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Action research: The key to inclusive education in Cyprus

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Abstract: The main aim of the article is to explore the role of Collaborative Action Research (CAR) in promoting inclusive education within a mainstream school in Cyprus. The preliminary data for this research were gathered using a mixed methodology approach. CAR was then carried out in a single school with 150 participants. The study then examined the extent to which CAR enhanced inclusive education, using interviews. Finally, the results showed that CAR is one of the factors which can lead to inclusion.

Keywords: inclusion, special unit, collaborative action research, mixed methodology.

Introduction

In recent years, the term "inclusive education" has gained increasing prominence internationally. It refers to an embracing education system, in which pupils Special Educational Needs (SEN) pupils have equal educational opportunities in mainstream schools (Charalampous and Papademetriou, 2019), regardless of how they may differ from what is perceived as "normal" (Ainscow, Booth & Dyson, 2006a).

The debate on inclusive education has been ongoing (Szeto et al., 2018). Many European countries, including Cyprus, have followed a policy of inclusive education (Manzano-García and Fernández, 2016). For example, Greece (Soulis et al., 2016) and Italy (Anastasiou et al., 2015) promote Education for All (United Nations Educational, 2005) following a one-way approach. Conversely, a two-track approach is found in education policies in Switzerland and Belgium, where SEN pupils, are educated only in special schools

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or classes (EADSNE, 2007). On the other hand, the United Kingdom (Blackburn, 2016) France, Poland, Finland and Ireland follow a multi-track approach, with a variety of services and choices ranging from mainstream to special education (EADSNE, 2007).

Studying these different approaches, we find that, on the one hand, countries that follow a two-track or multi-track approach, admit that systems of total inclusion have their difficulties. On the other hand, it is not always certain that countries following a one-way approach, achieve full inclusion, since it also depends on how each school implements the approach (Holmberg & Jeyaprathaban, 2016).

In Cyprus inclusive education is a human right, as not yet guaranteed, for SEN pupils (Symeonidou, 2018). A law implemented in 1999 was drafted to deal with this issue (N.113(I)/99), but despite some progress being made in the secondary education system that has encouraged inclusion, the practical implementation of the existing regulations still results in SEN pupils, experiencing marginalization (Symeonidou & Phtiaka, 2014).

So, we need to identify which elements prevent schools from being truly inclusive . Much of the research, both internationally (Manzano-García & Fernández, 2016) and in Cyprus (Charalampous & Papademetriou, 2018), has tried to identify these factors, but has not explored ways of dealing with them. This is why researchers and school communities need to identify ways of implementing and then evaluating practices which promote inclusive education.

In the present research, we considered Action Research (AR) a suitable method for realistically implementing a more inclusive culture in schools, through improving school practice (Messiou, 2018). AR is debated in the literature. Some researchers criticize collaborative action research (CAR) for being experimental (Kemmis, 2010). Frideres (1992) considers CAR to be influenced by the researcher's personal involvement, which ultimately affects the research results. Nevertheless, according to Razer (2018) AR creates an opportunity for cooperation, critical reflection (Kapenieks, 2016) and teacher training (Hathorn & Dillon, 2018), ultimately leading to school improvement (Kamler, 2016). Thus, this research is specifically aimed at exploring whether AR promotes the inclusion of pupils attending Special Units (SUs) in secondary schools in Cyprus.

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SUs in Cyprus: Inclusion or Marginalization?

The term "inclusion" refers to the right of all pupils to participate in mainstream schooling, regardless of whether they are different from what is considered "normal" (Ainscow et al., 2006b). In order to achieve inclusion, a school must address any obstacles to the participation and learning of all pupils, regardless of their socio-economic background, ethnicity or academic performance (Angelides & Avraamidou, 2010).

The Cyprus Ministry of Education and Culture set up SUs in order to cater for SEN pupils. The issue was addressed in the 1999 law (N.113(I)/99) and the 2001 regulation (N. 69(I)/2001). In the 2001 regulation, SUs are defined as places of "…integration and inclusion into mainstream schools, which are comfortable and accessible for children with special needs" (p.6).

The Ministry also issued a circular in 2017 (7.16.07/17), which is the main legislative tool regulating the institutional framework of SUs in secondary education on the island. The key regulation contained within it stipulates that SEN pupils should be segregated from mainstream classes and taught in a SU for most of the school day. It has been criticized for enabling the continuing marginalization SU pupils (Symeonidou & Phtiaka, 2009).

Heads face many obstacles when attempting to make schools inclusive. In addition to the inherently flawed legal framework governing SUs (Charalampous & Papademetriou, 2018), there are teachers' negative attitudes (Navarro et al., 2016), heads' own negative impressions about inclusive education (Cobb, 2015) and the reluctance of pupils in mainstream education pupils to engage with their SEN peers (Blackmore et al., 2016). Further, heads often lack the required training (Sharma et al., 2015), as do most teachers (Tariq et al., 2013). Nevertheless, school heads have to rally for a change in culture, which would in effective lead to the implementation of inclusive practices (Tschannen-Moran & Gareis, 2015).

Promoting Inclusion for SU Pupils through AR

In order to tackle the marginalization of SU pupils and create an inclusive school culture, the appropriate methodology must be implemented, with the support and willingness of heads and teachers. Sale (2002) attributes the current failure to establish effective inclusive strategies to the continued use of qualitative and quantitative research methods. Sometimes these do not contribute greatly to our understanding of school culture. Past research

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efforts have taken place in schools for periods that were either too short or intermittent in nature, and have therefore failed to produce consistent, good quality results. This is not to undervalue previous research efforts, but to suggest that AR may be a more effective method than intermittent observations of school culture.

AR follows a procedure made up of cycles of action and review, with the aim of achieving better results (Mettas, 2010). AR comprises a multi-method approach (Cohen & Manion, 2011) that employs qualitative and quantitative methods such as the analysis of documents, interviews, observations and other data. It is guided by the participants not just as research subjects, but as active researchers participating in the various stages of the research (Morales, 2016). This can help lead to effective change (Jacobs, 2016).

In essence, AR comprises four main stages: a) targeting and observation, b) assessment of the existing situation and design, c) development of strategic action, which is then implemented and observed, and finally d) critical analysis and evaluation (Altrichter et al., 2008). In our research, we used Collaborative Action Research (CAR), one of the main types of AR, which focuses on a specific problem found in multiple classrooms (Ferrance, 2000).

Through CAR, participants engage in collaborative dialogue and deeper reflection. According to Cook (2010), participating in AR is different from collaborating in CAR, as the latter includes both critical reflexivity and the participant's voice.

CAR is a process through which participants systematically examine their own educational practice using research techniques, improving pupils' and teachers' learning (Caro-Bruce, 2000). If the researchers possess different kinds of knowledge, skills and competences, this leads to an enhanced type of research (McDonald, 2012). However, there are drawbacks to AR. In order to achieve change, the onus is placed on the researcher. In general, CAR is a method that is particularly suited to achieving changes in an educational system. It effectively addresses the problem and there is a greater chance of determining which application of inclusive education is most efficient (Messiou, 2018) in larger education regions or even the education system as a whole.

A big issue faced by researchers is validity and reliability (Baralt et al., 2011). Since the results are limited to a specific school environment and a small sample size, we surmise that by adopting a mixed methodology in

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AR, researchers can formulate a structured approach leading to substantive change. Mixed methods in AR provide the "methodological framework" and "a comprehensive initial assessment of the problem", "produce conclusions" and "ensure better transferability of the AR study results to other contexts" (Ivanova, 2015, p. 58). Of course, combining AR and mixed methodology is hardly pioneering, having already been used by some researchers (Parker et al., 2017).

Methodology

Based on the above, we concluded that CAR was a methodological approach that could contribute to school improvement. The main aim of the present research was to explore the role of CAR in promoting the inclusion of SU pupils. We investigated whether the difficulty of creating an inclusive school culture depends not only on the stakeholders (educators, students, parents, ministry), but also on the way in which the change is promoted. The following research questions guided our research:

- How can the school community prevent the marginalization of SU pupils through CAR?
- Which values could CAR promote in order to enhance the development of an inclusive environment?

We used Ivanova's (2015) model of AR, as it combines elements of mixed methodology within the AR. The research consisted of two research cycles, conducted via the following steps:

1. Diagnosis: Through day-to-day discussions between teachers; several pupils have been marginalized because they are different. The teaching staff identified potential instances of marginalisation experienced by SU pupils.
2. Recognition: Here we incorporated a mixed methodology based on Creswell's (2014) research strategy. Initially, qualitative methods were used – interviews and observations – to establish the existing situation in the SUs. Quantitative and qualitative data were used to examine whether the education provided in the school was inclusive.
3. Design: the above results were used by the participants, who acted as researcher–participants, to form a plan to effect change in school culture.
4. Action: The plan was put into action.
5. Evaluation: Researcher–participants attempted to identify areas of improvement in the design and execution of the plan, to repeat the process to garner better results.

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The research was carried out at a public Cypriot secondary school with 112 teaching staff and 493 pupils. Out of these pupils, 70 who had learning difficulties, while 6 were integrated into the school's SU. Our research sample consisted of 150 individuals, who all participated in the quantitative part of the CAR. The school was chosen because one of the researchers was also a member of the teaching staff. This provided us with unique insights into the culture of the school. The questionnaire was filled in by 73 teachers, 3 carers of SEN pupils, 4 assistant headteachers, the school's head 10 parents and 54 pupils without SEN and 6 SU pupils. The research project lasted 10 months in total, from May 2017 to February 2018.

The entire school community was involved in the research. The school head, in cooperation with the research coordinator, had overall control and coordinated the whole process. The assistant headteachers provided guidance to the groups that were formed (e.g. teacher training group, cooperative networking group, group of SU pupils). Meanwhile the parents of SU pupils tried to help reduce feelings of marginalization.

Furthermore, it should be noted that the research facilitator was one of the two authors of this paper and was working as a teacher at the school in which the CAR took place. This strengthened the credibility of CAR, since the researcher facilitator had also participated in the stages of organizing, conducting and analysing. Specifically, the research facilitator organized meetings and led the CAR cycles and stages.

In the context of CAR, the role of the teacher as researcher is extremely important (Campbell, 2013). At this point we should mention that all participants had dual roles in the research. The participants were both investigators and researchers during the data collection and data analysis, reflecting on their own practices and the practices of their colleagues. Additionally, the researchers defined the individual objectives of each research cycle and reflected on whether the research should enter the second cycle.

The research was carried out as ethically as possible: the researcher–participants provided voluntary informed consent and had the option to withdraw from the research at any time. The parents of the pupils who took part in it gave their informed consent. The research facilitator maintained an authentic rapport with the researcher–participants as she was already a member of the teaching staff at the school. Before we conducted the research, we made sure we had the trust of the school head, the Parents' Association and

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the guardians, as well as the teachers of the school. The participants were guaranteed confidentiality and anonymity.

The data sources for the research were a questionnaire, interviews, observations, focus groups and the researchers' diary. These were studied by researcher–participants, to help them maintain an awareness of their attitudes and behaviour, and allowing them to revise their actions as required. The qualitative data were audio recorded. The researcher–participants also took field notes to record and reflect upon their impressions, the environmental context, behaviour and nonverbal cues.

The mixed data collection was performed using a "sequential exploratory strategy", proposed by Creswell (2014). This strategy gives priority to the qualitative research and then incorporates the qualitative and quantitative methodology into research during the interpretative phase. The data collection and analysis are performed sequentially. We chose this strategy because the qualitative approach allowed us to identify whether there really was a problem with marginalization in the school. We then compiled a questionnaire thoroughly exploring the aspects that had emerged from the qualitative research.

We analysed the data using the grounded theory approach (Strauss & Corbin, 1990), an interpretive, constructivist method allowing the participants to present their perspective and then combine it with the researchers' perspective (Hutchinson, 1998). We chose a systematic design, one of three designs (systematic, emerging and constructivist design) in grounded theory, which consists of three stages of coding, namely open coding, axial coding, and selective coding (Creswell, 2014).

Grounded theory has been used in several studies, such as in the research of Shpigelman, Reiter and Weiss (2008) (education) and Lewis-Pierre, Kovacich and Amankwaa (2017) (nursing). We analysed our data based on these studies which used grounded theory.

Although grounded theory is commonly used to analyse qualitative data, according to Johnson (2008) it can be used for quantitative data analysis as well. In order to analyse the mixed survey data we qualisized the quantitative data and quantized the qualitative data. This meant converting the qualitative data in word or image form into numbers, by reading, coding, presenting and interpreting it. The quantitative data were correlated using open-ended comment fields.

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The quantative data were subjected to an inductive statistical analysis through SPSS (Statistical Package for the Social Sciences), because apart from being relatively easy to use, we believe that it offers several optios for multiple data analysis. Once we had combined the quantitative and qualitative measures and thus achieved data triangulation, we were a step closer to data objectivity (Rendani Sipho, 2012).

After collecting and recording the data, they were returned to the participants so they could confirm they agreed with them. This was to ensure that results were not biased, given that one of the researchers worked at the school.

Mixed Methodology Results and AR

Diagnosis

In the last five years, the teaching staff had identified some pupils who may have been marginalized because of learning difficulties, appearance or general characteristics. According to the teachers and parents, this problem could not be disregarded. A representative view was that of Kostas (parent) and Maria (teacher):

> "We cannot help them at all. We just have those children here because that's what the law says".
> "These children are suffering in the mainstream school"

So, they concluded that it was very likely that SEN pupils were marginalized. That's why they decided this issue had to be explored. At this point, the author intervened suggesting a mixed methodology be used to investigate the school culture. All the researcher–participants agreed, so the author took on the role of research facilitator.

Recognition

The research then proceeded to the planning stage, during which the participants decided to use CAR to identify any emerging problems in the efforts to construct an inclusive school culture and then try to deal with them so as to promote inclusion. The CAR was launched through the mixed methodology, in order to reveal the extent of inclusivity in the school. We began with the qualitative part of the mixed methodology research and, based on the observations and interviews carried out, we realized that the

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school had not been inclusive prior to the application of the CAR. John, a teacher said:

> "Inclusion is…far from the truth. It doesn't exist nor will it ever. SU pupils have so many problems. It is impossible to place them in mainstream classrooms".

In addition, a carer of pupils (SEN) stated:

> "In secondary schools pupils with disabilities bored and are educated in the schools, but not with the other pupils. They are unfortunately isolated in separate classrooms"

Once we had broken the qualitative data down into much smaller components and labelled and finally coded them, the participants appeared to be somewhat against inclusion. In the qualitative part of this stage, we recorded a total of nine participants stating that true inclusion of SEN pupils was not possible at the school.

However, as we were using a mixed methodology, the results of the qualitative research were not deemed sufficient evidence in themselves. However, the subsequent questionnaires also showed that the school was failing to provide inclusive education to SU pupils. Participants responded to statements using a five-point Likert scale (strongly disagree, disagree, neither disagree nor agree, agree, strongly agree), subsequently measured using the Pearson correlation coefficient. Most agreed with statements such as "pupils with SEN should be placed in the SU", and "only teachers that specialise in special education can assume the role of teaching SU pupils". This is also evident from the significant statistical relationship between the data, based on an analysis of the Pearson coefficient (r=.344, p-value=.001). Meanwhile, those that considered a "lack of knowledge and competences in relation to teaching children with SEN" an obstacle to inclusive education believed that there was "difficulty in maintaining discipline in the classroom" (r =.570, p-value-=.000).

Furthermore, when we correlated various statements with the number of special education seminars teachers had attended using the statistical criterion x^2 (chi square), we found a statistically significant correlation. So although the teachers had attended special education training seminars, they continued to believe that inclusive education was not relevant, which constitutes an obstacle to applying inclusive theory. The statements pre-

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sented in table 1 were given on a five-point Likert scale (not at all, slightly, moderately, very, extremely):

Table 1 Teachers' views on the inclusion of SEN pupils

	Statement	**x2**	**df**	**p-value**
1.	"Teachers of mainstream classes must accept pupils of Special Units in their class"	24.068	12	.020
2.	"Difficulty maintaining discipline in a mainstream classroom"	45.057	12	.000
3.	"Lack of knowledge and competences in relation to teaching children with special needs in the Special Unit and also in the mainstream classes"	22.980	12	.028
4.	"School's difficulty in hosting children with various disabilities due to inadequate infrastructure"	28.356	12	.005
5.	"Difficulty in offering the same level of attention to all pupils in an inclusive classroom"	28.968	12	.004

The mixed-research results indicate that there is minimal inclusion of pupils in SUs. Analyzing the mixed data, we concluded that the main reasons SEN pupils are marginalized are to do with teachers' views and lack of knowledge on inclusion, and a lack of infrastructure and equipment that would enable the inclusion of SEN pupils.

Design

After analysing the data, we concluded that we had to design CAR in such a way that it effect a change in school culture and thereby promote the inclusion of SU pupils. The research facilitator emphasized that once partcipants had consented to the research, they took part in the research as participants and as researchers. The first cycle of research was launched.

As Ioanna, a teacher, stated:

> "Through this research we concluded that our school does not promote inclusion. However, we cannot remain this way. We need to act and find solutions".

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Action: First cycle of CAR

The aim of first CAR cycle was that participants should propose ways in which the whole school community could promote inclusion and engage in this themselves. This cycle lasted from September 2017 to November 2017. The data analysis was based on grounded theory, which guided us in coding the qualitative and quantitative data collected. The researchers took notes throughout the research, on events and cases and how these related to one another . Those notes concerned events, cases and relations between them.

In this section WE are going to describe what happened in the cycle. To make the data these more comprehensible, we give examples of what some of the participants said. In this first cycle of CAR, we took the following steps:

1) Training teachers:

Teachers suggested aspects on which they would like to be trained, including differentiated teaching, inclusive education theory and practical methods to address the needs of SEN pupils. In addition, the research facilitator discovered that the participants did not know the basic elements of CAR methodology. Therefore, seminars were held to inform the participants about the basic stages, research tools and methods for collecting and analysing the data in CAR. One positive outcome, according to a researcher–participant's notes was that:

> "Teachers made efforts to implement what they learned. They also decided to reflect and assess the level of the implementation of the inclusive theory. This helped them to review, correct potential mistakes and change their teaching practices and behaviour in order to move towards inclusiveness in their teaching".

As George, a teacher, stated:

> "I think we made a very good start. The training will improve our teaching…Of course, at the beginning teachers were not willing to spend their free time being trained.

After coding the data, we concluded that the training gave teachers the opportunity to become informed and apply more inclusive teaching practices. Certainly, educating teachers is time consuming. In this case, the teachers considered the training to be an additional workload. It seems perfectly

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reasonable to expect teachers to take on an additional workload until the change has been implemented. This barrier seems to have been gradually overcome.

2) Building trust between teachers

The aim was to encourage teachers not to assign blame amongst the teaching staff. Instead, the teachers were asked to work together to try to improve the situations of specific marginalized pupils. This made the teachers feel united in seeking solutions, regardless of whether they taught SU pupils. According to the school head:

> "It had been very difficult to build trust. The staff change every year, so they don't know each other. How can they trust one another? It took us a while, but I think we did it. Without trust we cannot create an inclusive school".

A teacher mentioned:

> "There are about 100 teachers in this school. It is difficult to get to know each other. Saying that, how can we have the confidence?".

We found that building trust was not as easy as it sounds. It is a process that takes time and effort. However, according to the school head, this goal was finally achieved.

3) Placing SEN pupils in mainstream classrooms

As initially observed by the researcher–participants, the SU pupils remained in the SU classroom throughout the day. To foster a more inclusive culture, we included the SU pupils in mainstream classes for five to seven teaching periods daily. They were not included for the whole day to allow them to receive personalized assistance. According to the head:

> "Certainly, our attempt to help SU pupils attend more lessons in the mainstream classroom was very important for their inclusion. Our main problem was creating an inclusive curriculum. We still have a way to go. The creation of such a curriculum is quite difficult because of the large number of teachers moving to different schools, their teaching specialisms and the pupils' choices".

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According to a parent of a SEN pupil:

> "It is easy to say that the special unit pupils must be educated in the mainstream class. This is what we want….But we know that it is very difficult to do that because of the curriculum, which must meet many requirements and needs".

Coding and then analyzing the data, we found there were several practical difficulties regarding inclusion. One was creating a curriculum which would allow SU pupils to attend mainstream classes.

4) A smaller number of pupils in each class

In order to improve teaching for all pupils in mixed ability classes, the school management team, following the researcher–participants advice, decided to reduce the number of pupils in each class, particularly when attended by SU pupils. In this way teachers were able to devote more time to each pupil during the lesson. According to Maria, an assistant headteacher

> "…With fewer children in the classroom, it is certainly easier to help them learn…"

A teacher also mentioned:

> "At the moment we have fewer pupils in the classroom. We can better apply the teaching practices we have learned in seminars in order to help children with disabilities…Before with so many pupils in the class we couldn't help SEN pupils at all".

Studying the interviews, and performing the open coding, axial coding, and selective coding, we concluded that, with fewer pupils in the class, teachers could more easily apply the principles of differentiated teaching to promote the inclusion of all pupils.

Evaluation of thefFirst cycle of research

At this point the first CAR cycle came to an end. December 2018 was used as a period of reflection. Upon completion of the first research cycle, the researcher– participants decided that these activities had been properly introduced; however, the consensus was that the act of carrying out the activities in the first cycle had highlighted just how far the school still had to

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go in order to achieve its goals. Antri, a teacher made the following comment during a staff meeting,

> "Ok…we tried but we are very far from…inclusion".
> The head also expressed his dissatisfaction by saying,
> "I don't know what went wrong. I think we should continue our efforts".

According to the researcher facilitator's personal diary, the early stages of the research had not turned out as expected:

> 15/09/17: I'm delighted. I really didn't expect colleagues to demonstrate such an interest in the research. I think they have probably not yet realized their dual role as participants and researchers.
> 18/10/17: Unfortunately, my colleagues aren't really engaging with the process. I have to help them realise that all this is happening for the pupils' benefit. They may think that I blame them. I must find a way to avoid this impression.
> 20/11/17: I think we may have achieved something. They have started to search the subject on the internet, asking for specialists to visit the school and advise them about the best ways to reach SU pupils placed in mainstream classrooms.

Trying to code the above points and bearing in mind the whole dataset, we concluded it was worth keeping the following, most representative views: "very far from inclusion", "I don't know what went wrong", "colleagues are not really engaging".

Thus, we see that as researcher–participants we were probably led into being a little over-optimistic at the beginning due to colleagues' initial enthusiasm and interest in the research. This gave way to feelings of pessimism because of the difficulties which arose.

In addition to the evaluation of the first cycle results by the research facilitator, a meeting was conducted during which the researcher participants evaluated the first round of the CAR. Indicatively, we give some views of the researcher–participants:

> "We learned a lot through the first cycle. But it was quite superficial." (Anna, assistant heateacher).

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> "We achieved some goals. However, the inclusive culture that has been created so far has to become established" (Andreas, parent).

> "We have been educated and understood that inclusive education works at least" (Antonis, teacher).

It can be seen from the above, which we can consider the second set of views, that the first research cycle contributed to the teachers obtaining significant inclusive knowledge, even theoretically. But that was not enough. The researcher–participants, after completing the first cycle, considered that the objective of creating an inclusive school had not been achieved.

Action: second cycle of CAR

It all points to the first research cycle having left room for improvement, which should not be underestimated. We therefore embarked on a second research cycle. It was decided, after a discussion between the researcher participants, that the objective of the second cycle should be to consolidate the inclusive culture. Studying the first research cycle, we concluded that it had focused on how the teachers could promote inclusion. That had not been fully achieved, so we created a second research cycle that would involve non-school factors that could be harnessed to promote the inclusive culture. During this cycle we took the following steps:

1) Defining personalized targets for every pupil, with the help of the District Committee for Special Education.

Teachers need to have some basic guidelines on how to reach each pupil through differentiated teaching. To carry out this intention, researcher participants wrote to the District Committee for Special Education, giving details of the SEN each SU pupil had. The committee wrote back to the school by giving more specific guidelines on inclusive and differentiated teaching for each SU pupil, such as exercises of graded difficulty, a worksheet to be shared, additional creative activities of different types to mediate knowledge and extend the length of time spent on it.

According to the head:

> "Teachers now know how to help pupils, depending on the difficulties they face, without creating additional problems."

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The head's view is confirmed by the following observation. A researcher participant mentioned a story:

> "During the lesson, the history teacher was trying to help pupils in every which way. He began the lesson by showing a video, then he gave out exercises starting from the easiest through to the most difficult. He gave the pupils a choice in selecting some of the exercises. The majority of the pupils seemed to understand the lesson. One did not understand the lesson and he asked he asked questions to help him understand. The teacher immediately referred him to a website with simpler texts and images. The pupils were satisfied. I was even more impressed when I saw him using memory cards as a game to summarize the whole lesson. I believe that all the students gained the appropriate knowledge from that lesson. After the lesson, I studied the personal goals set out for each student. I think the teacher has done an excellent job".

So, teachers gained time and energy that was spent searching for a way to approach each pupil. The above story shows that personalised targets had been set for each child depending on their needs, reinforcing the path towards creating inclusive culture. This also discouraged mainstream pupils from marginalizing the SU pupils.

2) Creation of a collaboration network with other schools

Exchanging views and best practices with those teaching in other schools was very useful for consolidating the inclusive culture. For example, we stopped using certain non-beneficial labels, such as SU, Special Education assistant headteacher and disabled children, to describe special education related practices. According to a teacher from the school where the research was conducted:

> „We have learned to consult colleagues from other schools. Through discussion, we have learned to apply new practices that had not even entered our minds before, such as the diversification of teaching and coteaching. We have also suggested useful practices to them".

According to an assistant manager:

> "By cooperating with teachers in other schools, we avoided using practices that have been used by others and that have failed. We saved time."

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Coding and analyzing the data, we realized that the creation of collaborative networks contributed either to the rejection of practices that led to marginalization or to the adoption of new proven practices that lead to inclusion ("apply new practices", "avoiding failed practices").

3) Working with parents

There is no doubt that parents can play an important role in efforts to consolidate the change. In this school two educational events took place to promote respect for diversity. Both events were open to parents, pupils and teachers. Firstly, the parents of SEN pupils spoke about their experiences, with a view to garnering empathy from other parents. Secondly, they spoke about their children's different talents and capabilities, which they were still discovering and developing. This was aimed at challenging the view that SEN pupils are "other" within the school community. As the mother of a SU pupil said:

> "We have managed to get people to understand that our children are not just decorative elements in our school, they have a lot to offer to both school and society".

According to a carer:

> "Cooperating with parents has given us the opportunity to see how they think. This helped us to change our views in order to help make SEN pupils feel equal in the school environment."

It therefore appears that the role of parents of SEN pupils and the cooperation between them and the school community is extremely important in creating an inclusive culture.

4) Participation of SEN pupils in school activities

SU pupils started to become involved in a variety of school activities, such as events, drama, music and dance performances. In addition, they took part in decorating the school grounds in order to promote messages of respect towards diversity.

Here it is worth mentioning the observation of a parent whose SEN pupil:

> „Over the past week, I have been thrilled…While I was sitting watching

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> the school event where the Christmas celebration was held. I saw SU pupils singing, reciting poems, dancing and helping screening films. Their faces shone with joy and the viewers were astonished, perhaps because they did not think that those pupils could do that."

A carer said,

> "Now I believe they feel equal to the other students"

The above observation and the carer's comment led us to conclude that the participation of SU pupils in every school activity is crucial if they are to consider themselves members of the school. It seems that the parents of the rest pupils had the same feeling.

Evaluation of the second cycle of research

Following the completion of the Second Research Cycle, we began the Evaluation Stage, which was conducted via a presentation that was open to the public. The resulting data, obtained from the views of the teachers, produced completely different results to the mixed methodology that came before it, indicating that progress had been made. Notably, we chose teachers who had initially exhibited disagreement and scepticism towards the process to take part in the evaluation stage of the CAR. Leonidas, an Assistant Headmaster stated:

> "I am truly amazed! Through gradual attempts at change, we understood the meaning of CAR, as well as its importance in being initiated, primarily, by ourselves".

The school head emphasised the following:

> "Personally, I thought that all we would achieve was that the teachers would attend some seminars. I thought everything was just theory. However, I have realized that CAR is a dynamic procedure that can involve all teaching staff and raise their awareness to a level not even we, the school administration, ever expected. Nothing would have changed if we had simply handed out questionnaires or interviews and observations".

Teachers that participated in the research appeared to have the same opinion. One of them, Angelos, said:

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> "The most important advantage of CAR is that there is no off-the-shelf programme to implement. On the contrary, it encourages us to figure out the solution, experiment, make mistakes and learn from our mistakes…We don't expect a solution to our problem from the Ministry".

Each school's problems are unique and specific. Therefore, the staff have to find ways to solve their own problems. The Ministry's administrators announce a couple of theories and then expect teachers to find a way to apply them. That is not a solution.

Costas, a parent of a SU pupil, said:

> "If hadn't seen it with my own eyes, I would never have believed it. Everything has changed. Teachers, pupils and parents, see things differently now. We have achieved equality in our school".

Stella, a carer of SEN pupils, confirmed:

> "We may be exhausted, we may have feared that our attempt would be pointless, but ultimately, we have achieved results".

While the researcher participants' feelings of achievement and excitement are worthy of consideration, we also want to highlight the value in the increased feelings of ownership and collaboration among the teachers. We worked towards creating an inclusive school, setting out specific common roles and actions with a sense of shared responsibility for success, which facilitated the establishment of an inclusive school culture. We noted statements such as:

> "the most important part is not that we applied the design. It is that we created it and it worked. It is our "recipe"….", "it did not magically occur. All together, we can achieve common good" (Georgia, carer).

and

> "it didn't just succeed in the eyes of the public; I think that inclusive education in our school is here to stay" (Christina, teacher).

The research was also productive in developing a collaborative culture, not just inclusion; this is also a prerequisite for the creation of permanently inclusive environments. Marios, an assistant head highlighted,

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> "We learned to cooperate, and this is important for everything we do in the school".

The teaching staff shifted their thinking on the head's role, as well. The concept of the head as a leader who issues top-down commands was proven to be an ineffective and outdated method of running a school. The teachers agreed that heads have to listen, take everyone's views into consideration and make collaborative decisions. Nicos, a parent, said,

> "Ultimately, a school's head is not just a figurehead. Through teachers' support and his own will, he can achieve quite a lot".

John, the head of the Parents' Association expressed his support:

> "To tell you the truth, I don't really understand methodologies and theories. I do, however, see the results. Every child, with or without SEN seems happy in our school".

This view was mirrored by an SU pupil's mother, Constantina, who stated,

> "Our children get to enjoy the same rights as the rest of the pupils".

Parents are not the only ones to have been positively affected by the CAR, since pupils also admitted that the research had led them to fundamentally change their views and perceptions. A pupil said:

> "This process was the best lesson for us. We understood what it's like not to be accepted…From now on, we will respect everyone".

This crucial need for change was made clear. Maria, an assistant headteacher, said:

> "I was shocked by the number of parents visiting our school because they wanted to enrol their children in our SU in the upcoming academic year. The school's reputation has improved. Most of the parents want their children to join because they have heard that pupils here participate in events and are happy in class".

In relation to this point of view, Koulla, a carer of SEN pupils, mentioned the following:

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> "Recently, a carer from another school, who was attending the same seminar as myself, spoke about two of our SU pupils, who were attending the SU in her school last year. They had been completely isolated. So, she said that in my school the same pupils behave completely differently. The carer was arguing the point that teaching SEN pupils is not a pointless endeavour. This sparked a huge discussion on how we can further help".

The research we carried out here is merely the beginning. Every school should examine itself to ascertain what is needed to create an inclusive environment. This would mark the beginning of widespread inclusive education for SEN pupils and the eventual eradication of SUs.

The research facilitator recorded her thoughts on the second CAR cycle in her personal diary:

> 25/12/17: Finally! I think I can see changes in teachers' behaviour towards SU pupils. It's the first time I've heard a colleague saying they can learn and do a lot of things.
>
> 02/01/18: Perfect! SU pupils have formed friendships with the rest of the pupils.
>
> 29/01/18: A few days ago, a seminar on inclusive practices for SU pupils took place. Colleagues actively participated in the seminar, had questions and listened to the specialists.

Internal satisfaction was the most important enjoyable feeling amongst the researcher participants, and it was down to the change in school culture. Nicolas, a teacher who had initially thought significant change would not happen said:

> "Bravo to all of us. It had been extremely important to achieve something that initially we could not even picture!".

This supported by Anna, one of the parents of SU pupils:

> "Thank you all. This was the best gift for our children. Their attitude has improved. They are happy to be a part of this school".

The presentation was also attended by teachers from other schools, one of whom said,

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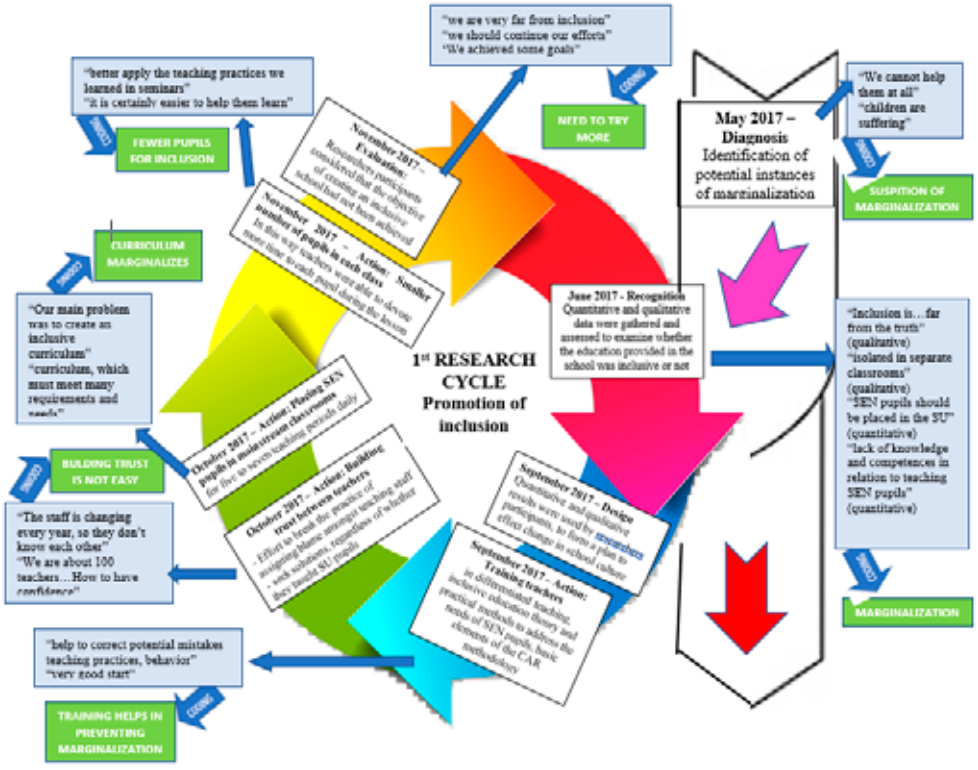
> "…you have managed to create the inclusive dream through your own efforts. You have set an example and encouraged other schools to do the same".

This second cycle of CAR, did not, of course transform the school into a perfectly inclusive environment. We need to be more balanced and realistic and view it with a critical eye. The process lasted for a very short period, so we cannot conclude that the results will be permanent. In addition, if the same procedure were applied in another school, the results would probably not be the same. The researcher participants and the research facilitator felt that they created it on their own. In this, we must appreciate and give credit to their efforts.

Figure 1, which was created as part of the research, can help us understand the CAR process and the way in which it guided the school in consolidating the inclusive culture. At the same time, it explains how we applied the CAR, sequential exploratory strategy and grounded theory. It presents the two main research cycles on which the CAR was based. Each presents the content of the main stages of the research (diagnosis, recognition, de-



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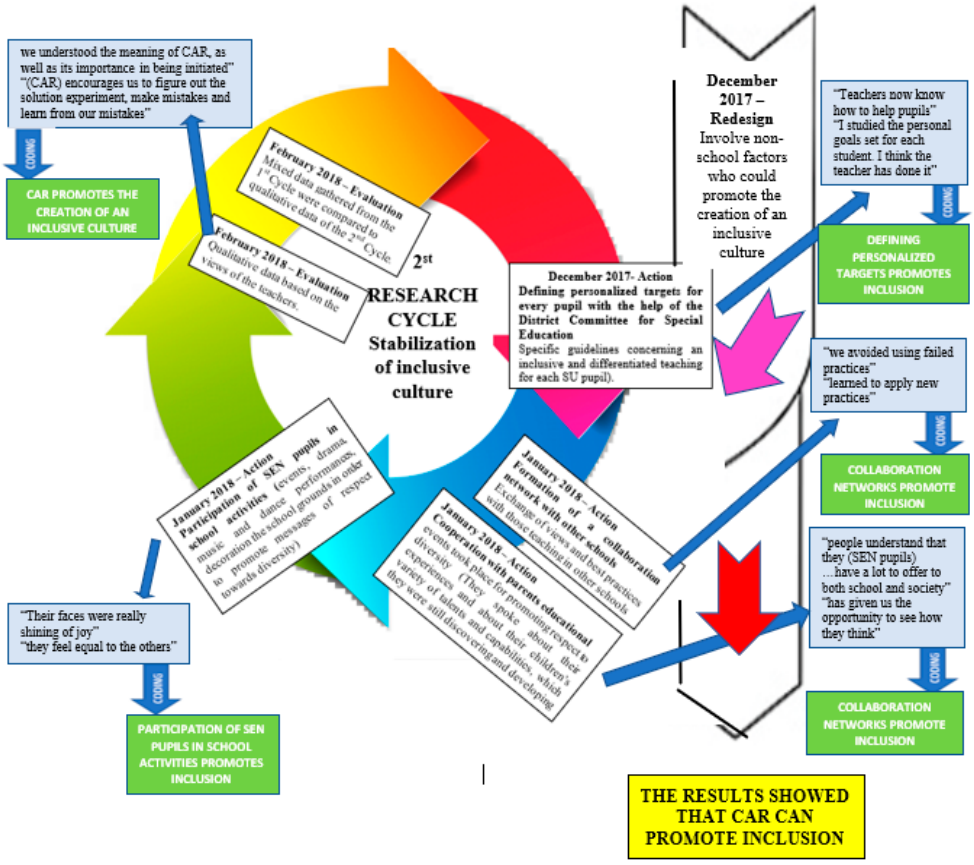

Figure 1: Research process

sign, action, evaluation). The blue boxes around the edges of the two research circles are intended to illustrate how selected participant statements have been coded using the theory, leading to the conclusions (green boxes). Finally, the yellow box shows the results of our research.

Discussion and conclusion

The research results have ultimately brought to light the potential of CAR as a means of promoting inclusion. Calhoun (1994) stated that the two main goals in implementing CAR in a school should be: a) the school proactively attempting to solve its own issues and b) better and fairer treatment of SEN pupils, which in turn benefits the entire pupil body. Our research broadly followed Calhoun's goals. Our results were also in line with those of Armstrong and Moore (2004), who stated that AR is an important factor in avoiding marginalizing practices in education. It directly addresses

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the challenges associated with achieving inclusive education, and provides practical methods for improvement through collaboration and collective action, based on the principles of equality and democracy. We also agree with Makoelle (2012), who concluded that CAR helps academics to self-reflect on established practices and attempt to improve on them. This creates an environment of cooperation between researcher participants and the research facilitator and allows teachers to exchange views on inclusive practices. This constitutes the driving force behind, not just inclusive schools, but any other goals set by the school community.

The analysis of the mixed data collected at the "Recognition" stage revealed that SU pupils were marginalized, a fact indicating the need to create an inclusive school environment.

What our research has shown is that while legislation has a place in establishing a formal framework, the effective implementation of an inclusive school culture is best carried out internally, avoiding top-down instruction and instead taking into consideration the views and relying on the cooperation of the entire school community.

According to the researcher participants, the CAR showed that the researcher participants were encouraged to take further action and to seek the active involvement of the wider school community.

CAR encouraged participants to become involved in the process of creating an inclusive school environment. Particularly at first, they had the opportunity to attend training on both inclusive education and CAR, to develop relationships of trust and cooperation with each other, to include SU pupils in mainstream classes, and to reduce the number of pupils in mainstream classes. CAR also gave them the opportunity to cooperate with non-school actors who could promote an inclusive culture. In particular, CAR meant they were able to receive guidance from the District Committee for Special Education for individual SU pupils, which helped them to establish cooperation networks with teachers from other schools, work with parents and integrate SU pupils into school activities.

The most striking feature of the CAR was the continuous reflection process, which, throughout the research, allowed participants to reflect and think about whether their practices would lead to the consolidation of the inclusive culture and finally review failed practices.

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We need to emphasise that CAR has the potential to change school culture by making a real difference in reducing the marginalization of SEN pupils. We now need to extend the experiment to a wider number of schools, which will reinforce our results. It would be particularly beneficial for schools to develop collaboration networks amongst themselves, exchange inclusive practices and provide each other with critical reviews. The development of collaboration networks aiming at inclusive education for SU pupils, as well as pupils experiencing marginalization for any other reason, could form the basis for additional research.

To sum up, by studying the data in depth, we realized that the results were positive and favoured two main axes that can contribute to improving a school, pupils and teachers. Firstly, the CAR facilitated the inclusion of SU pupils. Secondly, teachers had the opportunity to train and then experiment with the application of inclusive practices. So they gained practical and theoretical knowledge on inclusion. Teachers also had the opportunity to help their pupils, since they were now being taught by teachers who knew how to include them.

Finally, we must emphasize that the CAR was not completed without any problems or difficulties. Researcher participants encountered initial reluctance amongst the teachers to train, a delay in building trust and the difficulty of creating and implementing an inclusive curriculum. These problems were finally resolved with patience and a lot of effort to reveal the positive impact of AR implementation on the creation of an inclusive school environment and on school improvement.

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