



# D3.1 Implementation report for SWPBS Tier 1

Cyprus

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## Introduction

### WP3: Implementing SWPBS in primary schools

Under the WP3 (“Getting off” the ground: Implementing SWPBS in primary schools), Cyprus partners implemented the experimental protocol for supporting student socio-emotional needs using the Tier 1 SWPBS framework for 3 years (including project extension period). This report describes in detail the implementation of Tier 1 intervention in Cyprus school each year from the recruitment process until the preliminary analysis of data and extraction of conclusions. During this implementation quantitative and qualitative data were collected. Extensive data analysis and results examining the impact of the intervention and the overall attainment of project’s objectives throughout the 3-year period of reference are presented in the Final Evaluation Report (D5.5). Specifically, the aims of WP3 achieved by implementing Tier 1 intervention in Cyprus primary schools include:

- Implement SWPBS Tiers 1 training manuals across school teams in Cyprus,
- Coach and support school teams on SWPBS tiered implementation during project duration in Cyprus,
- Provide professional development trainings to whole staff during project duration in Cyprus,
- Collect empirical evidence on SWPBS impact and procedures.

The information included in this report, along with reports prepared in other WPs (e.g., WP5: Evaluation) will be used to influence national and European policies and evidence-based practices on creating school-wide learning environments with emphasis on safety, social inclusion and equity.

## The Tier 1 SWPBS theoretical framework

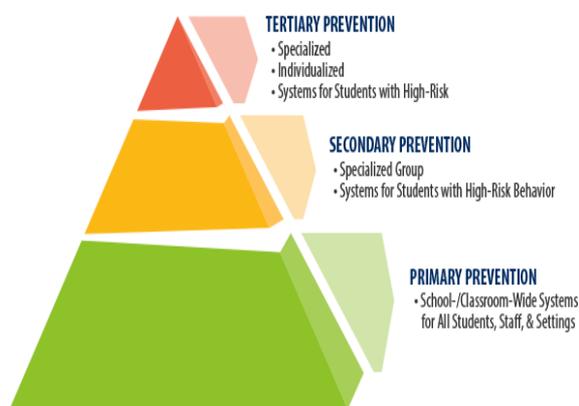
School-wide Positive Behaviour Supports (SWPBS) is “an implementation *framework* for maximizing the selection and use of evidence-based prevention and intervention practices along a multi-tiered continuum that supports the academic, social, emotional, and behavioural competence of all students” (U.S. Office of Special Education Programs [OSEP], Technical Assistance Centre on Positive Behavioural Interventions and Supports, 2018, p.1). Extensive research knowledge base has been established in USA, where SWPBS has been researched and implemented for more than three decades reaching out to more than 26,000 schools (OSEP, 2018) and acquiring an extensive knowledge base on SWPBS implementation, scalability and sustainability. So far, three meta-analyses have been conducted giving support to Tier 1 SWPBS positive impact on school outcomes (Mitchell, Hatton, Lewis, 2018; Chitiyo, May, & Chitiyo, 2012; Horner et al., 2010).

The objective of SWPBS project is to develop, implement and experimentally study three -tiered Support for behavior problems in schools. The three-tiered support can be described as a preventative model, where the goal is to change the way school responds to problem behaviours. Tier 1 is called universal support or prevention and includes definition of school wide behaviours expectations, expected

behaviours in different school locations, teaching of the behaviours and reinforcing expected behaviours by positive feedback. In this project universal support were built to new schools in Cyprus, Greece and Romania whilst schools in Finland concentrated on developing Tier 2 and Tier 3 supports.

## SWPBS framework's elements

SWPBS aims to establish an inclusive non-discriminatory social culture and necessary socio-emotional and behavioural supports for all children in a school. It is a systems-change approach and NOT a packaged program or a social skill curriculum; it enhances the capacity of schools, families and communities to design effective and efficient learning environments that (a) address student needs by providing a continuum of supports; (b) monitor regularly the implementation of evidence-based practices (EBPs) and outcomes, and (c) follow data-based decision making through continuous data-collection process (Horner, Sugai, & Lewis, 2015). This systems-change approach requires at least 3-to-5-year investment to efficiently differentiate behavioural instruction for all students across three tiers, as presented in the above diagram (OSEP, 2017).



Tier 1 support (Universal/Primary prevention) is built on the assumption that all children can exhibit appropriate behaviour. As a result, school staff is trained, coached and supported to assess the contextual setting events and environmental conditions and incorporate evidence-based practices and resources to increase the probability of appropriate behaviour. Teachers work to effectively teach, encourage and model school-wide values (e.g., respect, safety, responsibility) and appropriate behaviours (e.g., respect means use kind words and actions) to all children across all school areas (e.g., classroom, hallways, playground). Staff engage families and students in developing a universal positive and inclusive language about school's vision and mission, identifying school-wide social values, teaching explicitly expected behaviours and routines, recognizing student and teacher positive behaviours, and providing corrective feedback on student social errors inside and outside of classrooms. Teachers are trained and supported through an active SWPBS leadership team and an external SWPBS coach. Families are encouraged to use the common language and social expectations at home. Current research evidence on Tier 1 points out the importance of implementing Tier 1 with fidelity prior to moving to Tiers 2 and 3 (Bradshaw, Reinke et al., 2008; Kim, McIntosh, & Hoselton, 2014). Doing so, it produces the maximum behavioural and academic outcomes for students.

SWPBS is a systems-change framework that includes four main elements:

1. **Outcomes:** these are the expected goals to be achieved after implementing each tier of support in a school.

2. **Systems:** include external and internal supports provided to strengthen adults' behaviours in implementing SPWBS practices. Specifically, for Tier 1 implementation an external behavioural support coach provides on-site consultation and training to a SWPBS core team (leadership team). Training includes defining school vision and social values and expected positive behaviours, designing an instructional social skill approach to teach those behaviours, setting up a recognition system to reinforce student positive behaviours, designing a hierarchy of consequences to manage problem behaviours, and collecting data to make informed-based decisions with respect to student needs and procedural issues. The school leadership team, with the assistance of the external coach, trains and engages the rest of the school staff in putting the above elements in place. School administration is actively involved and guiding the implementation process and ensuring for staff buy-in.
3. **Data:** pertain to two sets of data (a) student data with respect to problem behaviours, attendance, academic achievement performance, and (b) fidelity of implementation.
4. **Practices:** This element focuses on implementing evidence-based strategies to support student behaviour. For Tier I, practices include teaching, recognizing, correcting and re-teaching student social behaviours. All adults in a school are expected to follow a common instructional approach to promote school vision and values.

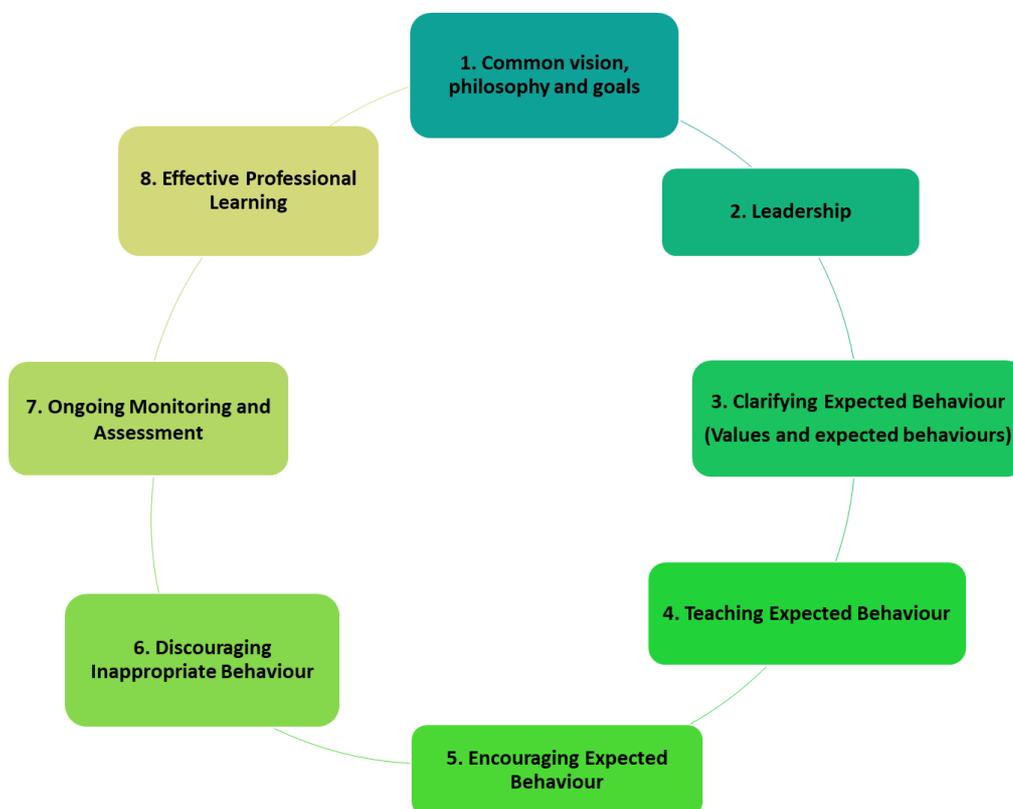


## SWPBS Tier 1 processes

The first level of prevention (Tier 1) includes eight basic elements guiding the implementation. For a school to implement the intervention with fidelity and reach to impactful results must implement each one of the elements. The diagram below shows the problem-solving approach school teams will incorporate as they will be working towards building:

- common school vision around creating positive school climate and developing positive student-teacher relationships
- common philosophy on discipline (i.e., emphasis on positive instructional approach to support student socio-emotional needs and problem behaviours rather than using reactive negative behavioural management strategies)
- universal language on 3-5 school-wide expectations (e.g., “be tolerant” “be respectful” “be cooperative” “be responsible”) and behavioural rules (e.g., “be respectful waiting for your turn” “be responsible following directions” “be cooperative sharing materials”)
- use of common social skill lesson plans to teach behavioural expectations in classroom and non-classroom settings. All teaching staff gets involved in teaching behavioural lessons

- school-wide recognition system for acknowledging student performance on social expectations
- use of hierarchy of consequences to discourage problem behaviours
- use data to monitor student social performance and record student severe problem behaviours



The SWPBS problem-solving framework provides teachers with evidence-based instructional practices and classroom management skills to create inclusive, positive classroom environments for all students. The project follows a systems-change approach, which means that the biggest impact on improving student behavioural and academic outcomes, school climate and teacher work satisfaction will come as a result after working with the entire school. In addition, the school becomes the “host environment” for preventing serious problems by training and coaching school to staff adopt and use evidence-based practices inside and outside of classrooms (e.g., Waasdorp et al., 2012).

## The implementation of Tier 1 Intervention in Cyprus

### Country Context

The formal educational system of Cyprus is highly centralized with the Ministry of Education, Culture, Sports and Youth (MOECSY) being the authority for decision-making related to school finances, staff

recruitment and curriculum content. The majority of policies are top-down and limited liability is given to the regional offices or schools. However, as part of the recent educational reforms, schools are given some autonomy to conduct their own yearly needs assessment and develop a school-wide action plan in an effort to enhance school administrative and pedagogical effectiveness. At a policy level, systems to support students' socio-emotional development and social behaviour are scarce. Therefore, the effective management of students' inappropriate behaviours in the school remains a major challenge for teachers.

During the academic year 2018/2019, for which the latest data are available, there were 361 primary education schools in Cyprus (330 public and 31 private schools). These schools employed 4.624 teachers (4.135 in public and 489 in private schools), serving 58.060 students (52.095 in public and 5.965 in private schools) in total. There is a great variation among schools in Cyprus.

## Related policies

**School Guide on Code of Conduct Against Racism:** The Ministry of Education, Culture, Youth and Sports in Cyprus has developed a school guide, entitled "*Code of Conduct Against Racism and Management of Racial Incidences*", which purports to provide information and prevention guidelines to school staff on human racism and how to identify, manage, and record incidences of racism in school. It constitutes a policy document, which comprises of two (2) parts that target primary and secondary education. The first part pertains to the Code of Conduct that addresses the rationale and importance of having such prevention school policies in place and states the responsibilities and commitments of each school member. The second part presents the management steps towards dealing with racism incidences, including the delivery of any punitive measures. School staff is asked to record each racism occurrence daily via the "Racism Incidence Recording Form" and annually via the "Annual Reporting Racism Incidences".

The general objectives of the "Code of Conduct Against Racism" are to:

- Protect children's rights, as defined by the International Convention on the Rights of the Child
- Eliminate any kind of racism incidences
- Support the provision of equal opportunities, justice and mutual respect
- Support children, who may become victims of school violence

**Peer-Conflict Resolution:** The Peer-Conflict Resolution program, offered by the Ministry of Education and Culture Cyprus, provides emphasis on training teachers on becoming mediators in peer-conflict incidences. Mediation is a process, which is applied for resolving conflicts. An individual (adults and students), who is properly trained, acts as a Mediator to help the conflicting parties to resolve their differences in a constructive manner. The most important characteristics of mediation are the Mediator's communication skills, which he/she has to convey to all parties involved. A team of professionals from the



- **Excellent interpersonal communication skills:** Mediate conflicts and disagreements, facilitate school team meetings, manage teacher resistance, increase school staff buy-in in SWPBS, ability to work in groups and receive constructive feedback.
- **Fluent research and writing skills:** adapt and write SWPBS intervention protocol and assessment tools in native language, develop school training slides in native language, search research literature, record and analyse data.
- **Experience and general fluency with technology:** operate email, access and work on online platforms (Moodle), use word processing software.

Each country assigned a supervisor (or coordinator) among external Tier 1 coaches. The following tasks took place:

1. Meetings on a monthly as a coaching team to coordinate tasks with schools.
2. Meetings online on a monthly basis (during the first year) with other European coaches and coordinators to receive professional development trainings and discuss challenges encounter in schools.
3. Frequent visits on the online platform and partners shared folders to access resources and acquire material.

## Coaching team training and support

Each country's coaching team was formed and trained locally with their country coordinator, as well as centrally with all European coaches. An initial 3-day face-to-face training in Thessaloniki was conducted with all Tier 1 external coaches of partner countries. Consequently, coaches from Cyprus, Romania and Greece, with the supervision of Finnish partners, met online once a month to share concerns, to get more information on the intervention, acquire the training material and discuss for the implementation in their schools to agree on a common route. The online meetings took place at the following dates:

- 1) Online Meeting 1 on the 9<sup>th</sup> September 2019
- 2) Online Meeting 2 on the 23<sup>rd</sup> September 2019
- 3) Online Meeting 3 on the 7<sup>th</sup> October 2019
- 4) Online Meeting 4 on the 21<sup>st</sup> October 2019
- 5) Online Meeting 5 on the 18<sup>th</sup> November 2019
- 6) Online Meeting 6 on the 2<sup>nd</sup> December 2019
- 7) Bilateral meetings in January 2020
- 8) Online Meeting 8 on the 20<sup>th</sup> February 2020
- 9) Online Meeting 9 in September 2020
- 10) Online Meeting 10 on the 28<sup>th</sup> September 2020
- 11) Online Meeting 11 on the 20<sup>th</sup> October 2020
- 12) Online Meeting 12 on the 24<sup>th</sup> November 2020
- 13) Online Meeting 13 on the 15<sup>th</sup> December 2020

- 14) Online Meeting 14 on the 13<sup>th</sup> January 2021
- 15) Online Meeting 15 on the 10<sup>th</sup> February 2021
- 16) Online Meeting 16 on the 24<sup>th</sup> March 2021
- 17) Online Meeting 17 on the 21<sup>st</sup> April 2021
- 18) Online Meeting 18 on the 1<sup>st</sup> November 2021 (CICO training)
- 19) Online Meeting 19 on the 21<sup>st</sup> January 2022 (CICO training)
- 20) Online Meeting 20 on the 25<sup>th</sup> March 2022 (CICO training)

Regarding the local supervision and support among the local coaching team, coaches in Cyprus met at least once every month (either online or face-to-face) to discuss all issues, progress of schools and discuss everything with regards to implementation together. During the second year, all meetings and trainings had to take place online instead of face-to-face due to safety measures. In addition, external coaches created a common Viber group in order to effectively communicate daily and post all the questions and answers.

## Schools recruitment

The process that Cyprus' partners followed for the sample selection process was randomized, as per the project's Experimental Protocol. On the 29th May 2019, Cyprus Pedagogical Institute (CPI) in collaboration with the Department of Primary Education (DPE) of the Ministry of Education, Culture, Sports and Youth (MECSY) published a circular, by which inviting up to 40 elementary schools to express a preliminary interest to participate in the SWPBS project. Following this, the CARDET Research Team met on the 23rd July 2019 with the CPI team. Both teams made decisions on the two following areas: (a) CPI sent out an email notification to all school principals of primary schools that expressed their interest to participate in the SWPBS project at the end of August 2019, in order to verify again with them about the receipt of their electronic submission interest, and, (b) CARDET Research Team contacted via phone each school principal to set up a 2-hour meeting with school staff to present the project idea and provide opportunities for discussion and further clarifications.

From September until mid –October 2019, external coaches of the Cyprus SWPBS team contacted schools to present the SWPBS idea and the whole process of working with the team across the 2-year implementation. Out of the 62 schools across the cities of Nicosia, Larnaca and Ammochostos, which had the chance to be given out the presentation, a total of 33 schools' staff (at least 70%) voted positively for their participation in the project. All schools signed an agreement that outlined their role and responsibilities for participating in the project.

All 33 schools participated in a draw of 5 consecutive rounds and based on the majority of results (e.g. if a school was picked more times for the A Group rather than the B Group), the teachers were assigned in two groups: Group A (Experimental Group) or Group B (Control Group). Participating schools vary in size, location (rural and urban areas), and region (Nicosia, Larnaca and Famagusta). The table below presents the sample schools overall demographics that participated in Years 1, 2 and 3.

**Table 1.** Participating schools' demographics

Year	Group A	Group B	Total no. of teachers	Total no. of students	Students in Special Ed.	Students in Speech Therapy
Year 1 (2019 – 2020)	16	17	604	5801	329	321
Year 2 (2020 – 2021)	16	15	564	5224	357	297
Year 3 (2021 – 2022)		15	279	2433	186	n/a

**Note.** Demographics of each school in each year are presented in Annexes 1, 2, and 3.

Overall, 33 schools joined the project in September 2019 and 31 schools remained in October 2020, after 2 schools dropped out (in early 2020). The main reasons for dropping are the following:

- 1) Collaboration among school staff proved to be a key factor for the project's successful implementation, while they mentioned that some school staff members were opposed to implementing the system.
- 2) The schools that dropped out mentioned that the system requires a heavy workload on behalf of the schools.
- 3) New staff joined the schools during the second year, which did not wish to proceed with the project implementation.

Therefore, 31 schools continued with the implementation of SWPBS Tier 1 during the second year. Consequently, due to the strongly willingness of certain school to continue for a third year, Cyprus partner decided to support them in this effort. In this respect, a new recruitment cycle followed asking the 31 schools to express their interest for a third year of implementation. From this pool of schools, 15 responded positively and brought on board for a new year. The project extension (i.e., for six months until August 2022) helped in this process as support given by the research and coaching team fell under the duration of the programme. The type of training and support provided during all years is described in the following section.

## Schools' trainings and ongoing support

Coaches in Cyprus were assigned certain schools to support and be generally responsible for the implementation of Tier 1 in their context. During the first year of implementation, all meetings and trainings were to be held face-to-face, while in the second year of implementation, all meetings and

trainings were held online. However, due to covid-19 the f2f interaction interrupted in March 2019. Coach mainly engaged with schools in four different ways:

- Trainings to the School Leadership Team (SLT)
- Whole School Staff (WSS) Trainings
- Monthly meetings
- Ongoing support and communication

During the first year of implementation (2019-2020), 15 schools were supported actively by the coaching and research team (experimental group). During the second year of implementation (2020-2021), the other 16 schools received the same trainings. During the third year, 15 schools from both group continued the intervention and provided training/support. The School Leadership Team (SLT) Trainings (Annex 4) were held in 2 or 3 groups of schools by the local external coaches collectively, with the following themes:

- 1) Establishing staff buy-in (defining school vision and new philosophy of discipline, identifying 2-3 school-wide expectations)
- 2) Defining expected behaviours (developing school-wide matrix across settings by including 1-2 social behaviours per school-wide expectation and setting) and social skill instruction activities
- 3) Developing a school-wide acknowledgment system
- 4) Correcting problem behaviours and introducing TFI
- 5) Developing school's action plan based on TFI fidelity assessment

The Whole School Staff (WSS) Trainings (Annex 5) were held once a month with each school by the responsible coach in collaboration with the coordinator of the very school's SLT, as follows:

- (a) creating positive learning environments (here we emphasize on building positive relationships at school) to be a joint presentation between principal and external coach
- (b) teaching school-wide expectations and social skills (i.e., expected social behaviours) in the classroom to be a joint presentation between external coach and internal coach
- (c) specific positive feedback (i.e., behavior specific praise and correcting student behavior) to be a joint presentation between external coach and internal coach
- (d) error correction procedure to be a joint presentation between external coach and internal coach.

Monthly meetings (Annex 6) were also pursued to keep up with the implementation progress, inform about the next steps and discuss issues or concerns that might arise. These meetings started to take place face-to-face with external coaches visiting each of their schools. However, these meetings were soon interrupted with the covid-19 outbreak. In addition, schools were holding their own internal agenda which was discussed at least once month (or more frequently) during their predefined weekly meetings among teaching staff. The following table summarizes the quantity and duration of schools' training and support. However, ongoing and instant communication (e.g., phone calls, chats, email) are not observable. Last, additional seminars on irrelevant subjects were provided to the control groups as per the experimental protocol (Annex 7).

**Table 2.** Trainings and meetings provided during the project

	Trainings to the School Leadership Team (SLT) (*hours)	Whole School Staff (WSS) Trainings (*hours)	Monthly meetings with the external coach (*hours)	Monthly within school meetings (*hours)
Year 1 (Sep. 2019 - Jun. 2020)	10 (*3hrs) f2f	64 (*1hr) f2f & online	≈100 (*1hr) f2f & online	≈20 (*0.5hr) f2f
Year 2 (Sep. 2020 - Jun. 2021)	10 (*3hrs) online	54 (*1hr) online	≈100 (*1hr) online	≈20 (*0.5hr) f2f
Year 3 (Sep. 2021 - Jun. 2022)		4 (*1.5hrs) online	≈50 (*1hr) ad hoc / online	≈20 (*0.5hr) f2f

## Implementation map

			YEAR 1									
			Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May/19	Jun-20
			M7	M8	M9	M10	M11	M12	M13	M14	M15	M16
Intervention	Group A Group B											
SLT trainings	Group A Group B	15 hrs (f2f) Group A			1	2		3 & 4	5			
WSS trainings	Group A Group B	8hrs (f2f) Group A										
Monthly meetings	Group A Group B	4-8 meetings (1hr) Group A										
	Lockdown											
	Data collection											
	TFI											

			YEAR 2									
			Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
			M19	M20	M21	M22	M23	M24	M25	M26	M27	M28
Intervention	Group A Group B											
SLT trainings	Group A	-										

	Group B	10hrs (online) Group B		1	2	3	4	5	
WSS trainings	Group A	-							
	Group B	8hrs (online) Group B							
Monthly meetings	Group A	1-8 meetings (1hr) Group A							
	Group B	6-8 meetings (1hr) Group B							
	Lockdown								
	Data collection								
	TFI								

			YEAR 3									
			Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
			M31	M32	M33	M34	M35	M36	M37	M38	M39	M40
Intervention	Group A											
	Group B											
SLT trainings	Group A	-										
	Group B	-										
WSS trainings	Group A	6hrs Group C (15 schools)										
	Group B											
Monthly meetings	Group A	where requested										
	Group B											
	Lockdown											
	Data collection											
	TFI											

## Experimental design

### Research questions

According to the research design, the participated primary schools from three countries (Cyprus, Greece, Romania) implemented a randomized wait-list controlled experimental design. Experimental procedures in Year 1 included randomizing schools into intervention (Group A) and control group (Group B), and offer the SWPBS and Business as usual interventions, respectively. In Year 2, Group A schools continued SWPBS intervention for 2nd year, while Group B was offered the SWPBS intervention. Four main research questions were preliminary set based on the evaluation plan as follows:

1. What are the effects of Tier 1 intervention on student and teacher outcomes?
2. To what extent can schools implement Tier I with fidelity with a professional development manual?
3. What factors (i.e., external coaches' experience from year 1 to year 2, external coaches' pre/post evaluation skills, external coaches' contact with schools, school demographics) moderate progression toward fidelity?
4. How does progress toward fidelity impact teacher perceptions of collective teacher efficacy and classroom behavioural climate?

### Data Collection Procedures

#### Phases and Instruments

According to the experimental protocol, research measures were administered 4 times. However, due to COVID-19 the 2<sup>nd</sup> data collection was postponed due to the covid-19 outbreak as shown below. Due to the continuation of the project for a third year, the partnership decided to collect data at the end of that academic year as an additional measurement. The data collection phases are presented below:

- 1<sup>st</sup> phase of data collection: Oct-Nov 2019
- 2<sup>nd</sup> phase of data collection: May-Jun 2021 (postponed)
- 3<sup>rd</sup> phase of data collection: Oct-Nov 2020
- 4<sup>th</sup> phase of data collection: May-Jun 2021
- 5<sup>th</sup> phase of data collection: May-Jun 2022

Instruments selection was made on the basis of previous research experiences. The behavior problem scale selected (Gray & Sime, 1989) is one that has been used in two largest experimental studies in Europe (PALS study in Norway, ProSchool study in Finland). The scale has student (10 items) and teacher (13 items) versions and describes different types of problem behaviours ranging from mild (e.g., being noisy) to severe (e.g., physical violence) problem behaviours. The scale is used as a sum score of problem behaviours as it has been found to be a reliable overall problem behavior indicator in earlier studies.

Classroom behavior climate measure was developed for the Finnish ProSchool study and proved to be a reliable and valid scale (see Närhi et al. 2015, 2017) and has been translated since to German (Hoffman et. al 2021). Classroom behavioural climate has four sub-dimensions: positive learning climate, disruptions, safety, caring for environment.

In addition, students wellbeing was measured in a short questionnaire probing their well-being from six different angles. This questionnaire is adapted from the Finnish version of HBSC study (Kämppi et al. 2012) and used also in the ProSchool study and found to be a good and concise scale having 3 items per subscales of: emotional engagement, workload in school, feeling of justice, student relations, student-parent relationship, student-teacher relationship.

Teachers rated also their collective teacher efficacy and the overall school climate. Collective efficacy was selected as an outcome since earlier studies in Norway and Finland have found that SWPBS had positive effects on teacher collective efficacy. Both studies have used the Collective Teacher Beliefs Scale (Tschannen-Moran & Barr, 2004) which has two sub-dimensions, instructional strategies and student discipline. School climate was chosen as an outcome as one of the objectives of SWPBIS is to develop overall working culture in a school. The Revised School Level Environment Questionnaire (Johnson et al. 2007) has been used in ProSchool research (see e.g. Malinen & Savolainen, 2016) and other studies in Finland and has four subscales in this study: collaboration, student relations, decision making and instructional innovation.

In brief, the following measures were administered to participating schools in each research phase according to the Experimental Protocol. From a random sample of **students** from Grades 4 and 5 in each research phase from both research groups (Grade 4= 9-10 years old; Grade 5=10-11 years old) except from Grades 5 and 6 during the 5<sup>th</sup> measurement.

1. Student evaluation of classroom behavioural climate (Närhi et al., 2015)
2. Student behavioural problems in school (Grey & Sime, 1989)
3. Social relationship quality and well-being (Kämppi et al., 2012)

From all **teachers** of participating schools from both groups are assessed:

1. Teachers evaluation of Classroom behavioural climate (Närhi et al., 2015)
2. Teacher evaluations on behavioural problems in school (Grey & Sime, 1989)
3. Organizational health and school climate (Johnson et al., 2007)
4. Teacher Collective efficacy (Tschannen-Moran & Barr, 2004)

Background information were also collected from both teachers (gender, age, teaching experience, formal education) and students (gender, age).

As a measure on the implementation fidelity of the intervention, the Tiered Fidelity Inventory (TFI) Tool was also administered in each phase:

- Modified TFI for Tier 1 implementation (see [https://www.pbisapps.org/Applications/Pages/Tiered-Fidelity-Inventory-\(TFI\).aspx](https://www.pbisapps.org/Applications/Pages/Tiered-Fidelity-Inventory-(TFI).aspx)). The TFI assessment, included the following measurements:
  - a. Interviews of at least 20% school staff
  - b. Interviews of at least 10% of all students
  - c. 10-minute Interview from the School Principal
  - d. School Observation

For the translation of the above instruments we used the European Social Survey (ESS) translation guidelines (Dorer, 2016) as part of the TRAPD procedures. TRAPD is an acronym for Translation, Review, Adjudication, Pre-testing and Documentation, the five interrelated procedures which form the framework for ESS translation and assessment (Harkness, 2003). These cover the basic procedures involved in producing a final translated version of a questionnaire.

## Data coding and processing

As per the research coordinator guidelines, at the end of each data collection phase, partner countries followed the same procedure to entering and coding the data. All data were first recorded in excel documents until imported to IBM SPSS statistics 20 program and organized separately by each country and measurement occasion.

The data from all countries was first cleaned to check for duplicate codes for individuals and any variable values outside the expected range (typically caused by mistakes in coding). The overall quality of the data was very good and only a few corrections were needed. After necessary corrections were made, for example to reverse some negatively measured items so that calculation of reliability is meaningful. After the check of reliabilities summary variables were formed from all subscales. All data transformations were made with SPSS Syntax (Annex 8) saved in a file so that if need arise to make changes in variables, the whole process can be easily repeated. Then, student and teacher datasets were merged and aggregated where possible (Annex 9).

For the time initial analyses of means and standard deviations and 95% confidence interval of the means were conducted for all time periods. In addition, calculations of Intra Class correlations (ICC) were made with SPSS variance components function to assess whether there is between school variance in the major outcome. Having Intra Class Correlations that are large enough are necessary for running two level models (random intercept models) which use individual (teacher) or class-level (students) data but have the primary interest in testing outcomes at the school level, which is the primary unit of analysis in a School Wide implementation. ICCs for the problems behavior variables for teacher and student ratings are reported here.

## Study sample

At the beginning of the school year 2019-20, the Cyprus team invited 33 primary schools to participate in the study. From all the invited schools, 2073 students from Grade 4 and Grade 5 participated in the research. The student sample at the initial measure came from 472 classrooms. These students come from two groups: the experimental group (n=1019) and the control group (n=1054). Randomization was done at the school level to avoid any spill over effect. The number of female and male students in the experimental group was 511 (51%) and 508 (49%) respectively. Also, the number of female and male students in the control group was 509 (48.3%) and 545 (51.7%) respectively. As regards the ages of students, the mean was 9.4 (SD= .67) of those in the experimental group and 9.5 (SD= .63) of those in the control group. Data on students' perceptions were collected not only at the beginning of the school year 2019-20, but also at the beginning of the school year 2020-21 which was our second measurement. As already mentioned, we were not able to conduct the second data collection at the end of the first school year due to the closures of schools because of the COVID-19 pandemic. It is important to note that although 2073 students from Cyprus participated in the initial measurement, 1330 students participated in the second measurement and 1241 in the third measurement which was conducted at the end of the school year 2020-21. Comparison of the background characteristics between the experimental and the control groups was also conducted in all three measurements revealing no significant differences.

**Table 3.** Students' demographics participated in research

	T1	T2	T3	T4
<b>Students (n, %)</b>				
Group A	1019 (49.2%)	657 (49.4%)	645 (52.0%)	337 (65.6%)
Group B	1054 (50.8%)	673 (50.6%)	596 (48.0%)	177 (34.4%)
<b>Total</b>	<b>2073</b>	<b>1330</b>	<b>1241</b>	<b>514</b>
<b>Gender (n, %)</b>				
Group A				
<i>Male</i>	508 (49.0%)	305 (46.4%)	299 (46.4%)	71 (40.1%)
<i>Female</i>	511 (51.0%)	351 (53.4%)	346 (53.6%)	105 (59.3%)
Group B				
<i>Male</i>	545 (51.7%)	338 (50.2%)	299 (50.2%)	146 (43.3%)
<i>Female</i>	509 (48.3%)	335 (49.8%)	297 (49.8%)	189 (56.1%)
<b>Age (M, SD)</b>				
Group A	9.4 ( .67)	9.5 ( .71)	10.0 ( .80)	10.7 (.98)
Group B	9.5 ( .53)	9.6 ( .61)	10.0 ( .70)	11.1 (.73)

The number of female and male teachers in the experimental group was 219 (88%) and 30 (12%) respectively. Also, the number of female and male teachers in the control group was 196 (89.1%) and 24 (10.9%) respectively. As regards the ages of teachers, the mean was 47.72 (SD= 6.48) of those in the experimental group and 42.16 (SD= 6.50) of those in the control group. Data on teacher perceptions were collected not only at the beginning of the school year 2019-20, but also at the beginning of the school year 2020-21 which was our second measurement. As already mentioned, we were not able to conduct the second data collection at the end of the first school year due to the closures of schools because of the COVID-19 pandemic. In particular, it is important to note that due to the circumstances, a significant number of teachers and students were not able to participate in the intervention from March 2020 till the end of the school year. Although 473 teachers from Cyprus participated in the initial measurement, only 406 teachers participated in the second measurement and 401 in the third measurement, which was conducted at the end of the school year 2020-21. Comparison of the background characteristics between

the experimental and the control groups was also conducted in all three measurements revealing no significant differences.

**Table 4.** Teachers' demographics participated in research

	T1	T2	T3	T4
<b>Teachers (n, %)</b>				
Group A	251 (53.1%)	201 (50.5%)	217 (54.1%)	93 (48.9%)
Group B	222 (46.9%)	205 (49.5%)	184 (45.9%)	97 (51.1%)
<b>Total</b>	<b>473</b>	<b>406</b>	<b>401</b>	<b>190</b>
<b>Gender (n, %)</b>				
Group A				
<i>Male</i>	30 (12.0%)	19 (9.4%)	26 (11.9%)	11 (11.8%)
<i>Female</i>	219 (88.0%)	184 (90.6%)	192 (88.1%)	81 (87.1%)
Group B				
<i>Male</i>	24 (10.9%)	23 (11.4%)	13 (7.2%)	8 (8.2%)
<i>Female</i>	196 (89.1%)	179 (88.6%)	168 (92.8%)	85 (87.6%)
<b>Age (M, SD)</b>				
Group A	47.72 (6.48)	43.2 (6.32)	43.62 (6.49)	44.09 (6.10)
Group B	42.16 (6.50)	42.84 (6.69)	42.65 (6.37)	43.16 (6.84)
<b>Experience (M, SD)</b>				
Group A	19.05 (8.51)	19.95 (8.21)	19.31 (8.91)	19.66 (8.81)
Group B	18.73 (8.36)	18.77 (8.66)	18.34 (8.79)	19.38 (9.75)
<b>Years at school (M, SD)</b>				
Group A	2.86 (3.32)	2.67 (2.54)	2.98 (2.67)	3.55 (4.69)

Group B	2.50 (2.54)	2.22 (1.64)	2.73 (1.76)	2.73 (1.84)
<b>Education level (n, %)</b>				
Group A				
<i>Bachelor</i>	89 (40.2%)	73 (36.1%)	75 (34.4%)	32 (34.4%)
<i>Master</i>	141 (55.3%)	117 (57.9%)	129 (59.2%)	52 (55.9%)
<i>PhD</i>	19 (4.6%)	11 (5.4%)	11 (5.0%)	7 (7.5%)
<i>Other</i>	0	1 (.5%)	3 (1.4%)	0
Group B				
<i>Bachelor</i>	88 (35.7%)	71 (35.1%)	59 (32.6%)	33 (34.0%)
<i>Master</i>	121 (56.6%)	120 (59.4%)	113 (62.4%)	55 (56.7%)
<i>PhD</i>	10 (7.6%)	10 (5.0%)	8 (4.4%)	5 (5.2%)
<i>Other</i>	0	1 (.5%)	1 (.6%)	1 (1.0%)

## Preliminary key findings

The results and progression of the TFI assessment in each participating school are presented in Annex 10. Overall there is positive progression of the fidelity implementation of the intervention from the schools that engage with the intervention every year. More details on the differences between groups and the statistically significant differences of TFI scores in each school are given in the Final Evaluation Report. In total, four (4) TFI assessments were conducted in October 2019, October 2020, May-June 2021, May-June 2022 and May 2021 along with the student and teacher data collections.

**The key findings including in-depth analysis of the observed outcomes and addressing the research questions as presented above, are presented in the Evaluation Reports.** While it is clear that there have been some challenges in receiving data from all the schools in the second measurement carried out in autumn 2020, the overall longitudinal data set will be large enough for credible longitudinal analyses. This holds both for the student and teacher samples. Though the student and teacher data shows:

- There is ample data for longitudinal analyses that are most likely to be used with this type of data (Repeated measures ANOVA, Regression analysis, Cross-Lagged longitudinal analysis (SEM)). (see column N in above tables).
- The datasets are quantitatively comparable among them.

- Point estimates of means across time and their 95% Confidence Intervals suggest that there are differences in the average levels of some of the observed outcomes. This is promising, as we may be able to detect some changes towards a positive direction i.e., reduction in problem behaviours, increase of school climate, student wellbeing, collective teachers' efficacy etc. that may be attributed to the intervention. However, this observation should not be interpreted as an intervention effect at this point, because:
  - preliminary analyses do not differentiate between experimental and control group.
  - The samples across measurements are not matched, thus differences may be a result of differential sampling at different time periods.

Initial analyses of scale reliabilities in the three countries suggest the vast majority of subscales show good to excellent reliability. In some rare instances specific subscales reliabilities are lower but acceptable. Some individual country adjustments to some individual subscales may also have to be made (e.g., omission of problematic single items) after a thorough analysis of what might be the linguistic or cultural reasons that have likely caused the lack of fit of an item. In summary, the overall conclusion at this point is that the selected scales will provide reliable information from all three countries and the result in this regard is excellent, as some of the scales had not been previously used in all three countries.

Any data collected from schools is not only individual level data, as the respondents are clustered. For example, teachers give their individual rating but they are also clustered within schools. Actually in this study we are specifically interested in this share of variance that is variance between schools, as we wish to detect intervention effects at the school level. Students are clustered in classes within schools. Students data is anonymous in this study so for majority of traditional analysis data aggregated for classroom level (classroom mean) will be used, but even there much interest lies also in analysing the share of variance between schools and whether this variance can be explained by for example the fidelity of intervention.

The initial analysis of Intra Class Correlations shows that there is meaningful school level variance with the exception of student data in T1 in Cyprus and Teacher data in T2 in Romania. Otherwise it will be possible to test the fit of Two-level Structural equation models (SEM) where the school level variance and its statistical significance and dependency on relevant predictors (e.g., intervention group, intervention fidelity, demographic variables) can be tested.

## Conclusion

The implementation of the School-Wide Positive Behaviour Support (SWPBS) framework in Cyprus brought involved stakeholders in front of a new reality. The PBS intervention is a long-duration school-wide applied systemic approach which requires continuous efforts from school actors for 3-4 consecutive school years. It is based on belief systems and values often opposed to the traditional approaches for student behaviour management and discipline. In Cyprus, beside the countless activities produced to support and execute such a large-scale project, people required to formulate a different thinking which opened-up new prospects and ideas. The ongoing work of key people involved in Cyprus was indispensable for shifting the perceptions and beliefs of the wider group networks including researches,

coaches, schools, teachers, students, parents, partner organisations, and higher level associates (e.g., local authorities, policy-makers etc.). This process becomes easier when recommendations are backed up with robust data and a 3-year practical experience. This report summarizes the implementation of the SWPBS as done by the Cyprus partner teams, which depicts the volume and quality of activities taken throughout the project lifespan as well as performance indications about the project impact based on the research observed outcomes.

During the preparation phase, Cyprus partners engaged in gaining robust knowledge on the theoretical framework of the SWPBS approach. They reviewed scientific articles that describe the implementation process in other educational systems and research approaches that examined the impact of the intervention at schools in other contexts. After mapping the favourable condition for implementing the SWPBS, Cyprus partners proceeded with an extensive needs analysis on the national primary schools collecting data from school inspectors, teachers, and school principals. The assessment focused on identifying the current local needs on school-wide discipline prevention and student socio-emotional supports and mapping the existing preventing policies/programmes for student discipline and behaviour management. The national research team based on the data collected during the needs assessment process, drafted a national report which resulted in guidelines and recommendations on developing action plans around school-wide prevention support systems for strengthening students' socio-emotional development.

Following the review of the literature and the needs assessment, Cyprus partners recruited the SWPBS coaching team based on certain criteria concerning the educational, professional background and field experience working at/with schools. The coaching team initially attended the intensive formal trainings provided by the research coordinator and the ongoing meetings along with the coaching team of other countries throughout the project lifespan. In total, apart from the initial f2f intensive training in Greece, 20 official transnational coaching meetings were conducted during the project. Bilateral and informal communication through video conferences, emails and chat was also encouraged. Within country communication and support was also very regular, especially during the first year. This way a network of external coaches across the participating countries was developed in an excellent climate of collaboration and mutual support. The internal capacity building gatherings continued throughout the project intervention within a spirit of lifelong learning mindset. The Cyprus research teams along with the local external coaches contributed to the development of the SWPBS Tier 1 training manual, which was extensively used by schools and teachers during the intervention phase. After the first year of implementation and the identification of several basic challenges, coaches contributed to the development of the first version of the Coaching and Professional Development manual for future coaches and members that joined the team at a later stage. Along with the manuals, coaches during the preparation phase produced the training material (i.e., presentations, educational aids, guidelines, checklists etc.) to be used during the intervention period.

During the recruitment phase, the Cyprus Pedagogical Institute (CPI) in collaboration with the Department of Primary Education (DPE) of the Ministry of Education, Culture, Sports and Youth (MECSY) published a

circular inviting primary schools from three geographical districts (Nicosia, Larnaca, Ammochostos) to express their interest to participate in the SWPBS project. Upon guidelines of the CPI, 62 schools verified their interest through an electronic submission. CARDET delivered a 2-hour presentation of the SWPBS project to the school staff of each of the interested schools during the period September-October 2019, followed by a brief discussion and further clarifications. A total of 33 schools voted positively to participate in the project (with at least 80% of internal agreement). According to the project requirements 30 schools were supposed to participate, though all schools signed an agreement with Cyprus partnership, in which their role and responsibilities for participating in the project were outlined. The schools were randomized divided into two groups: 15 schools as Group A (Experimental Group) and 17 schools Group B (Control Group). Demographic details were collected with all participating schools and a preliminary training plan was agreed with the school management teams. Simultaneously, the ethics clearance approval was obtained for schools to participate on the programme allowing visits from the external coaches and the research team to collect data from teachers and students at schools. Parent consent forms were required every school year in order to provided questionnaires to students.

The first year of intervention (2019-2020) began with a great excitement, however, it was subjected to the unavoidable barrier of covid-19 pandemic. During the first months (i.e., October and mid-November 2019), data collection preceded any action either in experimental and control schools. Members from the research team visited schools and handed questionnaires to each participating classroom (i.e., students of all 4<sup>th</sup> and 5<sup>th</sup> grades). It was emphasized that only students with parent consent participated answering the questionnaires. At the same time, the teacher questionnaires were administered by the school management team to the teaching staff. Experimental schools (group A) were given priority time-wise as after this process, they should have begun with the trainings and the implementation of the intervention. Coaches started with the school leadership team (SLT) training. These trainings were organised in three groups of schools based on their region. Until December 2019, experimental schools (group A) received two SLT trainings and the SWPBS leadership team was formed at each school. The SWPBS leadership team is a group comprised of 4-5 teachers, members of the school management team and parents if possible, that would lead the implementation of the SWPBS intervention at their school. Their role during the project were very important. In January, the SWPBS leadership team with the assistance of the school coach began with delivering training to the school staff (i.e., whole school staff trainings - WSS). These trainings were conducted separately at each school during the predetermined monthly whole-school meetings. Simultaneously, monthly meetings were taking place at each school with the SWPBS leadership team and the school coach. The purpose of these meetings is to keep schools on track with the intervention, monitor their progress and provide instant support. In total, 5 SLT trainings, 4 WSS trainings, and meetings every month were to be conducted during the first year of implementation to the experimental schools (group A). This plan worked smoothly until March 2020 when the covid-19 outbreak imposed strict safety measures. All public schools closed during the 2<sup>nd</sup> and 3<sup>rd</sup> week of the month. In two groups of schools the last (5<sup>th</sup>) SLT training were held online. Similarly, the last (4<sup>th</sup>) WSS training and the upcoming monthly meetings were held online. However, school for three consecutive months (March-May 2020) were unable to implement any of the steps of the SWPBS framework in practice. Beside the

back office work, teachers were only able to teach some of the social skills and routines online which at the end were not applied or reinforced because of the distance learning model. Therefore, we conclude that only some of the first main elements were actually implemented in practice, even though teachers made considerable efforts preparing material and the ground of a normal-running implementation. The research team evidenced the positive attitudes of schools towards the programme and teachers' willingness to integrate it into their policy and practice. Schools reopened a few weeks before the official summer holidays, however, because of the strict safety measures imposed by the government, external visits to schools were prohibited. Therefore, the 2<sup>nd</sup> data collection phase was postponed. In sum, the covid-19 stroke when the practical steps of the SWPBS framework were about to emerge, which limits to the minimum the impact of the intervention at experimental schools. It is also noted that during the first year three trainings/seminars/workshops were provided to the control schools (group B) in topics irrelevant to the project to keep them engaged throughout the first year. Though one school from the control group dropped out from the programme.

After the pandemic crisis, the situation at schools was far from the normal with regards to the second year of the intervention (2020-2021). Teachers and students were stressed and hesitant towards the uncertain conditions. Schools run to prepare the ground for a possible second lockdown and to cover the curriculum of last year. Local lockdown started to take place were students of teachers found to be positive incidents of covid-19. Generally, the situation was far from the normal circumstances. The research team and coaches attempted to use the project framework as an alleviating factor for schools stressed situation by developing small positive moments as tailored to the project mission. During the first two months (September and October 2020), the research team after granting an official permission from the Ministry of Education and the ethical approval for the research measures, visited the schools and handed questionnaires to students (of 4<sup>th</sup> and 5<sup>th</sup> grades) and teachers. Consequently, in November 2020 coaches begun the with the SLT trainings to group B schools. These trainings were conducted online in groups as during the first year. Until March 2021, coaches delivered 5 SLT trainings to SWPBS school leadership teams as planned (i.e., one training per month). At the same time, WSS trainings took place online since December 2020 to the teaching staff of each school by the SLT with the assistance of the school's coach. As planned, four WSS were held at each school and completed until April 2021. Unfortunately, apart from the local lockdowns because of the covid-19 (at certain schools or classrooms for unknown time periods) throughout the school year, another universal lockdown took place after December 2020 extending the Christmas holidays by the end of January 2021. This is expected to have again a negative impact on the normal and smooth implementation of the project at schools. However, adjusting to the new reality the trainings were all held online. Along with the trainings, monthly online meetings were taking place with the SLT and the school's coach for ongoing monitoring and assistance. Group A schools were also assisted by their coach when requested. For this reason, there is some variation on the monthly meeting of Group A monthly meeting during year 2. As per coaches' communication with schools and as evidenced during the fidelity measurement all schools continued with the intervention implementation and feedback from all schools was positive. During the last months of the school year (May and June 2021) the 3<sup>rd</sup> data collection phase took place normally. All ethical approval documents,

consent forms, as well as safety measures were considered. It is also noted that one school dropped out at the beginning of the year 2.

Several schools requested to the research team to continue implementing the SWPBS framework for another year (2021-2022). Although not included in the project proposal requirements, all countries agreed to offer some form of assistance to schools that willing to continue implementing the SWPBS framework. In Cyprus, the CPI circulate an announcement to the 31 participating schools as a call of interest for implementing the framework for a third year. Fifteen (15) schools expressed their interest therefore the research team and coaches actively supported them. Three universal online WSS trainings were conducted to the schools' staff throughout the school year. In addition, ad hoc support was provided by coaches to schools during the school year. Following the longitudinal research approach of the project, the research team conducted a 4<sup>th</sup> measurement of outcome to examine the long-term effect of the SWPBS intervention. Therefore, data were collected during the May and June 2022. No lockdowns were imposed and the negative effect of covid-19 was minimal during the 3<sup>rd</sup> year.

Following the request of specific cases, the research team pilot implemented the Tier 2 support in two schools in year 3 during the months February-May 2022. The Cyprus research team identified and selected 2 primary schools that demonstrated at least 80% adherence to the experimental protocol, as measured by the School-wide Evaluation Tool (Horner et al., 2004). In total, eight students (four in each school) were provided additional Tier 2 support, as non-responsive to Tier 1. As per the CICO support, involved teachers provided regular support (re)teaching daily routines and organising the supporting environment with high fidelity. In addition, schools collected information concerning the intervention effects. More information about the implementation of the Tier 2 support and its results can be found in the relevant report<sup>1</sup>.

Along with the development of project administrative deliverables, the research team used several results during the intervention such as the teacher manuals and the e-learning platform. SWPBS Tier 1 and 2 training manuals (D2.1 & D2.2), as well as the coaching and professional development manual (D2.3) were revised based on the experience and feedback of involved people (coaches, teachers, school principals, students, parents, research teams). This feedback is available in the piloting reports (D2.4 & D2.5). All the evidence concerning the implementation of Tier 1 & Tier 2 interventions in Cyprus can be found in the relevant folders (D3.1 & D3.2). The overall experience of the SWPBS framework implementation is attempted to be shown in the final project promo video (D3.3). The project online platform (D4.1) is a dedicated space to host all final deliverables and materials produced by schools during the project. These resources are expected to be extremely useful to schools implementing or intended to implement the SWPBS framework. Access is open upon registration. This platform also hosts the online course (D4.2), a specifically designed e-learning set of modules regarding the theoretical and practical aspect of the SWPBS framework. Moreover, the Cyprus partners collaborated to develop the digital tool (D4.3) for data collection of minor and major inappropriate behaviours incidents at schools. The desktop application was also pilot tested in four participating schools in Cyprus. The application is available upon request and

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<sup>1</sup> SWPBS\_D3.2 Implementation report for SWPBS Tier 2\_Cyprus

extensive details about the process can be found in the relevant report. Also, the video tutorial and demonstration is available [here](#).

Cyprus partners will continue to collaborate with the research teams of the other participating countries for analysing and extracting more conclusions about the effect of the intervention during the last years. The rich dataset will be also used after the project for drafting scientific articles for publication to academic peer-reviewed journals and scientific conferences in Europe and beyond. Though partners worked collaboratively to produce the Evaluation reports (D5.2-D5.5) which give a comprehensive picture on the measures and the impact of the intervention in the four countries. Extensive statistical data analysis is available along the presenting the methodology followed (i.e., sampling, intervention design, measures etc.). The overall results were also presented in the project [Final Conference](#) (D6.5) which was held in Cyprus to the participants including the Minister of Education, the director of the CPI, officials from key office authorities, researchers and teachers of all education levels. The feedback was very promising regard the actions that the public authorities will take to sustain and expand the implementation of the SWPBS framework in schools around Cyprus. The project results utilization actions are comprehensively presented in the Exploitation plan (D6.6) which summarizes the intended activities of all partner countries. During the project lifespan, several quality assurance controls took place ensuring that challenges are faced effectively by the consortium. Cyprus partners took part in all quality assurance evaluations (D8.2-D8.5) and participated in the meetings with active decision making in front of risks and challenges. Last, according to the sustainability strategies and mission of the partnership, Cyprus partners collected and reported the relevant data (D9.1) assisting to the development of policy and practice guidelines (D9.2).

Cyprus partners are very proud for the implementation of the project considering the large scale positive impact evidenced from the quantitative and qualitative data analysed during the project. In addition, the comments received from schools were encouraging and demonstrated the actual impact for teachers and students. Cyprus partners are committed to take actions in the future for sustaining the intervention and developing supportive mechanisms for further schools to adopt the SWPBS framework.

## Annexes

### Annex 1. School Demographics for schools in Year 1

**Table 5.** School Demographics for schools in Year 1

School Code	N Students	N Teachers	N not native speakers	N SEN Children (SE – Special Education ST – Speech Therapy)	Urban/Rural
<b>Group A</b>					
61 (Agios Demetrios)	296	26	49	43 (23 SE + 20 ST)	Urban
62 (Anthoupoli)	103	13	8	27 (14 SE + 13 ST)	Urban
63 (Aradippou E)	315	28	20	32 (23 SE + 9 ST)	Urban
64 (Archangelos)	271	25	12	29 (11 SE + 18 ST)	Urban
65 (Dasoupoli KB)	190	20	27	18 (12 SE + 6 ST)	Urban
66 (Kokkinotrim. A)	151	19	27	47 (23 SE + 24 ST)	Rural
67 (Lymbia)	209	21	12	20 (10 SE + 10 ST)	Rural
68 (Nareg)	97	16	N/A	5 (2 SE + 2 ST)	Urban

69 (Sia)	56	9	1	11 (6 SE + 5 ST)	Rural
70 (Frenaros)	284	26	58	31 (12 SE + 19 ST)	Rural
71 (Kornesios)	262	26	31	22 (16 SE + 6 ST)	Urban
72 (AglangiaD)	195	14	5	8 (3 SE + 5 ST)	Urban
73 (LakatameiaD)	269	21	81	21 (8 SE + 13 ST)	Urban
74 (Meniko)	72	13	7	20 (13 SE + 7 SL)	Rural
75 (Paliomet.)	90	15	7	11 (5 SE + 6 ST)	Rural
76 (Sotira B)	155	18	23	28 (13 SE + 15 ST)	Rural
<b>Group B</b>					
77 (Mitsero)	54	10	14	8 (6 SE + 2 ST)	Rural
78 (Ag Dometios)	135	19	33	15 (5 SE + 10 ST)	Urban
79 (AgMarina)	13	4	0	0	Rural
80 (Vrysoules)	98	12	14	24 (11 SE + 13 ST)	Rural
81 (Evrychou)	81	13	9	28 (14 SE + 14 ST)	Rural
82 (Livadia)	270	24	3	29 (26 SE + 3 ST)	Rural

83 (Mazotos)	49	8	21	6 (4 SE + 2 ST)	Rural
84 (Mammari)	146	15	34	14 (7 SE + 7 ST)	Rural
85 (XylofagouB)	201	20	34	24 (13 SE + 11 ST)	Rural
86 (AglangiaSt)	293	27	35	24 (11 SE + 13 ST)	Urban
87 (Akaki)	178	19	24	30 (16 SE + 14 ST)	Rural
88 (Alethriko)	143	17	11	24 (13 SE + 11 ST)	Rural
89 (Apost. Varnavas)	209	21	53	23 (12 SE + 11 ST)	Urban
90 (Ergates)	90	12	37	27 (12 SE + 15 ST)	Rural
91 (LakatameiaE)	312	27	N/A	N/A	Urban
92 (Makedonitis)	389	34	7	32 (15 SE + 17 ST)	Urban
93 (Prodromos KB)	125	12	63	24 (13 SE + 11 ST)	Urban

## Annex 2. School Demographics for schools in Year 2

**Table 6.** School Demographics for schools in Year 2

School Code	N Students	N Teachers	N not native speakers	N SEN Children SE – Special Education ST – Speech Therapy	Urban/Rural
<b>Group A</b>					
61 (Agios Demetrios)	311	30	49	40 (24 SE + ST 16)	Urban
62 (Anthoupoli)	130	17	15	27 (22 SE + 15 ST)	Urban
63 (Aradippou E)	302	26	17	62 (34 SE + 28 ST)	Urban
64 (Archangelos)	269	25	3	28 (11 SE + 17 ST)	Urban
65 (Dasoupoli KB)	186	20	17	32 (24 SE + 8 ST)	Urban
66 (Kokkinotrim. A)	149	18	N/A	N/A	Rural
67 (Lymbia)	201	22	7	19 (9 SE + 10 ST)	Rural
68 (Nareg)	91	17	5	3 (2 SE + 1 ST)	Urban
69 (Sia)	55	12	2	10 (5 SE + 1 ST)	Rural

70 (Frenaros)	266	25	15	31 (20 SE + 11 ST)	Rural
71 (Kornesios)	254	25	Not given	Not given	Urban
72 (AglangiaD)	191	17	Not given	Not given	Urban
73 (LakatameiaD)	272	20	7	23 (13 SE + 16 ST)	Urban
74 (Meniko)	67	12	6	19 (6 SE + 13 ST)	Rural
75 (Paliomet.)	90	15	6	12 (4 SE + 8 ST)	Rural
76 (Sotira B)	147	17	22	22 (8 SE + 14 ST)	Rural
<b>Group B</b>					
77 (Mitsero)	46	8	13	10 (6 SE + 4 ST)	Rural
78 (Ag Dometios)	135	20	22	28 (11 SE + 17 ST)	Urban
79 (AgMarina)	11	4	0	5 (2 SE+ 3 ST)	Rural
80 (Vrysoules)	99	12	9	29 (14 SE + 15 ST)	Rural
81 (Evrychou)	90	14	N/A	N/A	Rural
82 (Livadia)	270	24	3	29 (26 SE + 3 ST)	Rural

83 (Mazotos)	49	8	21	6 (4 SE + 2 ST)	Rural
84 (Mammari)	143	17	26	17 (7 SE + 10 ST)	Rural
85 (XylofagouB)	218	24	48	47 (32 SE + 15 ST)	Rural
86 (AglangiaSt)	275	27	8	26 (14 SE + 12 ST)	Urban
87 (Akaki)*	-	-	-	-	-
88 (Alethriko)	143	17	11	24 (13 SE + 11 ST)	Rural
89 (Apos. Varnavas)	197	21	19	23 (11 SE + 13 ST)	Urban
90 (Ergates)	88	13	33	34 (15 SE + 19 ST)	Rural
91 (LakatameiaE)*	-	-	-	-	-
92 (Makedonitis)	354	21	2	35 (20 SE + 15 ST)	Urban
93 (Prodrornos KB)	125	16	N/A	N/A	Urban

**Note.** Primary schools of Akaki and Lakatameia E dropped out the second year.

### Annex 3. School Demographics for schools in Year 3

**Table 7.** School Demographics for schools in Year 3

School Code	N Students	N Teachers	N not native speakers	N SE – Students in Special Education	Urban/Rural
<b>Group A</b>					
61 (Agios Demetrios)	327	31	N/A	27	Urban
66 (Kokkinotrim. A)	139	19	N/A	19	Rural
68 (Nareg)	85	15	N/A	1	Urban
69 (Sia)	57	11	N/A	10	Rural
72 (AglangiaD)	193	17	N/A	7	Urban
75 (Paliomet.)	92	14	N/A	5	Rural
76 (Sotira B)	150	18	N/A	11	Rural
<b>Group B</b>					
78 (Ag Dometios)	138	20	N/A	8	Urban
79 (AgMarina)	14	5	N/A	2	Rural
81 (Evrychou)	86	14	N/A	13	Rural
82 (Livadia)	280	23	N/A	25	Rural
85 (XylofagouB)	225	24	N/A	19	Rural
88 (Alethriko)	132	15	N/A	13	Rural
89 (Apos. Varnavas)	167	22	N/A	8	Urban
92 (Makedonitis)	348	31	N/A	18	Urban

**Note.** Primary schools of Akaki and Lakatameia E dropped out the second year.

## Annex 4. School Leadership Team (SLT) trainings in Cyprus

**Table 8.** School Leadership Team (SLT) trainings in Cyprus

Training	Date	F2F or online	Duration	Nature
<b>Group A - Year 1</b>				
1 <sup>st</sup> School Leadership Team Training	17.11.2019	F2F	3 hours	Formal
1 <sup>st</sup> School Leadership Team Training	19.11.2019	F2F	3 hours	Formal
1 <sup>st</sup> School Leadership Team Training	20.11.2019	F2F	3 hours	Formal
2 <sup>nd</sup> School Leadership Team Training	03.12.2019	F2F	3 hours	Formal
2 <sup>nd</sup> School Leadership Team Training	04.12.2019	F2F	3 hours	Formal
2 <sup>nd</sup> School Leadership Team Training	06.12.2019	F2F	3 hours	Formal
3 <sup>rd</sup> & 4 <sup>th</sup> School Leadership Team Training	05.02.2020	F2F	3 hours	Formal
3 <sup>rd</sup> & 4 <sup>th</sup> School Leadership Team Training	06.02.2020	F2F	3 hours	Formal
3 <sup>rd</sup> & 4 <sup>th</sup> School Leadership Team Training	07.02.2020	F2F	3 hours	Formal
5 <sup>th</sup> School Leadership Team Training	06.03.2020	F2F	3 hours	Formal
5 <sup>th</sup> School Leadership Team Training	18.03.2020	Online	1,5 hour	Formal
5 <sup>th</sup> School Leadership Team Training	19.03.2020	Online	1,5 hour	Formal
<b>Group B - Year 2</b>				
1 <sup>st</sup> School Leadership Team Training	17.11.2020	Online	2 hours	Formal
1 <sup>st</sup> School Leadership Team Training	19.11.2020	Online	2 hours	Formal
1 <sup>st</sup> School Leadership Team Training	20.11.2020	Online	2 hours	Formal
2 <sup>nd</sup> School Leadership Team Training	15.12.2020	Online	2 hours	Formal
2 <sup>nd</sup> School Leadership Team Training	17.12.2020	Online	2 hours	Formal

2 <sup>nd</sup> School Leadership Team Training	18.12.2020	Online	2 hours	Formal
3 <sup>rd</sup> School Leadership Team Training	19.01.2021	Online	2 hours	Formal
3 <sup>rd</sup> School Leadership Team Training	21.01.2021	Online	2 hours	Formal
3 <sup>rd</sup> School Leadership Team Training	22.01.2021	Online	2 hours	Formal
4 <sup>th</sup> School Leadership Team Training	26.02.2021	Online	2 hours	Formal
4 <sup>th</sup> School Leadership Team Training	25.02.2021	Online	2 hours	Formal
5 <sup>th</sup> School Leadership Team Training	18.03.2021	Online	2 hours	Formal
5 <sup>th</sup> School Leadership Team Training	19.03.2021	Online	2 hours	Formal

### Group A & B - Year 3

1 <sup>st</sup> School Leadership Team Training	12.10.2021	Online	1.5 hour	Formal
1 <sup>st</sup> School Leadership Team Training	14.10.2021	Online	1.5 hour	Formal
2 <sup>nd</sup> School Leadership Team Training	02.11.2021	Online	1.5 hour	Formal
3 <sup>rd</sup> School Leadership Team Training	08.02.2022	Online	1.5 hour	Formal
4 <sup>th</sup> School Leadership Team Training	17.05.2022	Online	1.5 hour	Formal

**Note.** The School Leadership Team (SLT) trainings were conducted in groups based on the geographical area.

## Annex 5. Whole School Staff (WSS) trainings in Cyprus

**Table 9.** Whole School Staff (WSS) trainings in Cyprus

School	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
<b>Group A -Year 1</b>				
61 (Agios Demetrios)	27.01.2020	03.02.2020	17.02.2020	16.03.2020
62 (Anthoupoli)	27.11.2019	19.02.2020	30.04.2020	28.05.2020
63 (Aradippou E)	16.12.2020	03.02.2020	24.02.2020	30.03.2020
64 (Archangelos)	18.12.2019	29.01.2020	12.02.2020	18.03.2020
65 (Dasoupoli KB)	20.01.2020	27.01.2020	17.02.2020	-
66 (Kokkinotrim. A)	22.01.2020	05.02.2020	04.03.2020	04.03.2020
67 (Lymbia)	18.12.2019	15.01.2020	19.02.2020	08.04.2020
68 (Nareg)	11.12.2019	10.02.2020	19.02.2020	11.03.2020
69 (Sia)	20.01.2020	17.02.2020	24.02.2020	-
70 (Frenaros)	16.12.2019	20.01.2020	24.02.2020	23.03.2020
71 (Kornesios)	27.01.2020	17.02.2020	-	-
72 (AglangiaD)	13.01.2020	10.02.2020	24.02.2020	30.03.2020
73 (LakatameiaD)	15.01.2020	29.01.2020	19.02.2020	11.03.2020
74 (Meniko)	13.01.2020	13.01.2020	10.02.2020	-
75 (Paliomet.)	10.12.2019	21.01.2020	25.02.2020	17.03.2020
76 (Sotira B)	16.12.2019	10.02.2020	09.03.2020	30.03.2020
<b>Group B – Year 2</b>				
77 (Mitsero)	13.01.2021	17.02.2021	24.03.2021	07.04.2021
78 (Ag Dometios)	21.12.2020	27.01.2021	08.03.2021	19.04.2021

79 (AgMarina)	07.12.2021	13.01.2021	18.02.2021	26.03.2021
80 (Vrysoules)	09.12.2020	03.02.2021	03.03.2021	07.04.2021
81 (Evrychou)	09.12.2020	27.01.2021	10.02.2021	13.03.2021
82 (Livadia)	07.12.2020	11.01.2021	28.01.2021	05.04.2021
83 (Mazotos)	15.01.2021	15.01.2021	05.02.2021	02.04.2021
84 (Mammari)	02.12.2020	13.01.2021	03.02.2021	10.03.2021
85 (XylofagouB)	30.11.2020	18.01.2021	22.02.2021	29.03.2021
86 (AglangiaSt)	02.12.2020	27.01.2021	03.03.2021	07.04.2021
87 (Akaki)*	-	-	-	-
88 (Alethriko)	21.12.2020	12.01.2021	23.02.2021	06.04.2021
89 (Apos. Varnavas)	18.01.2021	01.02.2021	01.03.2021	05.04.2021
90 (Ergates)	20.01.2021	24.02.2020	31.03.2021	21.04.2021
91 (Lakatameia E)*	-	-	-	-
92 (Makedonitis)	30.11.2020	18.01.2021	01.02.2021	29.03.2021
93 (Prodromos KB)	19.01.2021	19.01.2021	-	-
<b>Group A &amp; B – Year 3</b>				
All schools	14.10.2021	02.11.2021	08.02.2022	17.05.2022

**Note.** Primary schools of Akaki and Lakatameia E dropped out the second year.

## Annex 6. Monthly meetings of schools with their external coach

**Table 10.** Monthly meetings of schools with their external coach

School	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	
<b>Group A – Year 1</b>									
61 (Agios Demetrios)	11.12.2019	13.01.2020	27.01.2020	17.02.2020	13.03.2020	06.04.2020	-	-	
62 (Anthoupoli)	21.11.2019	09.12.2019	17.01.2020	14.02.2020	07.03.2020	24.04.2020	08.05.2020	12.06.2020	
63 (Aradippou E)	10.12.2019	14.01.2020	11.02.2020	10.03.2020	07.04.2020	12.05.2020	-	-	
64 (Archangelos)	29.11.2019	24.01.2020	14.02.2020	13.03.2020	-	-	-	-	
65 (Dasoupoli KB)	18.11.2019	10.12.2019	13.01.2020	13.02.2020	09.03.2020	02.04.2020	04.05.2020	04.06.2020	
66 (Kokkinotrim. A)	26.11.2019	10.12.2019	14.01.2020	11.02.2020	03.03.2020	-	-	-	
67 (Lymbia)	21.11.2019	18.12.2019	15.01.2020	12.02.2020	11.03.2020	08.04.2020	06.05.2020	03.06.2020	
68 (Nareg)	20.11.2019	12.12.2019	23.01.2020	13.02.2020	12.03.2020	03.04.2020	-	-	
69 (Sia)	20.11.2019	18.12.2019	10.02.2020	-	-	-	-	-	
70 (Frenaros)	21.11.2019	16.12.2019	20.01.2020	14.02.2020	13.03.2020	10.04.2020	08.05.2020	05.06.2020	
71 (Kornesios)	22.12.2019	09.12.2019	20.01.2020	17.02.2020	16.03.2020	27.04.2020	25.05.2020	-	
72 (AglangiaD)	22.11.2019	11.12.2019	15.01.2020	10.02.2020	18.03.2020	08.04.2020	06.05.2020	-	
73 (LakatameiaD)	22.11.2019	19.11.2019	24.01.2020	21.02.2020	20.03.2020	27.04.2020	15.05.2020	05.06.2020	
74 (Meniko)	28.11.2019	19.12.2019	16.01.2020	13.02.2020	-	-	-	-	
75 (Paliomet.)	28.11.2019	19.12.2019	13.02.2020	05.03.2020	30.04.2020	-	-	-	
76 (Sotira B)	21.11.2019	13.12.2019	10.01.2020	14.02.2020	13.03.2020	10.04.2020	08.05.2020	-	
<b>Group A – Year 2</b>									
School	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>
61 (Agios Demetrios)	04.09.2020	05.10.2020	19.10.2020	16.11.2020	15.02.2021	22.03.2021	24.05.2021	-	-
62 (Anthoupoli)	08.10.2020	21.10.2020	05.11.2020	20.11.2020	03.12.2020	11.03.2021	27.05.2021	-	-
63 (Aradippou E)	16.10.2020	-	-	-	-	-	-	-	-

64 (Archangelos)	09.10.2020	06.11.2020	27.11.2020	04.12.2020	05.02.2021	11.02.2021	21.05.2021	-	-
65 (Dasoupoli KB)	07.12.2020	-	-	-	-	-	-	-	-
66 (Kokkinotrim. A)	09.10.2020	21.10.2020	04.12.2020	11.02.2021	02.04.2021	-	-	-	-
67 (Lymbia)	14.10.2020	27.11.2020	12.02.2021	09.04.2021	-	-	-	-	-
68 (Nareg)	27.10.2020	09.11.2020	10.11.2020	18.11.2020	08.12.2020	09.02.2021	23.02.2021	-	-
69 (Sia)	26.11.2020	11.02.2021	17.02.2021	14.04.2021	-	-	-	-	-
70 (Frenaros)	07.10.2020	26.10.2020	04.11.2020	02.12.2020	27.01.2021	17.02.2021	26.05.2021	-	-
71 (Kornesios)	19.10.2020	02.12.2020	10.12.2020	17.02.2021	14.04.2021	-	-	-	-
72 (AglangiaD)	10.09.2020	21.10.2020	25.11.2020	03.02.2021	24.03.2021	02.06.2021	-	-	-
73 (LakatameiaD)	26.10.2020	04.12.2020	15.02.2021	-	-	-	-	-	-
74 (Meniko)	30.09.2020	21.10.2020	11.11.2020	-	-	-	-	-	-
75 (Paliomet.)	08.10.2020	24.09.2020	22.10.2020	26.10.2020	12.11.2020	17.12.2020	20.01.2021	18.03.2021	03.06.2021
76 (Sotira B)	02.10.2020	05.10.2020	23.10.2020	30.10.2020	26.02.2021	28.05.2021	-	-	-

### Group B – Year 2

School	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
77 (Mitsero)	25.11.2020	21.12.2020	27.01.2021	03.03.2021	24.03.2021	14.04.2021	19.05.2021	02.06.2021
78 (Ag Dometios)	25.11.2020	21.12.2020	27.01.2021	03.03.2021	24.03.2021	-	-	-
79 (AgMarina)	17.11.2020	18.12.2020	22.01.2021	26.02.2021	19.03.2021	23.04.2021	25.05.2021	04.06.2021
80 (Vrysoules)	25.11.2020	16.12.2020	27.01.2021	17.02.2021	07.04.2021	21.04.2021	-	-
81 (Evrychou)	30.11.2020	21.12.2020	25.01.2021	01.03.2021	22.03.2021	07.04.2021	12.05.2021	07.06.2021
82 (Livadia)	30.11.2021	21.12.2020	25.01.2021	01.03.2021	29.03.2021	-	-	-
83 (Mazotos)	26.11.2020	22.12.2020	26.01.2021	02.03.2021	06.04.2021	-	-	-
84 (Mammari)	27.11.2020	18.12.2020	22.01.2021	05.02.2021	05.03.2021	02.04.2021	14.05.2021	04.06.2021
85 (XylofagouB)	27.11.2020	21.12.2020	19.02.2021	05.03.2021	02.04.2021	-	-	-
86 (AglangiaSt)	02.12.2020	22.12.2020	22.01.2021	25.02.2021	03.03.2021	07.04.2021	-	-

87 (Akaki)	-	-	-	-	-	-	-	-
88 (Alethriko)	24.11.2020	04.01.2021	29.01.2021	02.03.2021	26.03.2021	16.04.2021	25.05.2021	18.06.2021
89 (Apos. Varnavas)	03.12.2020	14.01.2021	28.01.2021	04.03.2021	16.03.2021	08.04.2021	13.05.2021	15.03.2021
90 (Ergates)	24.11.2020	18.12.2021	26.01.2021	09.03.2021	23.03.2020	13.04.2021	18.05.2021	01.06.2021
91 (LakatameiaE)	-	-	-	-	-	-	-	-
92 (Makedonitis)	24.11.2020	15.01.2021	26.01.2021	02.03.2021	23.03.2021	20.04.2021	-	-
93 (Prodromos KB)	11.12.2020	19.01.2021	-	-	-	-	-	-

### Group A & B – Year 3

All schools	14.10.2021	02.11.2021	08.02.2022	17.05.2022	-	-	-	-
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*Note. Primary schools of Akaki and LakatameiaE dropped out the second year*

## Annex 7. Additional Seminars for control group at Year 1

**Table 11.** Additional Seminars for control group at Year 1

School	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
<b>Group B – Year 1</b>			
77 (Mitsero)	22.01.2020	05.02.2020	20.05.2020
78 (Ag Dometios)	10.02.2020	17.02.2020	25.02.2020
79 (AgMarina)	16.01.2020	12.03.2020	14.05.2020
80 (Vrysoules)	15.01.2020	-	-
81 (Evrychou)	22.01.2020	18.03.2020	06.05.2020
82 (Livadia)	-	-	-
83 (Mazotos)	28.01.2020	11.02.2020	19.05.2020
84 (Mammari)	22.01.2020	12.02.2020	13.05.2020
85 (XylofagouB)	27.01.2020	24.02.2020	04.05.2020
86 (AglangiaSt)	18.12.2019	26.02.2020	
87 (Akaki)	15.01.2020	19.02.2020	13.05.2020
88 (Alethriko)	28.01.2020	18.02.2020	07.04.2020
89 (Apos. Varnavas)	03.02.2020	16.03.2020	06.04.2020
90 (Ergates)	15.01.2020	26.02.2020	20.05.2020
91 (LakatameiaE)	29.01.2020	19.02.2020	06.05.2020
92 (Makedonitis)	22.01.2020	12.02.2020	13.05.2020
93 (Prodromos KB)	29.01.2020	-	-

## Annex 8. Syntax file: Variables calculation

### Teacher data

#### 1. Problem behaviours in school

COMPUTE

BehaviorProblemsT1=mean(Beh1@1,Beh2@1,Beh3@1,Beh4@1,Beh5@1,Beh6@1,Beh7@1,Beh8@1,Beh9@1, Beh10@1,Beh11@1,Beh12@1,Beh13@1).

#### 2. Classroom behavioural climate

RECODE Cbc4@1 Cbc10@1 Cbc11@1 Cbc13@1 Cbc16@1 (1=6) (2=5) (3=4) (4=3) (5=2) (6=1).

- 'Positive learning climate'

COMPUTE PosWorCliT1=mean(Cbc1@1,Cbc2@1,Cbc3@1,Cbc4@1).

- 'Disruptions'\_REV

COMPUTE DisruptT1=mean(Cbc5@1,Cbc6@1,Cbc7@1,Cbc8@1,Cbc9@1).

- 'Safety'

COMPUTE SafetyT1=mean(Cbc10@1,Cbc11@1,Cbc12@1,Cbc13@1,Cbc14@1).

- 'Caring for environment'

COMPUTE CareEnvT1=mean(Cbc15@1,Cbc16@1,Cbc17@1).

#### 3. School climate

RECODE Schc7@1 Schc8@1 Schc11@1 Schc13@1 Schc16@1 Schc17@1 (1=5) (2=4) (3=3) (4=2) (5=1).

- 'Collaboration'

COMPUTE

CollaborationT1=Mean(Shc1@1,Shc5@1,Shc9@1,Shc13@1,Shc16@1,Shc17@1).

- 'Student relations'

COMPUTE StudentRelT1=Mean(Shc2@1,Shc6@1,Shc10@1,Shc14@1).

- 'Decision Making'

COMPUTE DecisionMakingT1=Mean(Shc3@1,Shc7@1,Shc11@1).

- 'Instructional innovation'

COMPUTE InstuctInnovT1=Mean(Shc4@1,Shc8@1,Shc12@1,Shc15@1).

#### 4. Teacher collective efficacy

- 'Instructional Strategies'

COMPUTE ColEfInstructionT1=Mean(Tcef1@1,Tcef2@1,Tcef5@1,Tcef6@1,Tcef9@1,Tcef11@1).

- 'Behavior management'

COMPUTE ColEfBehManT1=Mean(Tcef3@1,Tcef4@1,Tcef7@1,Tcef8@1,Tcef10@1,Tcef12@1).

### Student data

#### 1. Problem behaviours in school

COMPUTE

BehProbT1=mean>Last1@1,Last2@1,Last3@1,Last4@1,Last5@1,Last6@1,Last7@1,Last8@1,Last9@1, Last10@1).

## 2. Classroom behavioural climate

RECODE Less1@1 Less2@1 Less3@1 Less4@1 Less6@1 Less15@1 Less16@1 Less18@1  
Less21@1 (1=4) (2=3) (3=2) (4=1).

- 'Positive working climate'

COMPUTE

PosWorCliT1=mean(Less1@1,Less2@1,Less3@1,Less4@1,Less6@1,Less7@1,Less8@1,Less9@1)

.

- 'Disruptions'

COMPUTE DisruptT1=mean(Less5@1,Less10@1,Less11@1,Less12@1,Less13@1,Less14@1).

- 'Safety'

COMPUTE SafetyT1=Mean(Less15@1,Less16@1,Less17@1,Less18@1,Less19@1).

- 'Caring for the environment'

COMPUTE CareEnvT1=Mean(Less20@1,Less21@1,Less22@1).

## 3. Student well-being

RECODE Schc4@1 Schc5@1 Schc6@1 Schc8@1 (1=5) (2=4) (3=3) (4=2) (5=1).

COMPUTE WellbeingallT1=Mean(Schc1@1, Schc2@1, Schc3@1, Schc4@1, Schc5@1, Schc6@1,  
Schc7@1, Schc8@1, Schc9@1, Schc10@1, Schc11@1, Schc12@1, Schc13@1, Schc14@1,  
Schc15@1, Schc16@1, Schc17@1, Schc18@1).

- 'Emotional school engagement'

COMPUTE EmoEngT1=Mean(Schc1@1,Schc2@1,Schc3@1).

- 'Work load'

COMPUTE WorkLoadT1=Mean(Schc4@1,Schc5@1,Schc6@1).

- 'Feeling of Justice'

COMPUTE JusticeT1=Mean(Schc7@1,Schc8@1,Schc9@1).

- 'Student relations'

COMPUTE StuRelT1=Mean(Schc10@1,Schc11@1,Schc12@1).

- 'Family relations'

COMPUTE FamRelT1=Mean(Schc13@1,Schc14@1,Schc15@1).

- 'Teacher relations'

COMPUTE TeachRelT1=Mean(Schc16@1,Schc17@1,Schc18@1).

## Annex 9. Preparation of datasets and merging of longitudinal data

If cases can be matched (i.e. **Teachers data**):

1. **Recode reversed variables and Compute summary variables** for each measurement (i.e., copy Syntax file into the command area: File → New → Syntax [change needed for each measurement: @1 and T1, @2 and T2, @3 and T3). Save file.

Attention: Check for duplicate entries within every measurement

- Data → Sort cases (by Key variable)
  - Data → Identify Duplicate cases
    - If you identify duplicates (see output, and top of Data view)
      - Correct the (teacher) code if it is wrong with either one of the duplicate
      - Changing the line of data to correct file if it has been misplaced (like last time)
      - Confirming which is the right data and deleting the incorrect one
2. **Merge data** (Data → Merge files → Add variables):
    - a. **Key variable:** Identify the key variable that will be used to merged data, which is unique for each case in each measurement (i.e. Teacher code).
    - b. **Identical variables:** Other variables' name should be differentiated among measurements (i.e., by adding at the end @1, @2, @3).
  3. The merged file is ready (i.e., Teachers\_T1\_T2\_T3). Save file.
  4. **Aggregated the data** in another level if appropriate (e.g., school level).
    - a. Data → Aggregate → Break variable (i.e., School code [aggregate level]) → Summaries of variables (Add the variables needed [demographics, background, and summary variables] → "Create a new dataset containing only ..." → ok. Save file

If cases cannot be matched (i.e. **Students data**):

1. **Recode reversed variables and Compute summary variables** for each measurement (i.e., copy Syntax file into the command area: File → New → Syntax [change needed for each measurement: @1 and T1, @2 and T2, @3 and T3). Save file.

Attention: Check for duplicate entries within every measurement

- Data → Sort cases (by Key variable)
- Data → Identify Duplicate cases

2. **Aggregate data** before merging the files: You need to aggregate the data to a level of a unique value for case (i.e., Class code):
  - a. Data → Aggregate → Break variable (i.e., Class code [aggregate level]) → Summaries of variables (Add the variables needed [demographics, background, and summary variables] → “Create a new dataset containing only ...” → ok. Save file
3. **Merge data** (Data → Merge files → Add variables):
  - a. **Key variable:** Identify the key variable that will be used to merged data, which is unique for each case in each measurement (i.e. Class code).
  - b. **Identical variables:** Other variables’ name should be differentiated among measurements (i.e., by adding at the end @1, @2, @3).
4. The merged file is ready (i.e., Students\_T1\_T2\_T3agg). Save file.

## Annex 10. TFI Assessment progress in participating schools

**Table 12.** TFI Assessment progress in participating schools

School Code	T1	T2	T3	T4
<b>Group A</b>				
61 (Agios Demetrios)	6	20	30	18
62 (Anthoupoli)	6	16	21	-
63 (Aradippou E)	0	19	27	-
64 (Archangelos)	2	19	27	-
65 (Dasoupoli KB)	0	6	23	-
66 (Kokkinotrim. A)	0	15	16	14
67 (Lymbia)	0	14	23	-
68 (Nareg)	1	8	14	12
69 (Sia)	3	15	25	25
70 (Frenaros)	4	16	29	-
71 (Kornesios)	0	17	21	-
72 (AglangiaD)	0	13	24	24
73 (LakatameiaD)	0	14	15	-
74 (Meniko)	0	19	26	-
75 (Paliomet.)	0	20	27	28
76 (Sotira B)	4	15	29	24
<b>Group B</b>				
77 (Mitsero)	0	4	23	-

78 (Ag Dometios)	0	6	22	29
79 (AgMarina)	3	5	26	15
80 (Vrysoules)	3	8	30	-
81 (Evrychou)	0	3	24	24
82 (Livadia)	0	7	26	25
83 (Mazotos)	0	3	24	-
84 (Mammari)	0	3	30	-
85 (XylofagouB)	3	10	29	23
86 (AglangiaSt)	3	5	23	-
87 (Akaki)*	0	-	-	-
88 (Alethriko)	4	10	26	27
89 (Apos. Varnavas)	1	4	18	18
90 (Ergates)	1	3	17	-
91 (LakatameiaE)*	0	-	-	-
92 (Makedonitis)	0	3	24	16
93 (Prodromos KB)	2	3	15	-