' and students' opinions about students' attention problems during the lesson. *Journal of Education and Learning, 8*(6), 15-30.
- Claessens, A., & Dowsett, C. (2014). Growth and change in attention problems, disruptive behavior, and achievement from kindergarten to fifth grade. *Psychological science, 25*(12), 2241-2251.
- Einsiedler, W., & Treinies, G. (1997). Effects of teaching methods, class effects, and patterns of cognitive teacher-pupil interactions in an experimental study in primary school classes. *School Effectiveness and School Improvement, 8*(3), 327-353.
- Godwin, K., Almeda, V., Petroccia, M., Baker, R., & Fisher, A. (2013). Classroom activities and off-task behavior in elementary school children. In *Proceedings of the Annual Meeting of the Cognitive Science Society*, (Vol. 35, No. 35).
- Gromada, A., & Shewbridge, C. (2016). *Student learning time: A literature review*. OECD Education Working Papers, No. 127. Paris: OECD Publishing.
- Huang, H. (2015). Can students themselves narrow the socioeconomic-status-based achievement gap through their own persistence and learning time? *Education Policy Analysis Archives, 23*, 108.
- Karweit, N., & Slavin, R. E. (1981). Measurement and modeling choices in studies of time and learning. *American Educational Research Journal, 18*(2), 157-171.
- Kelly, J. R., & Shogren, K. A. (2014). The impact of teaching self-determination skills in the on task and off-task behaviors of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders, 22*(1), 27-40.
- Lindsay, E. K., & Creswell, J. D. (2015). Back to the basics: how attention monitoring and acceptance stimulate positive growth. *Psychological Inquiry, 26*(4), 343-348.
- Lopez-Agudo, L. A., & Marcenaro-Gutierrez, O. D. (2020). Instruction time and students' academic achievement: a cross-country comparison. *Compare: A Journal of Comparative and International Education, 1*-17.
- Martella, R. C., & Marchand-Martella, N. E. (2015). Improving classroom behavior through effective instruction: An illustrative program example using SRA FLEX literacy. *Education and Treatment of Children, 38*(2), 241-271.
- Quaigrain, K., & Arhin, A. K. (2017). Using reliability and item analysis to evaluate a teacher-developed test in educational measurement and evaluation. *Cogent Education, 4*(1), 1301013.



- Rybachuk, O. B. (2009). Off-task behavior and its impact on academic achievement of first graders. *UMI Dissertation Publishing*, 1-97.
- Sabourin, J, Rowe, J., Mott, B., & Lester, J. (2011). When off-task is on-task: The affective role of off-task behavior in narrative-centered learning environments. *Proceedings of the 15th International Conference on Artificial Intelligence in Education*, pp. 534-536.
- Sezer, S. (2017). Novice teachers' opinions on students' disruptive behaviours: A case study. *Eurasian Journal of Educational Research*, (69), 199-219.
- Silva, E. (2007). *On the clock: Rethinking the way schools use time*. Washington, DC:
- Simonsen, B., Sugai, G., & Negrón, M. (2008). Schoolwide positive behavior supports: Primary systems and practices. *Teaching Exceptional Children*, 40(6), 32-40.
- Thomson, M. M. (2012). Labelling and self-esteem: does labelling exceptional students impact their self-esteem? *Support for Learning*, 27(4), 158-165.
- Tubin, D., Likritz, R., & Chen, D. (2004). Educational achievements of graduates of an experimental elementary school. *Educational Research*, 46(2), 151-162.
- Witt, P. L., & Wheelless, L. R. (2001). An experimental study of teachers' verbal and nonverbal immediacy and students' affective and cognitive learning. *Communication Education*, 50(4), 327-342.