

**Research Article**

**Treatment For Disruption Of Smartphone Use In Learning Activity  
Through School-Wide Positive Behavior Support**

**Arina Mufrihah<sup>\*a</sup>, Nur Erlinasari<sup>b</sup>**

[a] STKIP PGRI Sumenep  
\*arinamufrihah@gmail.com

[b] SMA Muhammadiyah 1 Yogyakarta  
erlina\_bkiuino8@yahoo.com

**Abstract:** This study is purposed for guiding students to use their smartphone approximately and opportunely through School-Wide Positive Behavior Support (SWPB). Location of this research was at SMA Muhammadiyah 1 Yogyakarta which used Classroom Action Research and Spiral Self-Reflective as its design. The research process was undertaken within two cycles where each cycle consists of the planning phase, action phase, and reflection phase. Group counseling and individual counseling were applied as the form of SWPB in which students who received these services were selected purposively. All data collected through observation, questionnaire, and interview. Respondents participated cooperatively during counseling service sessions; as a result, they can manage their selves to not use smartphone unless it is necessary for learning resource and assignment in the classroom.

**Keywords:** group counseling; individual counseling; school-wide positive behavior; smartphone

GUIDENA: Jurnal Ilmu Pendidikan, Psikologi, Bimbingan dan Konseling  
Website : <http://ojs.fkip.ummetro.ac.id/index.php/bk>

Received: 2017-01-05. Published: 2017-06-31.



This is an open access article distributed under the terms of the [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium provided the original work is properly cited.

## INTRODUCTION

Smart phone or smartphone is a significant need for the people in this era, even now widely used in learning by teachers and students. Lee (2014: 20) conducted a study on 314 high school students and found that 84% have a smartphone. Mobile phones can be used to download learning resources (Miranda et al., 2011: 81). Also can overcome the obstacles of learning that occurs in the previous era, where the model devices such as smartphones deliver innovations, helping students, teachers, and parents to obtain access learning easily (West, 2013: 1). Today was almost all schools and teachers in secondary schools allow their students to bring cell phones and smartphones into the school environment and even into the classroom because of the perception of the teachers have already begun about a smartphone that features that are available in today's mobile phones can help Students in completing school work (O'Bannon & Thomas, 2014: 15).

However, the use of smartphones in the school gradually lead to impacts that are not expected. It's not about how smart phones can be worked or operated, but in readiness, maturity, and wisdom of smartphone users among students. Students in SMA Muhammadiyah 1 Yogyakarta bring mobile phones to schools, especially in grade XI IPA 7 using them during classroom learning activities; playing games, using a headset, and open social media. A total of 18 (out of a total of 33 students of class XI IPA 7 Muhammadiyah 1 Yogyakarta) students to explain why students use the same smartphone with KBM, which is the primary factor of boredom, do not understand the teacher's explanation, and prefer to read the material from the website because it is more easily understood. The students prefer to find content on the internet because it is more complete than the material in the book.

Problem use of smartphones that are not appropriate and timely course need to get the solution and the support of all leaders and teachers in the school. To create the support of all parties, the School-Wide Positive Behavior Support (SWPB) may be an alternative. SWPB a strategy to deal with behavior problems through the application of behavioral, social

learning, and organizational behavioral principles (Bradshaw, Mitchell & Leaf, 2010: 133). A good SWPBS conceptual model includes: (1) contains the principle of behavior analysis application; (2) is a prevention program that is multi-tiered logical from a community health; (3) are used appropriately as a universal screening and progress monitoring; (4) integrating education behaviors and practices to improve behavior and learning; And (5) exploit technological sophistication (Horner, Sugai & Anderson, 2010: 5; Coffey & Horner, 2012: 407; Bliese, 2013: 131).

In Agustus 2009 recorded more than 1,000 schools in the United States adopted SWPBS (Bradshaw, Koth, Thornton & Leaf, 2009: 100) with three stages of implementation, the primary intervention, secondary intervention and tertiary intervention where each stage contains implementation specific and contain system Used to direct the implementation (Sailor, Dunlap, Sugai & Horner, 2009: 44). SWPBS is often used to address student discipline problems in schools to improve student discipline (Jovilette et al, 2014: 63). And aimed to improve social behavior and school-level academic achievement (Gage et al, 2013: 17).

Technological sophistication can also be integrated into implementing SWPBS. As performed by Bromley (2012: 340) that apply classroom reading with the use of smartphones. While Miranda et al (2011: 89) explains that the use of e-reader among students managed to improve students' reading ability even if through a process that is not short. Tillmann et al (2012: 157) argue that the technological sophistication of mobile phones that exist in the digital age has replaced the era of paper, then teachers need to innovate learning using a method close smartphone trend to expand the effectiveness of teaching. A study in South Korea showed that the use of smartphones in the education impact on improving student achievement (Hur & Oh, 2012: 295).

Empirically primary prevention of SWPBS successfully used and showed the desired results in 4-6 days for students (Bradshaw et al, 2009: 152). Thus Bradshaw, Mitchell & Leaf (2010: 140) suggests that SWPBS operated in schools consistently shows a decline in the number of counseling services because students get a better academic

achievement. Implementation of SWPBS at the baseline is associated with reduced student behavior regarding discipline, disruption, and academic and improves school security systems for students (Nelson, Hurley, Synhorst & Epstein, 2008: 29). Users SWPBS in school have improved outcomes student's academic, where SWPBS focused on the connection between the problematic behavior with the academic performance of students (McIntosh, Flannery, Sugai, Braun & Cochrane, 2008: 66; McIntosh, Bennett, & Price, 2011: 46).

Referring to the focus of the problem that students use smartphones in addition to the needs of the learning activities in the classroom and on the basis of empirical studies regarding the use of SWPB as interventions to address the behavior and attitude of student learning, the goal of this research is to direct the behavior of high school students Muhammadiyah 1 Yogyakarta so to used smartphone of appropriate and timely in teaching and learning through the School-Wide Positive Behavior Support.

## METHOD

This research uses a Class Action Research (PTK) with a Self-Reflective Spiral design which consists of planning, action stage, and the stage of reflection. There are two cycles in this model are:

Table 1.Spiral Self-Reflective

Cycle I	planning actions implementation of actions Reflecting on the process and outcome measures Re-planning
Cycle II	Implementation of actions based on the result of reflection and re-planning Reflecting on the implementation of the second cycle Compiling the results of the second implementation cycle

In the second cycle of the self-reflective spiral model of these researchers used school-wide positive behavior support as action learning in the realm of guidance and counseling services to address the problem of students who have been identified previously. The respondents are 7 students were selected purposively through consideration of: (1) the

respondent is a student of XI IPA 7 SMA Muhammadiyah 1 Yogyakarta; (2) the respondent is always repeated use of smartphones along with the lesson.

## Data collection technique

### Observation

Researchers shared one observer force observed during the PTK progress. The object to be observed, namely: (1) the material services (learning); (2) application of positive behavior in the classroom techniques; (3) the focus of observation of students in a class; (4) changes in patterns of use of smartphones in the classroom; (5) communication between students and teachers BK; and (6) the activities carried out in the classroom.

### Questionnaire

Questionnaire semi-structured and semi-open is used to collect data from the student's perspective is related to how school-wide positive behavior can help students overcome learning problems, how to change the attitude of student learning by improving the usage habits of smartphones, and how the students' responses to support all teachers of subjects in the classroom.

### Interview

Interview prepared for students who can not cope smartphone usage disorder though has followed the group counseling sessions. Interviews conducted at the same time in individual counseling sessions to further determine the obstacles and heaviest factor for students in developing attitudes and motivation to learn in the classroom related to the use of smartphones.

## Material and Procedure

### Diagnosis

At this stage the researchers collected the necessary data before any action was planned, the data in the form of (a) the data of student achievement using smartphones when learning takes place; (B) information descriptive of the subject teachers related to the use of smartphones in the classroom; (C) the graphic data of the students' learning motivation of teachers BK ever provide related services to students and of teachers of subjects; (D) to analyze all types of data obtained from three types of data at the beginning; and (e) drafting

a school-wide positive behavior support in accordance with smartphones use disorder diagnosis results in the classroom.

### Planning

Activity in the planning stages include: (1) create care plans BK within the framework of school-wide positive behavior in accordance with the results of the need assessment of students; (2) prepare observation sheets and semi-structured questionnaire as a data collection tool during these procedures; (3) promoting positive behavior of the services on the teachers, the purpose of the service and its benefits for students; (4) cooperating with the teachers and principals in implementing positive behavior design services; (5) puts all the research subjects were identified using smartphones in the classroom to get counseling group; (6) set the individual counseling sessions for subjects with a more crucial problem in the use of smartphones and their impact on activity and motivation to learn.

### Observations

This observation Stages contain the following activities: (a) fill the sheet observations about the activity giving positive school-wide behavior support in setting group counseling; (B) to observe the form of teacher support towards the implementation of positive behavior; (C) and noted the important things that happened during the delivery of services given to the students' positive behavior.

### Reflection

Observation data is then used as the material for the conduct of the organization and analysis of data to prepare and conclude the research. Reflections on the first PTK cycle is done to organize and analyze data from the learning action pre-planned in the first cycle and the conclusion to make improvements to the learning cycle 2. Before entering the second cycle action, researchers reconstitute learning action plan for cycle 2 based on the data which has been concluded in the first cycle of reflection, and reflection of the learning action cycles performed after observing the action cycle 2. the second cycle is the cycle last PTK which provide the final data regarding the results of the study.

## RESULT AND DISCUSSION

### Implementation Cycle 1

#### First meeting

BK teachers and subject teachers collaborate to address, manage, and exploit the use of smartphones that students have during the learning activities take place.

Table 2. Forms Collaboration BK Teacher and Teacher Mapel

No	Stages Collaboration
1	<ul style="list-style-type: none"> <li>a. Socialization SWPB</li> <li>b. The consequences of a breach of contract learningsmartphone students who had been seized and then handed over to the teacher BK</li> <li>c. Students who confiscated his cell phone to get the service before getting his phone back</li> </ul>
2	<ul style="list-style-type: none"> <li>a. BK teachers and subject teachers to discuss material that will be presented by utilizing smartphone</li> <li>b. Subject teacher conducting a lesson activity by using a smartphone as a learning resource related to the material covered and tasks to be performed students in class</li> </ul>

Teachers were applying for a student learning contract with subject matter that does not need to use and is not allowed to use a smartphone during the learning activity. Teachers and students agree that the specific subject matter of teachers said that none of the students were allowed to use either a smart phone to search for material, listen to music, reply to messages on your phone or social media, and gaming. Consequently, if there are students who violate the teachers of subjects entitled to seize the student's smartphone for a while and gave it to the teacher BK, then to get the phone back student will need to meet the teacher and get the services of BK teachers.

After creating a learning contract regarding the use of smartphones during the class, students are given time to read the material in the text book independently, then the students listened to the teacher and asked about things that are not understood from the subject matter. Most students already seen to be using smartphones for teachers do not instruct students to find learning resources from the internet. Students save smartphone in bag and uniform pocket. Of the overall observation, there are certain students who use

smartphones for social media and playing games by stealth, holding a smartphone under the table to avoid being seen by the teacher.

This learning contract is effective for most students, but there are still some students who use mobile phones secretly like to position the phone under the desk drawer and hide behind a veil of earphones for listening to music.

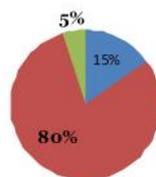
### Second meeting

Teachers of subjects began designing teaching methods by not only describing the material (especially social studies) but how to direct students to take advantage of smartphones in the classroom. The focus in this second strategy is to how smartphones are a learning resource for students as a second reference textbook.

In subjects PPKn, teachers guide students to download electronic books that are relevant to the subject. There are two themes, each in a different meeting. First, students are assigned to make an opinion. To strengthen students' ideas are welcome to quote from text books and articles on the internet. On the second material, the teacher explains the discussion first. During the learning process of students take advantage of smartphones to pick up references to a given task. Students are greatly helped by the smartphone as a learning resource in doing the task.

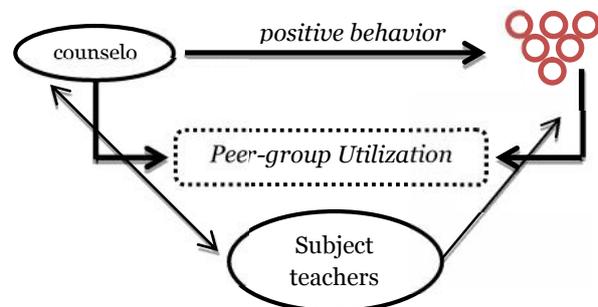
SWPB conducted collaboratively by teachers of subjects successfully applied in teaching and learning in the classroom, especially in directing students to use the smartphone of appropriate and timely. The following student opinion regarding the smartphone as a medium of learning.

Figure 1. The Opinion Students of application Smartphone on the learning



As many as 80% of students believe that the smartphone can be useful in the learning process but must be adapted to the material

Figure 2. Model Group Counseling SWPB



and not all subjects need a smartphone as a medium. By contrast, 15% of students say that any lessons can take advantage of a smartphone as a medium of learning for all the material can be searched via the Internet. While 5% of students believe that the smartphone disrupt classroom activities and better not to use in learning.

Most students only use a cell phone as instructed by the subject teachers when teachers require students work on assignments in class and must be resolved immediately, then in the method of learning so students find material and references from the Internet. Nevertheless, there are still some students who use a smartphone other than for learning activities. Then the number 7 of these students receive group counseling services.

Collaborative counseling services within the framework of SWPB done so that teachers also take a role in directing the student to use a smartphone. Students are not completely prohibited from using smartphones in the classroom, but how and to what used smartphones during a lecture.

This is in line with the objectives SWPB which is a process to develop the ability of schools to implement the behavioral intervention both for prevention and treatment of behavior problems learn to take advantage of technological means (Horner, Sugai & Anderson, 2010: 5; Coffey & Horner, 2012: 407; Bliese, 2013: 131).

### Third meeting

Group counseling is only given to students who violate the learning contract agreed upon by students and teachers of

subjects. Some seven students in class XI IPA 7 was found to always use the smartphone for purposes other than learning, especially when smartphones not needed as a medium of learning. Group counseling is given emphasis on: (1) positive behavior, namely on how the student can control his desire to use a smartphone that can interfere with the understanding of the subject matter; and (2) peer group utilization, which utilize the support among peers in the counseling group to give expression to the expression of emotions and thoughts, supporting each other not to use smartphones in the classroom when the teacher does not allow, and sharing solutions.

During the group counseling session, the counselor emphasizes on positive behavior, ie, how to make students be able to control yourself to not always want to use the smartphone for unneeded in learning activities in the classroom. In this case, the counselors teach coping skills in students. Coping skills are taught is self-talk and self-evaluation include: (1) positioned between the lesson and smartphones priority; (2) rationally weigh yourself losses obtained when using smartphones in the classroom; (3) assessing the behavior of the past as to what happened to me when using a smartphone during the learning takes place; and (4) make a commitment to yourself to not using smartphones back when the lesson.

In the process of counseling, the counselor is not only positioned itself as a provider of services but directs students to take advantage of the group. Pemanfaatan among groups of peers, here the students to talk to each other, led by counselors, students, in turn, reveals the reasons why students used a smartphone during the lesson. Based on the information the students, the dominant factor is that students are bored with the subjects that are presented descriptively using lecture and the rest of the assignment.

After each student is given the opportunity to speak from the standpoint of personal, then students are asked to assess whether the behavior is appropriate or not, the last students give each other feedback on the solution of the problem and are committed to jointly transform learning behavior into a more positive direction.

Application of counseling these groups into account the criteria in SWPB namely: adjusted to the students, to get specific data about the behavior of students who will receive the service, the service targets to be achieved adjusted to the class that students live in, the target population have certain behaviors that are aimed at improving behavioral, services supported by the principal and teachers, focused on handling the problem behavior, and there is a conceptual theory as a foundation for applying behavioral analysis.

BK teachers communicate the results of group counseling services that have been given to students to teachers of subjects and requested the cooperation of subject teachers to participate and observe whether there change classroom behavior on the 7th of students post-counseling group. The observation of the subject teachers into teacher evaluations for BK to decide next intervention if there has been no significant change. Finally showed that 5 of 7 students showed positive changes; students can do regulate itself in the use of smartphones; these students no longer use their cell phones unless permitted by the subject teachers. Group counseling services show the integration between student behavior and learning activities to improve behavior and better learning.

While two other students showed no change in the behavior of smartphone use in the classroom. Two students in group counseling states that do not have interest in the subject, the value of learning outcomes on average, are not enthusiastic about any subject, and always use a smartphone during the lesson in almost every subject.

## **Implementation Cycle 2**

### **First meeting**

Both students do not simultaneously receive individual counseling services. In male and female students of the teacher BK emphasis on behavioral change by starting to recognize the interest in the subject, change the direction of the use of smartphones, in the beginning, has always been to listen to music and social media be looking for a source to learn about the subject matter that is not understood, and work on assignments that have been agreed in counseling sessions. Each student gets a different action depending on the

results of observations and the results of the assessment were to produce data on the condition and needs of each student.

Table 3. Proses Individual Counseling

Counselee	Stages of Counseling
students AL	<ul style="list-style-type: none"> <li>• Build a sense of trust and openness students</li> <li>• Identifying external factors and internal</li> <li>• Figuring out student interest</li> <li>• Collaborate with teachers</li> <li>• Trains students to conduct coping skills</li> <li>• Commitment to apply coping skills</li> </ul>
students NA	<ul style="list-style-type: none"> <li>• Steeped factors why students do not have an interest in teaching</li> <li>• Identify environmental factors and support from parents</li> <li>• Analyzed the lessons what little demand by students</li> <li>• Students receive training on coping skills related to the use of smartphones that disrupt learning activities in the classroom</li> <li>• Students commit to implementing coping skill and develop interest in learning</li> </ul>

Through individual counseling, students begin to understand the factors that influence the attitude of learning and interest of the students towards subjects. Through more intensive communication students willing to explain the reasons why it does not have a stake in learning activities in the classroom so that the use of smartphones in the classroom. In this first session students planning stage of completion of problems ranging from internal factors, namely to identify interest in subjects and apply coping skills that have been taught to try not prioritize in-class smartphone.

### Second meeting

Both students as counsees in individual counseling has implemented coping skills such as self-talk and self-understanding that has previously been practiced in the first session. But students still experiencing problems not to use a smartphone during the learning activity, especially in the use of social media. To that end, at the second meeting, the two students get interventions include:

Table 4. Konseling Individual Session 2

Stages of Counseling
1. Recognize the external factors
2. Change the location of storage and smartphone settings when in the classroom
3. Students consider the impact of the use of smartphones and the subject matter of learning achievement
4. Consider other consequences that harm themselves can
5. Fostering a sense of shame because of the problems that students do
6. Commit yourself to realize plans made in individual counseling
7. Request watch list second-grade teacher, especially at students on smartphone usage habits in the classroom

Activities are undertaken by the counselor and counselee focus more on how to reduce the habit of using a smartphone that is not needed in learning activities in the classroom. In reality, the AL student class looks like the other students who follow learning as possible, put in a bag smartphones, social media change notification settings, so it does not know when there is a message, and students AL not seen lazing during a lecture.

While students NA also do the same thing and no longer skipped out of the classroom when teaching. NA students still put the smartphone in a pocket uniform but did not wear any notifications on social media to keep the focus on the subject matter presented teachers to KBM ends. Self-talk is done before the start of teaching and greatly assist students to drive themselves more focused and serious lesson.

AL and NA students successfully apply coping skills and carry out the commitment made in the 2nd session of counseling associated with a place to store and smartphone notification settings so that external factors cause the problem can be resolved. Observations show that students do not use a smartphone during the teaching process take place by the commitment in counseling and learning with a teacher contract that was already agreed upon.

In individual counseling coping skills is essential to equipped with the students so that students have the sensitivity to understand the problem and know how to solve problems

independently by existing capabilities. The results achieved in the cycle 2 is in line with application SWPB by previous investigators showing that SWPB reduce the number of counseling services (Bradshaw, Mitchell & Leaf, 2010: 140), reduced disciplinary problems, disruption, and academic (Nelson, Hurley, Synhorst & Epstein 2008: 29), and can overcome a significant problem behavior (McIntosh, Bennett, & Price, 2011: 46).

## CONCLUSION

SWPB can lead students to use the smartphone of appropriate and timely. In cycle 1 SWPB implemented in the form of group counseling that focuses on positive behavior and utilizes peer-group dynamics. Through this group counseling of students managed to control their behavior in the use of smartphones and support each other not to use smartphones in the classroom. Service individual counseling in cycle 2 assists students in understanding the problems posed by the use of smartphones to learning, knowing the causes of internal and external, determine solutions and problem-solving strategies, implement coping skills to deal with nuisance use of smartphones, and change the behaviors that lead students to always want to use smartphones in the classroom.

## REFERENCES

- Bliese, J. 2013. The Effects of School-Wide Positive Behavior Supports. Dissertation. Baker University: Graduate Department and Faculty of the School of Education.
- Bradshaw, C., K. Debnam, Koth, C., & Leaf, P. 2009. Preliminary Validation of The Implementation Phases Inventory for Assessing Fidelity of School-Wide Positive Behavior Supports. *Journal of Positive Behavior Interventions*. 11 (3), p. 145-160.
- Bradshaw, C., Koth, T., & Leaf. 2009. Altering School Climate Through School-wide Positive Behavioral Interventions and Supports Findings from a Group-Randomized Effectiveness Trial. *Prevention Science*. Vol.10, p.100-115.
- Bradshaw, C., Mitchell, M., & Leaf, P. 2010. Examining the Effects of School-wide Positive Behavioral Interventions and Supports (PBIS) on Student Outcomes: Results from a Randomized Controlled Trial Effectiveness in Elementary Schools. *Journal of Positive Behavior Interventions*. Vol. 12, No. 3, p.133-148.
- McIntosh, K., Flannery, KB, Sugai, Ge., Braun, D., & Cochrane, K. 2008. Relationships Between Academics and Problem Behavior in the Transition From Middle School to High School. *Journal of Positive Behavior Interventions*. DOI: 10.1177 / 1098300708318961.
- Bromley, K. 2012. Using Smartphones to Supplement Classroom Reading. *The Reading Teacher*. Vol. 66 (4), p.340-344. DOI: 10.1002 / TRTR.01130.
- Coffey, JH, & Horner, RH 2012. The Sustainability of Schoolwide Positive Behavior Interventions and Supports. *Exceptional Children*. Vol 78, No. 4, p.407-422. DOI: 10.1177 / 001440291207800402.
- Gage, NA, Sugai, G., Lewis, TJ, & Brzozowy, S. 2013. Academic Achievement and School-Wide Positive Behavior Supports. *Journal of Disability Policy Studies*. DOI: 10.1177 / 1044207313505647.
- Horner, RH, Sugai, G., & Anderson, CM 2010. Examining the Evidence Base for School-Wide Positive Behavior Support. *Focus on Exceptional Children*. ISSN. 0015-511X. Vol. 42, Number 8, p.2-16.
- Hur, JW, & Oh, J. 2012. Learning, Engagement, and Technology: Middle School Students' Three-Year experience in Pervasive Environments Technology in South Korea. *Journal of Educational Computing Research*. Vol. 46, No. 3, p.295-312.
- Jovilette, K., et al. 2014 School-Wide Positive Behavior Interventions and Supports in Residential School for Students With Emotional and Behavioral Disorder: First Years of Implementation and Maintenance Follow-Up Focus Groups. *Residential Treatment for Children & Youth*. Vol. 31 (1), p.63-79. DOI: 10.1080 / 0886571X.20.
- Lee, EB 2014. Facebook Use and Texting Among African American and Hispanic Teenagers: An Implication for Academic

- Performance. *Journal of Black Studies*.  
DOI: 10.1177 / 0021934713519819.
- McIntosh, K. Bennett, JL, & Price, K. 2011. Evaluation of Social and Academic Effects of School-Wide Positive Behavior Support in a Canadian School District. *Exceptional Education International*. ISSN. 1918-5227. Vol. 21 (1), p.46-60.
- Miranda, T., et al. 2011. Reluctant Readers in Middle School: Successful Engagement With Text Using the E-Reader. *International Journal of Applied Science and Technology*. Vol. 1, No. 6, p.81-89.
- Nelson, JR, Hurley, K., Synhorst, L., & Epstein, M. 2008. The Three-Tiered Nebraska Behavioral Prevention Model Case Study. *Schoolwide Prevention Models: Lessons Learned in Elementary School*. New York; Guilford.
- O'Bannon, B., & Thomas, K. 2014. Teacher Perceptions of Using Mobile Phones in the Classroom: Age Matters !. *Computers & Education*. Vol 45, p.15-25. DOI: 10.1016 / j.compedu.2014.01.006.
- Sailor, W., Dunlap, G., Sugai, G & Horner, R. 2009. *Handbook of Positive Behavior Supports*. New York: Springer.
- Tillmann, N., et al. 2012. The Future of Teaching Programming is on Mobile Devices. *ITiCSE '12 Proceedings of the 17th Annual ACM Conference on Innovation and Technology in Computer Science Education*. ISBN: 978-1-4503-1246-2, p.156-161. DOI: 10.1145.2325296.2325336.
- West, DM 2013. *Mobile Learning: Transforming Education, Engaging Students. And Improving Outcomes*. Center for Technology Innovation. September, p.1-17.