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The relationship between grading and teacher judgment

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Abstract: This paper presents two studies examining the interrelation of grading and teacher judgment. Study 1 revealed the structure of teacher judgment two teachers and their classes, based on data from long-term ethnographic research. Through inductive analysis of teacher statements about students, four criteria by which teachers judge their students were identified: performance, aptitude, effort, and communicativeness. Using quantitative data from 639 students and 32 teachers, Study 2 explored the relationship between the criteria for teacher judgment identified in Study 1 and the grade assigned to a particular student. Evaluation questionnaires that teachers completed about their students were used. All four criteria identified in Study 1 positively correlated with the grade, but as the multiple linear regression analysis showed, the final grade was most influenced by the category of performance. However, a teacher's perception of a student's performance did not always fully align with their performance as measured by a standardized test.

Keywords: grading, teacher judgment, student performance, effort, communicativeness, aptitude

Introduction

This paper is concerned with grading in connection with teacher judgment processes. Grading is a significant school phenomenon with potential far-reaching implications for students. Research has shown an interrelation between student grades and student motivation, self-esteem, and self-efficacy (Ross & Kostuch, 2011; Perry, Davies & Qiu, 2018). Students form an idea of how successful they are on the basis of the grades they get, which can affect their beliefs about their competencies, their further motivation and effort, and consequently their future achievement.

The effects attributed to grades are ambiguous. On the one hand, they are believed to support the learning process (Gustafsson & Erickson, 2013; Südkamp, Praetorius & Spinath, 2018). On the other hand, some authors draw attention to the negative impact of grading – for example, in promoting unhealthy competitiveness or suppressing motivation and creativity in students (Tomlinson, 2010; Lipnevich & Smith, 2009).

For teachers, grading students is part of their day-to-day duties. Alm and Colnerud (2015) reported grading as one of the most difficult and least popular teacher duties. As Brookhart et al. (2016) noted, teachers use measures of student performance, primarily tests, as major determinants in grading. At the same time, it is important for teachers to grade fairly, with fairness being understood as considering criteria and sources of information other than performance in the grading process. Tierney (2014) claimed: "Fairness in classroom assessment is a complex quality that relies heavily on teachers' professional judgment." Murillo and Hidalgo (2017) argued that a fair assessment does not mean assessing and grading all students the same way.

It is evident that grading is an activity that involves inner tension for teachers caused by ethical dilemmas (Pope et al., 2009); at the same time, teachers are aware of the importance of grades for students and the influence of grades on student achievement. Therefore, it is relevant to examine what guides teachers in grading, what student characteristics are significant in forming teacher judgments of students, and how this judgment is in turn reflected in teacher grading practices.

Theoretical Background

Grading

In the Czech school system, grading is governed by a decree issued by the Ministry of Education, Youth and Sports that stipulates that school grades should reflect in particular the attained level of education of the student with regard to the expected learning outcomes in individual subjects and the educational capacity, personality traits, and age of the student. Grading may also take into account the student's attitude to education and other factors affecting their achievement (Münich & Protivínský, 2018, p. 5). It can be argued that the assigned grades should primarily reflect the academic performance of the students, but there is also room for teachers to incorporate in the grades the student's overall attitude to school duties.

It is generally accepted that grading is the most common feedback for

students, giving them and other stakeholders (for example, parents) a brief and summary report on how well they are doing at school (Brookhart, 1994; Lipnevich & Smith, 2009; Tomlinson, 2010). From this perspective, as McMillan, Myran and Workman (2002) pointed out, grades are perceived as a form of reward provided to students on merit. Empirical research has examined the extent to which grades actually reflect student performance. In these studies, student grades are correlated with the results of standardized knowledge tests. The correlation between the grade and test scores in these studies oscillates between 0.4 and 0.6 (Carter, 1952; Farkas et al., 1990; Brennen et al., 2001; Woodruff & Ziomek, 2004; Duckworth & Seligman, 2006; Pattison, Grodsky & Muller, 2013). It is clear that there is a strong, but not absolute, overlap between the grade and student performance.

Other student characteristics with an impact on grades have been investigated. Carter (1952), as well as McCandless, Roberts, and Starnes (1972), demonstrated a positive association between grades and intelligence as measured by intelligence tests. Farkas et al. (1990) provided evidence that student work habits have a positive impact on their grades. Similar results were presented by Duckworth and Seligman (2006) in relation to student self-discipline and by Kelly (2008) in relation to the degree of their engagement in classwork. Casillas et al. (2012) identified the influence of former academic achievements and discipline. A study by Klapp Lekholm and Cliffordson (2009) showed that grades are influenced by student motivation and self-efficacy (Diaconu-Gherasim et al., 2019).

The relationship between grades, achievement, and gender has been repeatedly demonstrated – girls get better grades on average, although they do not outperform boys on achievement or IQ tests (Carter, 1952; Brennen et al., 2001; Duckworth & Seligman, 2006). A relationship has also been shown between grades, achievement, and student socio-economic status, with higher socio-economic status correlated with better grades[1] (Kelly, 2008; Westphal et al., 2016).

In the studies cited, student grades are related to different characteristics of individual students. Although the conclusions and findings are heterogeneous, there is clear agreement that in addition to performance, other student characteristics, including their cognitive and socio-demographic characteristics, as well as the different aspects of their approach to schoolwork, contribute to student grades. The existing research explains the in-

[1] Even when accounting for achievement.

consistency between grades and test scores in that teachers consider other non-performance criteria in their assessments of students.

Teacher judgment

The studies cited in the previous section conceptualized grades as a result of different student characteristics. A complementary perspective understands grades as being determined by the teachers' judgment.

Teacher judgment can be operationalized as the teacher's estimation of a student's current academic achievement (Zhu, Urhahne & Rubie-Davies, 2018). As Vanlommel (2018) pointed out, teacher judgment has a rational side that manifests through the teacher's search for and evaluation of different data sources, and an intuitive side based on a quick and not fully conscious thought process. Teacher judgment has far-reaching implications because it serves as the basis for the teacher in assessing the student's work and school performance and in adapting communication with the student (Ready & Wright, 2011; Urhahne et al., 2011; Urhahne & Zhu, 2015; Drexlerová, 2018). The teacher's judgment is reflected in how the teacher approaches individual students in the classroom, in what tasks they assign, and in what clues they provide for dealing with these tasks (see Sedova & Salamounova, 2016). For example, students perceived as outstanding by their teacher may face more difficult questions and tasks and get more sophisticated clues and feedback. At the same time it affects how students are finally assessed and graded. For this reason, teachers should be, according to Walker et al. (2015) experts in assessing the level of students' abilities in terms of academic skills and social behavior. As the authors put it: "There is a long-standing body of research showing that teacher ratings predict important student outcomes, such as academic achievement and peer social status, well into the future" (Walker et al., 2015, p. 365-366).

The way teachers perceive and evaluate their students is consciously or unconsciously reflected in teacher behavior towards individual students. The teacher approaches different students differently, or in other words, acts differentially (Babad, 2005; Bressoux & Pansu, 2016; Higgins, 2011; Newberry, 2013), for example with preferential behavior towards high-achievers and broadminded behavior towards low-achievers. This has some effect on students. As noted by Bressoux and Pansu (2016), students tend to adopt the teacher's evaluation, internalizing it over time. This perception of oneself and of one's capacities impacts actual academic achievement. Students who are perceived as high achievers by the teacher may consequently do better at school.

The formation of a teacher's judgment is based on diverse sources of information. Bressoux and Pansu (2016) suggest four main domains of these sources. The socio-demographic characteristics of students, including gender, socio-economic status, and ethnicity[2] represent the first domain. The second domain that teachers draw on is the school characteristics of students, such as their academic history and general information concerning school life. Further, teachers take into account the physical appearance of students and their classroom behavior, with their main focus on the degree of participation in learning and cooperation. This suggests that it is likely that each teacher attaches different significance to individual factors and thus judges in a specific and unique way.

Kaiser et al. (2013) argued that the accuracy or adequacy of a teacher's judgment is a key component of the teacher's professional skills and abilities. If teachers are able to adequately assess student characteristics such as performance and motivation, they will offer their students the appropriate instructions and feedback that the students need for their learning process. However, teacher judgments are susceptible to errors and inaccuracies (Campbell, 2015; Newberry, 2010; Ready & Wright, 2011; Urhahne et al., 2011). The most frequently mentioned factors are gender, ethnicity, and the teacher-student relationship. In general, authors have concluded that girls, whites, and students with a close relationship with the teacher tend to be overrated.

How teacher judgment is related to grading

There is an apparent relationship between the teacher's judgment and grading, since the awarding of a grade is necessarily based on the teacher's assessment of the student. Yet there are few studies in which student grades were explicitly related to the processes involved in teacher judgment. The study by Westphal et al. (2016), which examined the extent to which teachers' assessments of students' classroom behavior and motivation are involved in their grading practices, is an exception. A similar study was undertaken by Gagné and St Père (2002), revealing a strong link between teacher judgments of student motivation and student grades.

Several studies have questioned the accuracy with which teachers can judge student performance and motivation. Kaiser et al. (2013) found that "teacher judgments of student motivation point to a rather low level of agree-

[2] We do not focus on ethnicity in this study, as Czech schools are not very diverse.

ment between teacher ratings and student self-reports" (Kaiser et al., 2013, p. 74). Another study in this line of research by Urhahne and Zhu (2015) compared teacher judgments of students' subjective well-being with self-reports of students. The teachers were able to evaluate positive student feelings more accurately than negative ones. The implicit message of these studies is that if teachers were able to judge their students accurately, it would lead to greater student satisfaction at school, as well as higher self-esteem and self-efficacy, factors that undoubtedly have an impact on student performance and on their grades.

Nevertheless, teacher approaches to the grading process are fluid because teachers are aware of the importance and effect of grades on students. Although assessment experts claim that grades should reflect primarily the performance or the degree of fulfilment of a particular assignment (Green et al., 2007; Randall & Engelhard, 2010), actual teacher practice is different. A number of authors have examined teacher statements about their grading practices.

The findings suggest that teachers knowingly consider, in addition to student performance, a range of other aspects of student work in their grading. McMillan (2001) argued that teachers mainly try to assign grades that reflect fairly both the performance and the effort students make. Randall and Engelhard (2010) added to these aspects students' abilities or potential and their classroom behavior. According to McMillan, Myran, and Workman (2002), student participation, in terms of active involvement in learning and doing extra work, also plays a role in teachers' grading practices. Ross and Kostuch (2011) further mentioned the process of comparison with other students and with the overall school achievement rating. Student grades thus may reflect teacher evaluations of fairly diverse aspects of student attitudes to schoolwork.

Many authors have noted that despite attempts to systematize and objectify the grading process, the basic characteristic of this procedure is that it is a highly individualized practice for teachers. The grading method reflects the teacher's own educational philosophy, values, personal and professional characteristics such as gender or status in the educational institution hierarchy, and other socio-cultural factors (Biberman-Shaley et al., 2011; McMillan, 2001; McMillan, Myran & Workman, 2002; Randall & Engelhard, 2010). As a result, the grading method is often unique and teacher-specific. As Green et al. (2007) noted, requiring fairness, usefulness, accuracy, and ethics of the feedback provided by teachers to students can serve as a potentially unifying element.

These studies have suggested that teachers use various guides when grading. Although there have been multiple studies dealing with this topic, they tend to look either at the views of the teachers on evaluation or at what grades are received by particular types of students. Research linking the perspectives of teachers and the actual impact on students in the form of grades is missing. This paper is, therefore, written with a view to establishing this link.

Aims of the Present Work

In this article, we aim to explore the relationship between teacher's judgment and grading. In other words, we explore how teachers think about students and how their judgment about their students is reflected in the students' school assessment.

The paper involves two studies. The first study uses data from the long-term ethnographic research of two teachers and their classes to expose the structure of teacher judgment. In this study, we identify the criteria teachers use when evaluating individual students.

The second study, using quantitative data from 639 students and 32 teachers, shows the relationship between the individual criteria of a teacher's judgment of a particular student and the grade that the teacher gives to that student.

We asked the following research questions:

1. What criteria are used by teachers to orient their judgment of individual students? (Study 1)
2. How is the teacher's judgment about individual students related to the grade that the students get from this teacher? (Study 2)

Study 1

Methods

Study 1 was carried out as a longitudinal, ethnographic, multiple case study. This involved intensive year-round field research that combined multiple methods of data collection – structured and unstructured lesson observations, audio recordings of lessons, semi-structured interviews with teachers, and interviews with students. The research was conducted in two classes during the 2015/2016 school year (CLASS A) and the 2016/2017

school year (CLASS B). All of the classes were sixth grade, which is the first grade of lower secondary school in the Czech Republic. In this grade, students meet for the first time with teachers who will then teach them for the next four years (sixth grade to ninth grade). The aim of the ethnographic study was to examine how the teacher's judgment of students is shaped in the course of the school year.

CLASS A consisted of 21 students – 11 girls and 10 boys. The participating teacher taught in the given class Czech language arts in the scope for 5 × 45 minutes per week. The teacher was a woman with more than 30 years of experience. CLASS B consisted of 27 students – 15 girls and 12 boys. The participating teacher taught in the given class mathematics in the scope for 4 × 45 minutes per week. The teacher was also a woman with more than 30 years of experience. Both classes were located in the same school: a medium-sized school in the center of a large city attended predominantly by middle-class and working-class students.

Both classes were observed by the researcher (the first author of this paper) to collect data throughout the school year. For her research, the researcher obtained the informed consent of school management, teachers, and the parents of the participating students. All data used were anonymized.

This study uses data from repeated in-depth interviews with teachers. The interview design contained two areas of questioning. The first area aimed at determining the teacher's judgment of the whole class. The second area focused on individual students and the teacher gradually spoke freely about each of them. During the school year, six interviews with identical structures, each approximately one hour, were conducted. They represent a unique data material that allows us to reveal how the teacher perceives the students and how her judgment is gradually formed. The interviews were recorded using a voice recorder and then transcribed into text. Subsequently, an individual sheet was created for each student, where all the statements of the teacher about the student were entered. The analysis was qualitative. It was based on open coding (Corbin & Strauss, 2015). This is a procedure during which a researcher repeatedly performs a close reading of the data and inductively creates appropriate codes for phenomena reflected in the data. Subsequently, these emergent codes are clustered in several categories (Corbin & Strauss, 2015). The first author conducted the coding under the supervision of the second author. As a result of the analysis, four key categories were derived from the inductively established codes: aptitude,

effort, performance, and communicativeness. They are considered to play key roles since they appeared in all student records in both classes and are saturated by several partial codes.

Results

An analysis of the teachers' statements revealed that teachers form their judgment about students based on four key categories: performance, communicativeness, aptitude, and effort. As evidenced by the teachers' statements, several different assessment elements are reflected in each category.

In forming their judgments within the category of **academic performance**, teachers took into account the student's school results, represented by grades or test scores, and academic skills, such as preparation of aids, the ability to respond adequately to questions, and the speed of task fulfilment. Teachers also considered the development of student performance in terms of whether their performance improved or deteriorated over time. Family background was used as a secondary clue in explaining student performance.

Teacher attention to academic performance is illustrated in their statements. Teacher A, for example, commented on one of her students: "*Well, I have found that Teodor is probably the best Czech language arts student in this class. He reads beautifully, he is good at Czech, I'd say he enjoys Czech, and that's because he is good at it.*" We can see in the quotation that the teacher drew conclusions about the performance of Teodor (*the best Czech language arts student*) on the basis of his ability to read fluently (*reads beautifully*) and knowledge of the Czech language (*he is good at Czech*). In addition to the student's performance, the teacher emphasized the aspect of interest (*he enjoys Czech*). However, the student's interest was perceived as secondary; the teacher assumed that it was motivated by the student's doing well in the subject (*because he is good at it*). The performance category was also perceived in low-achievers by the teacher, as illustrated by following quote: "*She raises her hand instantly, but she fails. Magda spoils what she can do.*" Although the student exhibited activity during the lesson (*raises the hand*), her performance was perceived as poor by the teacher (*she fails, she spoils what she can do*).

Similarly, we can identify a performance-oriented perspective in teacher B's statement: "*Patrick, well there, I think he is a completely trouble-free A student. He is quiet, he works, he writes nicely. And I think he'll retain his A grade. In his case, it is clear that he comes from an ambitious family. He*

is simply led in this way." In this statement, the performance of the student (*he works; he writes nicely*) was associated with a high work ethic that leads to diligent work without the need for teacher intervention (*absolutely trouble-free*). These traits were associated with family characteristics; more precisely, the teacher assumed that these characteristics were cultivated by the family (*an ambitious family; he is simply led in this way)*. The quote further shows that positive development was clearly anticipated (*he will retain his A grade*).

The second key category involved in teacher judgment is **communicativeness**, which indicates the way the student communicates, their openness and their willingness to engage in interactions. Within this category, the external expressiveness of the students is emphasized, not only in the sense of activity prompted and appreciated by the teacher. Teachers also consider students who behave in a "naughty" way, shout out, etc. to be communicative. The importance of this category in teacher evaluations is revealed by the following interview excerpts. Teacher A spoke about one of her students: "*Petra is a nice, quiet girl. Actually too nice. Too quiet, right?* (She says it scornfully, shaking her head.) *She does not express herself. One has to push her hard to make her say anything at all.*" The teacher negatively perceives the unwillingness to communicate because it makes it impossible to establish contact with the student. This perspective can be illustrated by the use of the expression "nice" in a rather pejorative sense (*actually too nice*). The teacher is expressing the view that Petra does not show disruptive behavior, but she is undesirably passive (*does not express herself*). The teacher finds it difficult to get such a student to participate (*one has to push her hard*).

Teacher B commented on another student: "*She does not stand out. I just feel like she is ... I would not even recognize her by her voice. But she's smart. She's got the brains. She's doing well. She works quietly, without me having to prompt her all the time.*" The teacher, again with some regret, comments on the student's lack of communicativeness *(she does not stand out; I would not even recognize her by her voice*). However, unlike in the previous statement, the teacher does not associate lack of communicativeness with unwillingness to work. On the contrary, there is a clear appreciation of the student's autonomy and independence from the teacher's management (*works quietly without me having to prompt her all the time*). Although the student avoids direct verbal contact with the teacher, thanks to her aptitude and hard work, she achieves excellent school results (*smart; she's got the brains; she's doing well*). It is evident that academic performance and communicativeness are, in the eyes of the teachers, independent categories.

This is also illustrated by the statement: "*Rick is a noisy person; being quiet in a lesson would make him sick, I guess. He is smart, but the talkativeness holds him back.*" In Rick's case, the communicativeness (*noisy person; being quiet would make him sick*) is so strong that it negatively influences his performance according to the teacher (*the talkativeness holds him back*).

Another constitutive category contributing to teacher judgment is **aptitude**. Teachers perceive aptitude as the natural endowment or capacity of the students to comprehend the knowledge and acquire skills in a given subject. Thanks to aptitude, students have an easier path to school success. This category is therefore closely related to the actual student performance. The inadequate aptitude of one student was mentioned by teacher A in an interview: "*We had our books open. I was explaining paragraphs, prose, poetry. The kids had to look for a paragraph. Like they had to count them on the reader's page ... there were eight of those paragraphs there. Well, and Laura, she had no chance. I think she does not understand when I speak Czech. Clearly, she is not gifted.*" The teacher was primarily talking about the performance of Laura, who was unable to complete a simple assignment. The teacher saw this substandard performance as conditioned by the student's abilities (*is not gifted*), which is a characteristic that the teacher understands as strongly determining achievement (*she had no chance*).

Teacher B also formed judgments about students' aptitude, as illustrated by the following statement: "*Jarmila and Edita are the smartest kids I have there. I think both will go to a multi-year grammar school. They have no competition in the class and are well aware of it. In addition, Jarmila also has logical thinking, and she copes with stressful situations well, which was clear from how she was doing in that math contest.*" We see an elaborate description of the students' talents (*they are the smartest; they have no competition; she has logical thinking*). The teacher concludes that the ability of the students determines their current achievements (*how she was doing in that math contest*), as well as future achievements (*they will go to a multi-year grammar school*).

The fourth and final key category that teachers consider in forming their judgments is **effort**. In the teachers' eyes, effort is manifested through preparation at home, doing homework, reviewing the subject matter before a test, and willingness towards and respect for the teacher's requirements. Teacher A talks about one students who does not belong among the successful students: "*For Bibiana, the tutoring is a huge help. And it's interesting*

that she's trying hard, that she won't let go of it. She is not doing well, but she won't give up. I was pleasantly surprised by that (nodding with appreciation)." The teacher highly valued Bibiana's effort (*she is trying hard)*, as demonstrated by Bibiana's raising her hand and regularly doing her homework. The teacher perceived this low-achieving student's attendance of organized tutoring to be crucial (*the tutoring is a huge help*). The student's attendance of tutoring lessons was proof to the teacher of her independent efforts to achieve a better performance, which the teacher highly appreciated (*I was pleasantly surprised by that*).

Teacher B spoke in a similar way about a different student: "*Diana keeps surprising me. I thought that her mental capacity was not so great, but she is in fact aspiring to an A. Like I never thought that she might be as good as this. Nevertheless, it turns out that, yeah, she is able to work. She is really making a lot of effort; she is single-minded."* In contrast to the previous quote, in this excerpt the teacher talked about a successful student (*she is aspiring to an A*) whose success largely depended on her effort (*she is really making a lot of effort; she is single-minded*). The teacher showed great appreciation for the effort and an increasing personal respect for the student. Still, she did not seem to consider the effort sufficient to achieve an excellent performance. When the student achieved an excellent performance, the teacher changed her original judgment about the student's lack of aptitude (*I thought that her mental capacity was not so great*). Obviously, effort, aptitude, and performance are separate categories, but capable of significant mutual impact.

We identified four key categories in teacher judgment: performance, communicativeness, aptitude, and effort. In each of these categories, a positive and a negative pole can be distinguished. This means that, from the teacher's perspective, a student's performance is either good or poor, the student communicates or does not, is gifted or is not, and makes an effort or does not.

Each student can be assigned to a certain position on the imaginary continuum between the poles of the given categories. Teachers commonly combine the four key categories in their judgments. This is illustrated by the following excerpt from an interview with teacher A: "*Adam is calm, conscientious, careful. He does not attract attention, he does not speak much, but he is a clever boy. In Czech language arts, he's got good grades and I think that the class ranks him at the top of the class.*" It is obvious that the teacher perceives the student as excellent in terms of academic performance and out-

comes (*he is a clever boy; he's got good grades; top of the class*). On the other hand, in the category of communicativeness, the teacher classifies him as a passive and non-communicative student (*calm; does not attract attention; does not speak much*). A common element when teachers are making judgments is the principle of student comparison, which allows the teacher to assess the student within the broader perspective of the whole school class (*the class takes him as the top of the class*).

Study 2

Methods

In this study, we relate data on how teachers judge individual students to the grades that the students receive from these teachers. A total of 32 teachers and 639 ninth-grade students of lower secondary school (ISCED 2A) participated in the research. These classes were involved in a reading literacy testing conducted by the Czech School Inspectorate (CSI). The CSI is a key central institution in evaluating the education system in the Czech Republic, distributing and evaluating standardized tests focused on different areas of student learning to measure student achievement in Czech schools. The sample for this study consisted of ninth-grade students (ISCED 2A) who were involved in the CSI's selective reading literacy testing. In this national sample survey, CSI included altogether 163 schools from the total of 4221 Czech lower secondary schools. From this sample, the researchers chose schools from three Czech districts.[3]

We use the results of individual students in reading literacy tests designed and evaluated by the CSI as an indicator of student achievement. Testing took place in November 2017. The test consisted of 16 tasks. An example task is attached in Appendix. The tasks covered all areas of reading literacy that were operationalized in accordance with the curriculum for the grades concerned. In this study, we use the percentage of student success rate in the main section of the test (100% is the full score).

We sought to identify teacher judgment about individual students. The assessment was made by teachers of Czech language arts, which is a subject that involves reading literacy in the Czech curriculum. Each teacher

[3] The Czech Republic is divided into 14 districts. The data were collected in three districts (South Moravian Region, Olomouc Region, and Vysocina Region). We invited to participate in our study all the schools in these three districts that were involved in the CSI testing of reading literacy.

completed a questionnaire in which they expressed their view about each student as regards the following items:

1. The student has an aptitude for Czech language arts.
2. The student is making an effort and preparing for the lessons.
3. The student has good results in Czech language and arts.
4. The student actively communicates in the class.

These items were created based on the results of Study 1 and represent the individual identified criteria according to which the teachers evaluate their students – aptitude, effort, performance, and communicativeness. Teachers rated students on a four-point scale (1 I agree; 2 I moderately agree; 3 I moderately disagree; 4 I disagree). Teachers completed the questionnaires in November 2017.[4]

In addition, for each student we also recorded the final grade attained in Czech language arts at the end of the previous school year (June 2017) and in the first quarter of ninth grade (November 2017). In the Czech Republic, students are assessed using a five-point grading scale (1–5), where 1 (A) is excellent, 2 (B) very good, 3 (C) good, 4 (D) satisfactory, 5 (E) fail. If a student is rated at the end of the school year with a grade 5, that student has to repeat the grade. In this analysis, we only work with the mark from the first quarter of ninth grade, so the grading corresponds to the time in which teacher judgments about their students were collected.

The analytic strategy was as follows. To estimate the impact of teacher judgment and other demographic factors on the student's grade in Czech language arts, we used a multiple linear regression analysis that allowed us to maximize the prediction of the dependent variable with as few as possible relevant independent variables. Because of a higher number of regressors, we apply a modified coefficient of determination (adjusted R2) for interpretation, which in the prediction removes the artificially increased values caused by the number of variables entering the regression analysis.

As far as research ethics are concerned, we first arranged to work with the CSI. They agreed that we could use the reading literacy test results in the research if the schools involved and the parents of the students agreed. We then sought verbal consent from the school principals and all the teachers to allow us to conduct the research in their schools and classrooms. In the

[4] When doing so, they were not informed about students' results in CSI tests.

next step, we sought the written consent of all parents of students participating in the observed classes. Participants were assured of confidentiality and of the ability to withdraw at any time. No-one withdrew. All participants were given numbers; all identifying information was removed from the data before data processing began.

Results

The aim of the study was to determine the extent to which students' final grades in a subject can be explained by teacher judgments about their students. Before we present the results of our analysis, it seems useful to look at the extent to which school grades are a reflection of factual knowledge and skills. We have the students' results for a standardized reading literacy test that was designed by the CSI and serves as the basis for a comprehensive evaluation of educational results in the Czech Republic. For the students in our sample, the relationship between school grades and the result in this test had a medium value (Pearson $r = -0.42$ $p<0.01$). It is a significant association in which a better result in the test indicates a better school grade.[5] A stronger association might have been expected. If we apply the coefficient of determination to such a relationship, we find that the school grade corresponds to standardized test scores only by approximately 20%. However, such an interpretation cannot be taken at face value, because the determination is calculated from a correlation, so causality cannot be determined. Nevertheless, it can be said that schoolteacher evaluation is relatively freely connected to actual achievement and is influenced by other factors.

Since teacher judgments may be listed among these factors, we examined them using further analytical procedures. In addition, we controlled for student gender and socio-economic status[6], which have in the long term been shown as key intervening variables for both grades and teacher judgments. Table 1 outlines the basic descriptive parameters of all variables entering the models of regression analysis.

[5] The negative value of the correlation is due to different scales (the increase in test scores means a better grade, which is actually a drop – that is inverse proportion).

[6] Measured as the socio-economic index of occupational status of the family (ISEI). Occupational data for both the student's father and the student's mother were obtained by asking open-ended questions. The responses were coded into four-digit ISCO codes and then recoded to the international socio-economic index of occupational status (ISEI) (Ganzeboom et al., 1992). HISEI corresponds to the higher ISEI score of either parent or to the only available parent's ISEI score. Higher ISEI scores indicate higher levels of occupational status.

Table 1 Descriptive measures of all variables

	N	Mean	Standard deviation
performance	603	2.42	1.00
communicativeness	624	2.33	1.00
aptitude	624	2.48	0.97
effort	623	2.23	1.04
grades	635	2.61	0.97
socio-economic status	586	47.52	18.56

All arithmetic means of teacher judgments oscillate around the center of the scale, which corresponds, given that a four-point option was applied, to the value 2.5. Therefore, it can be said, that, across the sample, the students are perceived by their teachers as average. The sample as a whole is not inclined to either extreme in terms of their performance, aptitude, communicativeness, or effort in the subject. Students are seen in the best light by the teachers in terms of effort; aptitude is the worst-rated area. The two-sample t-test shows a statistically significant difference ($p < 0.05$) between boys and girls (Performance: $t = -6.28$, $p<0.01$; Communicativeness: $t = -6.26$, $p<0.01$; Aptitude: $t = -6.21$, $p<0.01$; Effort: $t = -3.49$, $p<0.01$. In all statements, girls got a higher rating. Likewise, girls had better school report grades. Despite the statistical significance, student gender was not a key predictor. For all evaluative judgments, it only accounts for about 2% of the variability.

If we look at the relationship between teacher judgments and school grades, we find that there are relatively strong associations. The results of the mutual associations, which were, with respect to the scales used[7], verified by Spearman's rank correlation, are summarized in Table 2.

Looking at each teacher judgment in isolation, student grades were most influenced by the view of the teacher that the student performed well or has good results in the subject ($r = 0.81$). There is also a fairly strong correlation between student grade and teacher conviction about student aptitude ($r = 0.79$). Strong positive links indicate that teachers gave better grades to those students they perceived as more gifted and showing better perfor-

[7] Teacher judgments were measured on an ordinal scale; therefore, we could not use the Pearson correlation.

Table 2 Values of correlation coefficients (Spearman) between grades and evaluative judgments

	grades	**performance**	**communication**	**aptitude**	**effort**	**socio-economic status**
grades	1	0.814**	0.649**	0.785	0.724**	-0.137**
performance		1	0.701**	0.830**	0.767**	-0.171**
communication			1	0.684**	0.682**	-0.198**
aptitude				1	0.686**	-0.149**
effort					1	-0.191**
socio-economic status						1

Note: * marked correlations are significant at the level of p< 0.05; ** at the level of p< 0.01

mance. However, we also identified significant interrelations between grades and the remaining two categories of teacher judgment.

It is evident that teachers do not form their individual judgments about students in isolation. The categories are interdependent. The grade that the student receives from the teacher is ultimately influenced by these links. To estimate the net influence of categories of teacher judgment on final school grades (after the aforementioned intercorrelations have been filtered out) we used multiple linear regression analysis. The linearity of relationships and normal distribution were verified by point distribution and residual analysis. We used SPSS 25 diagnostics to check for apparent or hidden multicollinearity. As shown in Table 3, all coefficients of collinearity (VIF and tolerance) were below the generally accepted critical values, indicating the suitability of regression analysis.

To estimate the best model, we applied the following procedure. The basic model shows to what extent the student grades in our sample are explicable on the basis of the key demographic characteristics of gender and socio-economic status of their primary family. In further models, we gradually estimated the impact of individual categories of judgments on the grade. We successively added them to the models according to the strength of the interrelationship. The results are summarized in Table 4.

The basic Model 1 built only around the demographic characteristics of the student confirms the assumption that these are significant predictors of school grades. However, gender and socio-economic status are not very strong factors in our sample. As the coefficient of determination (adjusted

Table 3 Multicollinearity tests

	Collinearity coefficients	
	Tolerance	**VIF**
performance	0.24	4.07
communicativeness	0.44	2.30
aptitude	0.33	3.02
effort	0.38	2.64
sex (male)	0.88	1.13
socio-economic status	0.96	1.04

Table 4 Estimates of student grade models

	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**	
	B	**β**	**B**	**β**	**B**	**β**	**B**	**β**	**B**	**β**
constant	2.31		0.71		0.52		0.49		0.45	
sex (male)	0.43	0.22**	0.03	0.02						
centered socio-economic status[8]	-0.08	-0.09*	0.01	0.01						
performance			0.78	0.81**	0.50	0.52**	0.37	0.39**	0.36	0.37**
aptitude					0.35	0.35**	0.33	0.32**	0.31	0.31**
effort							0.19	0.21**	0.17	0.19**
communicativeness									0.06	0.06+
Adjusted R^2	0.05		0.65		0.69		0.71		0.72	

** $p < 0.01$, * $p < 0.05$, + $p < 0.055$

R^2) shows, together they account for grade variability approximately only by 5%. Surprisingly, a stronger net effect after filtering out the influence of other independent variables was identified for student gender (see column standardized β coefficient). With regard to the analysis, a *dummy variable* was introduced indicating that boys received on average worse grades. If we were to think purely hypothetically and compare boys and girls disregarding

[8] To facilitate interpretation, we work with a centered status variable (socioeconomic status will be replaced with centered socio-economic status), the mean of which is zero, since the average value of the original variable is subtracted from all individual values.

any other characteristics, then it is estimated that a boy would get a grade of about half a grade lower than girls (see the column of non-standardized β coefficient). The influence of student socio-economic status was weaker in our sample, although still significant. With an increase in occupational status by approximately ten points, the likelihood of a better grade increased by about one grade. However, our sample was quite homogeneous in terms of the family socio-economic status. The net negative effect of this variable on the school grade therefore appears to be weaker and, as shown below, its influence was completely eliminated in the models that follow.

In Model 2, we added the first category of teacher judgment and belief in good student performance in the given subject. Inclusion of this variable significantly increased the predictive power of modelling a student's final school grades. The model explains as much as 65% of variability. It is worth noting, however, that the inclusion of teacher judgment nullifies the significance of demographic characteristics. Although we know from previous bivariate analyses that even the teacher's judgment itself is determined by demographic characteristics, we can basically conclude that teacher judgment is a fairly strong predictor of final school grades without any fundamental consideration of the gender and SES of the student.

Model 3 includes, in addition to the previous components, the teacher's judgment about the student's aptitude. Adding this factor increased the proportion of variance explained by 4% to almost 69%. Hence, the impact of this category of teacher judgment is also significant. This confirms the assumption that from the point of view of the final school grades, the teacher's beliefs about the student's good results ($\beta = 0.52$) is a stronger determinant than the perception of the student's aptitude ($\beta = 0.35$).

In Model 4, we added judgment about the student's effort. Predictive power once again increased; the model explains 71% of variability. The power of individual categories of judgments naturally decreased; the order of importance remained. The largest proportion of variability of final school grades is explained by the Model 5, which includes the last category of teacher judgment, related to students' communicativeness. The proportion rose by a single unit to the resulting value of 72%.

Discussion

One of the main conclusions of our study is that student grades are to some extent determined by the teacher's judgment. There are four areas rel-

evant for the judgment: performance, communicativeness, effort, and aptitude. Our analysis shows that the most important role in relation to grading is played by the teacher's judgment about student's performance. This finding is problematic because teacher judgment is a construct that does not fully align with reality. In other words, the teacher's judgment of the student's performance corresponds to the student's performance on a standardized test to only a limited extent. This means that the teacher's judgment about performance does not represent performance as such, which is evident in that test performance (an alternative and probably more accurate representation of performance) correlates with the grade to a much lesser degree.

The finding that the correlation between grade and actual performance can be described as medium, rather than strong, is in line with the findings of several other studies (Duckworth & Seligman, 2006; Pattison, Grodsky & Muller, 2013; Woodruff & Ziomek, 2004). Previous studies predominantly worked with the assumption that any discrepancy between test scores and grades was because teachers included other non-cognitive criteria, such as effort, ability, or classroom behavior, in the assessment (Keller, 2016; McMillan, 2001; McMillan, Myran & Workman, 2002; Randall & Engelhard, 2010). However, our results show that although the teacher primarily considers and evaluates the student performance, this judgment does not align with the test results. Future research, therefore, needs to focus on identifying the constituents of the teacher's opinion about student performance, or the student characteristics and signals that the teacher takes into account when making a judgment about performance. Vanlommel (2018) points out that in addition to the rational aspect of the judgment, which is based on searching for and evaluating relevant data by the teacher, there is an intuitive aspect. The role of intuition in teacher judgment has been insufficiently mapped (Vanlommel, 2018).

Although teacher judgment about student performance plays a dominant role in grading, our results show that other identified categories of teacher judgment – effort, aptitude, and communicativeness – also correlate with grades. Previous research has shown that when teachers consider students to be diligent, they tend to assign better grades to them (Brookhart, 1994; McMillan, 2001; Ross & Kostuch, 2011). These findings are in agreement with what we have found – the more a student is perceived as hard-working, the better the grade they receive. Our data suggest that judgments about aptitude and communicativeness have a similar effect. Students perceived as gifted and communicative get better grades than students perceived as non-gifted and non-communicative.

Our analysis also demonstrated that although girls get better grades than boys, this is not primarily due to teachers' making more positive judgments about girls – the relationship between the teacher's judgment and student grades is not influenced by gender. According to Rasooli, Zandi, and DeLuca (2018), this sex bias is not uncommon. The gender perspective of evaluation has been the focus of a number of studies, with authors repeatedly concluding that teachers rate girls higher, thus girls get better grades than boys, although the girls' performances are not better or of a higher quality (Carter, 1952; Brennen et al., 2001; Duckworth & Seligman, 2006). One possible reason that girls get better grades may be that girls more often possess a feature or characteristic that positively affects the teacher's judgment. A similar line of thought was pursued by Duckworth and Seligman (2006); they observed that girls generally show greater self-discipline, which is more relevant to school report grades than various types of test scores.

A significant number of studies have adopted the perspective of a rather complex relationship between teacher judgment and grading. Kaiser et al. (2013) and Urhahne and Zhu (2015) perceived the evaluation process as a sequence of interdependent elements of teacher judgment and the subjective understanding and processing of this judgment by the students themselves, who are influenced by it in their further performance, which in turn impacts the final grades assigned. Our analyses provided a more straightforward perspective. The teacher makes a judgment about a student and then assigns a grade based on that judgment. We do not question the proposition that teachers, on the basis of their judgment, treat different students differently, thereby further affecting their achievement (cf. Babad, 2005; Bressoux & Pansu, 2016; Higgins, 2011; Newberry, 2013). However, we believe that grading is a direct manifestation of differentiated behavior, not its consequence. The grade the teacher assigns to the student is a strong indication of how the teacher perceives the student. Straková and Greger (2013) showed that the educational aspirations of students and their parents are strongly determined by the grades that the students receive from their teachers. This means that grading as an explicit expression of teacher judgment has a direct impact on the student's educational trajectory.

Grades are an important school phenomenon and can have a major impact on students. Grading processes should therefore be a subject of continuous research interest. Our analyses have shown that it is only possible to grasp the mechanisms of grading if we have a solid understanding of the ways teacher judgment is formed.

Conclusion

In this paper, we examined how grading and teacher judgment are interrelated. We showed that teachers use four general criteria in their judgment about students – performance, aptitude, effort, and communicativeness. All four criteria have positive and negative poles. The final judgment about a student is determined by a combination of different statuses of the student in each category. All of these categories positively correlate with the grade, but the performance category has the greatest impact on the final grade. The teacher's perception of a student's performance does not fully align with the student's performance as measured by a standardized test. It is therefore necessary for further research to examine in more detail the guides teachers use to make their judgments about student performance

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Appendix

Read the text and choose the right answer.

Towards the end of the 19th century, the disease known as beriberi (in Singhalese "I cannot"), with characteristic symptoms ranging from weakness to paralysis, spread dramatically through Dutch East Indies (present-day Indonesia). The Dutch government, concerned that there were hardly any slaves left on the plantations, set up a special committee. Christian Eijkman (1858–1930), a physician from the state prison in Batavia (present-day Jakarta) was among its members. One beautiful day, Dr. Eijkman was enjoying the view from the window of his official apartment overlooking the prison courtyard. His mind full of the cursed beriberi, he watched the hens pecking around the yard. He was intrigued by their strange movements and postures; somehow, they reminded him of the sick inmates… It turned out that the hens were, through the kitchen garbage, eating basically the same diet as the inmates: mostly rice. Specifically, they were eating husked rice. The husks were removed because a product processed in that way looks better and as a result was more profitable.

The suspicious Eijkman only needed to ask the "competitors" a few questions and everything was clear. Jails where the inmates consumed only husked rice had high numbers of beriberi patients, while in the jails where the managers economized and fed their inmates cheap rice that had not been husked, the disease was almost nonexistent.

In 1897, Eijkman published his discovery. Despite its significance, there was almost no response. At that time, nutrition science was dominated by caloric assessments of nutrients, while the causes of diseases were decided by young and ambitious bacteriology. The idea that a mere deficiency in some trace element in the diet could cause a serious disease or even death simply seemed ridiculous.

However, in 1911, Eijkman's work was discovered by a young biochemist of Polish origin named Kazimierz Funk (1884–1967) who was living in London. He first tested Eijkman's conclusions on pigeons. He then got a kilo of rice husks and laboriously prepared six grams of white powder from them. This powder, even in milligram measurements, reliably cured beriberi. Funk called it vitamin B; *vita* means "life" in Latin and *amin* was for the amin group that the powder contained. He used letter "B" to avoid confusion with a substance of a similar category that had been discovered shortly before in milk by Funk's colleague Frederick Hopkins (1861–1947) who called it growth factor A (today known as vitamin A). It is clear that Funk's name was widely accepted, even though the amin group after which it was named is, out of all the thirteen vitamins that are known, only contained in "his" vitamin (it is at present known as vitamin B_1). Eijkman and Hopkins were awarded the Nobel Prize in 1929.

(Houdek F., Tůma J.: Objevy a vynálezy tisíciletí [Discoveries and Inventions of the Millennium], Nakladatelství Lidové noviny 2002, p. 233)

Which of the following statements is directly contradicted in the text above?

- Christian Eijkman died in prison in Batavia.
- The beriberi disease can be cured with six grams of a special white powder.
- Kazimierz Funk was later awarded the Nobel Prize.
- The beriberi disease was widespread in all prisons of the Dutch East Indies.
- **Vitamin B_1 can be found in particular in husked rice; rice that has not been husked does not contain it at all.**

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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

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.

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

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

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.

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

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.

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

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-

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".

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

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".

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

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).

> "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."

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."

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

> 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:

> "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,

> "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:

> "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:

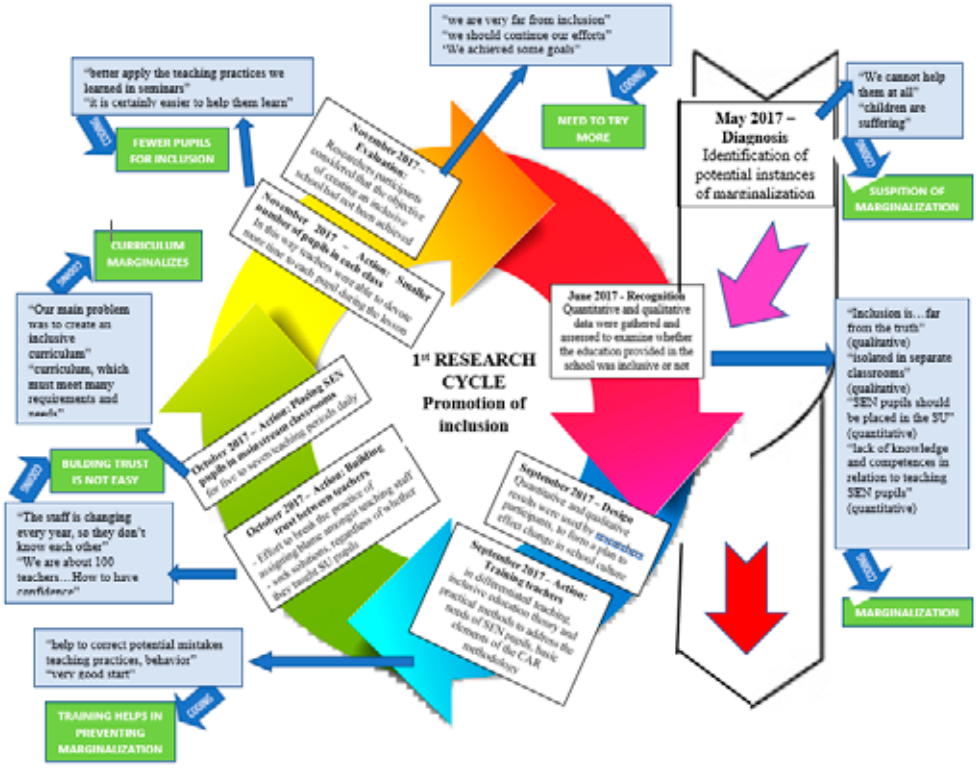
> "Thank you all. This was the best gift for our children. Their attitude has improved. They are happy to be a part of this school".

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

> "…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-



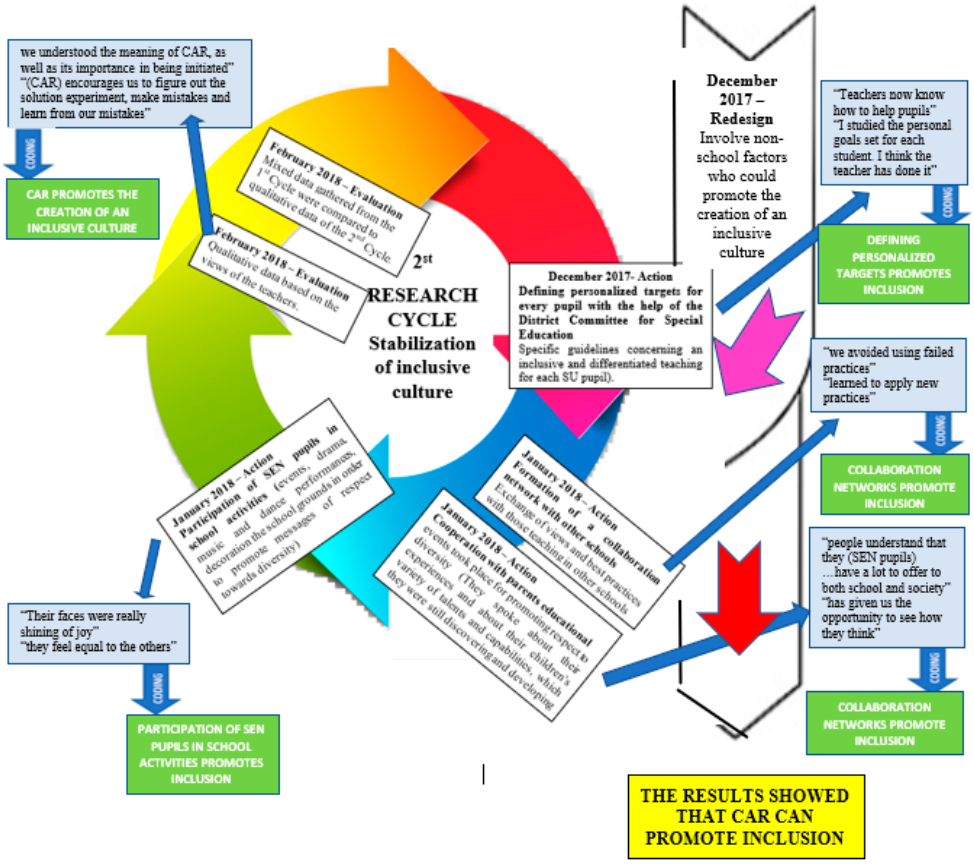


Figure 1: Research process

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

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.

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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Changing reading paths in a digital age: What are the consequences for meaning-making?

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Abstract: Everyday experience and a growing part of empirical research illustrate the changing reality of reading in our society in recent years. There are many empirical, pedagogical and philosophical studies that reflect on the falling level of general knowledge of the population and the superficiality of young people's reading comprehension. In this study, we aim to identify and analyse how reading is changing with the emergence of a new text architecture and the replacement of alphabetic, print-based text with screen-based text, and ask whether this new ontological variant could also bring about a change in the epistemological "qualities" of reading. We go beyond the design of digital text itself to ask how changes in text design affect the role of alphabetic text in meaning-making. We then examine specific aspects of the change in the nature of reading itself and how they could lead to a paradigmatic change in pedagogy and literacy.

Key words: meaning-making, alphabetic text, digital text elements, reading on-screen, reading printed text.

Technological progress is a topic that frequently attracts the attention of those making prognoses on the future development of the *homo sapiens* (Harari, 2016). Digital technologies and diverse educational reforms for the 21st century are the main symbol of such progress in education. The use of digital technologies, the digitization of learning resources and the implementation of e-learning platforms are intended to overcome the limits of traditional learning and promise to bring personalized benefits in the form of lifelong

learning and contribute to learning that is open, appropriate, people-centred, equitable and sustainable (UNESCO, 2015). Behind this lies the ideal of a revolution in *collective intelligence*, potentially saturated with the availability of knowledge in a virtual, interconnected and ubiquitous space that enables the masses to benefit from reading and writing (Fišerová, 2015a). The normal, everyday reality will become one in which individuals are "creative conversation participants" able to "prioritize, select resources, filter information according to its quality, categorize and classify data, synthesize and relate information and discuss in a civilized way" (Fišerová, 2015a).

Many phenomena show that communication is increasingly being transferred to the online space, with individuals now spending a large amount of time using technologies. Bohn and Short (2009), in their report *How Much Information? 2009 Report on American Consumers,* state that US residents spent approximately 11.8 hours a day receiving information through technologies, and about 24% of this time is spent on computer activities such as browsing the Internet, playing video games, writing messages and watching videos. The average time users now spend on the Internet is 6 hours and 42 minutes, and that applies worldwide (Hootsuite & We Are Social, 2019). Most of that time is spent on entertainment activities delivered to users by visual or auditory means. According to the latest GlobalWebIndex survey (Hootsuite & We Are Social, 2019), 93% of all Internet users watch online videos, 70% use music streaming services, 51% watch vlogs, 47% listen to online radio broadcasting and 39% listen to podcasts. None of these popular Internet activities involve the written language in any significant way.

However, the question we will focus on in this study is specific. The more general objective of this article is to examine aspects of the transition from printed text to digital form that are changing the nature of reading itself, and which have the potential, at both individual and collective levels, to lead to a paradigmatic change in pedagogy. From the wide range of topics relevant to this area, we have chosen to focus on the status of alphabetic text in digital, screen-based texts, and look at the implications for access to knowledge this change entails. We are interested in how the changes brought about by the digital era affect *how* and *by what means* individuals read and how they are changing people's (cognitive) abilities. We are also interested in the dynamics of this relationship, and what this trend – the retreat of the written language at the expense of other modalities for mediating meaning – means in terms of stimulating or suppressing the development of specific mental abilities acquired through the use of written language alone. We start from the fact that the spread of general education and literacy is tied up with

the invention of the alphabetic script and has shaped our civilization. The change in the nature of reading in the digital era therefore affects the most important cultural invention of our civilization – literacy – and people's attitude to knowledge, leading to the idea of accessible education for all (Havelock, 1982).

In this study, we aim to identify and analyse the differences brought about by the newly emergent text architecture and the replacement of alphabetic, printed text with screen-based text, and ask whether this new ontological variant could bring about a change in the epistemological "quality" of reading. We also focus on the essence of these reading features and how they differentiate the reading path chosen.

Change in Text Architecture Prompting a Change in Reading

The emergence of a new reading and learning paradigm

Our everyday experiences and the growing empirical research indicate that reading has changed. In general, there has been no decline in the marketability of books, the symbol of traditional literacy (Baricco, 2006). However, there has been a decline in reading as a cultural activity. The act of continuous reading stimulates the capacity for realization, insight, and discovery, supporting *deep reading* (Wolf, 2016). But it is being pushed aside by a new reading style "that is able to integrate multiple sources of information, but that often appears fragmented, less focused, and potentially less able to attain previously achieved depths of concentration, comprehensiveness, and even immersion in reading" (p. 5). Baron (2015) refers to this as *reading on the prowl*, which involves skimming texts and scanning for information among other things.

This comes as no surprise. Decades ago the first theories on the impact digital technologies have on reading began to appear. First television, and later computers, were criticized in relation to reading and learning. One of the main thinkers writing about the end of alphabetic text (or linear code), the Czech philosopher Vilém Flusser, has put forward many arguments favouring a return to the era of images, based on a new technical coding that differs from the linear coding characteristic of alphabetic text (2012). Flusser argues that as technologies produce different coding (cameras, computers, pixels) the way we read will change and contribute to the breakdown of "collective memory". The media theorist and philosopher Marshall McLuhan

had a similar idea: in his historical scheme of the development of human communication, he anticipated the decline of the book era and the onset of the technological era. Similarly, philosopher and journalist Neil Postman (1986, 1995) pointed out that new technologies were leading to individuals becoming gradually isolated in learning. Many other authors like Jean Gebser, Ken Wilber and Hugo Enomiya Lassalle have had similar ideas.

Some analytical popular writing has shown that the decreasing level of general knowledge of the population and the superficiality of young people's text comprehension is related to changes in leisure time and contact with others through digital media (Carr, 2010; Bauerlein, 2008; Spitzer 2012). Their conclusions add to research findings by neuroscientists, literature scholars and educators indicating that the use of digital technologies, specifically reading in digital form, affects neuron levels and changes the architecture of mental functions, especially in young people (Baron, 2015; Greenfield 2015; Wolf 2016).

In many works, the use of digital technologies to display educational texts (for example the digitization of educational content) is seen as both pragmatic and essential in the information era, and focus on describing the changes in form and the implications for reading (Alexander & DRLRL, 2012). However, the problem of on-screen text in mediating information and providing a source of knowledge in education goes deeper and reveals the role of written speech as an intellectual tool for the development and mental organization of language use and for the formation of specific human capacities and strengths, compared to cultures that do not have this intellectual tool (e.g. Cole & Cole 2006; Brockmeier & Olson, 2009).

A new platform for text ontology

If we view written language as an intellectual tool, as a specific cognitive function operating via the techniques of *administration and regulation,* that creates the ground for justifying (Goody, 1987) changes in the transition from traditional, paper-paper based text to screen-based text of both an ontological and paradigmatic nature (Husset, 2006). The main component of traditional, paper-based text is alphabetic text, while screen-based text contains other components, especially visual ones, and this has profound implications for understanding text.

Ontologically, the form of texts is being transformed. Texts that use digital technologies rely only partially on alphabetic text to communicate meaning

and make the information available through other modalities of meaning. Changes are also occurring in the way meaning is constructed in different contexts (e.g. Jeník, 2010) and reading «practices» in the digital era, and therefore it is possible to record paradigmatic changes as well. The transfer of learning processes and materials to digital form, or the replacement of more traditional, paper-based texts with screen-based texts, thus not only changes the medium and the manner in which teaching content is displayed, but the nature of literacy as well and the activities that promote and enable it.

More specifically, digitization changes the type of media, requiring a different kind of control and a different type of interaction than paper-based mediums such as books (Mangen, 2017). But it also bring about a change in text modality, in the way blocks of text are arranged on the digital media page (Waller, 2012). The specific visual experience of a digital text also affects the way it is read – understood (a psychological and semiotic problem), «detection» of meaning, which may not reflect the preferred meaning. Many philosophical theorists have pointed out these semiotic and hermeneutic connections (R. Barthes, M. Foucault, D. Davidson, Goodman and others). They have also discussed the way individuals perceive the reality of what is displayed (a phenomenological and epistemological problem) using the new text architecture and understand it (Jeník, 2012). Here, we are referring to ways and forms of representation that convey the meaning to us.

Multimodality related to text architecture

The focus of this paper is text that incorporates digital visuals. We will analyse this (comparing to paper-based text) on the basis of textual modality. But first we must clarify the nature of this textual characteristic, often thought to be distinctive.

The problem is that all communication is inherently multimodal, whether it is spoken communication or text-based communication, including digital forms of representation. Spoken communication contains multimodality, for example the linguistic code associated with rhetorical emphasis, pauses, and voice muting (Kress, 2005). In more traditional textual formats, (alphabetic text) multimodality manifests itself in specific ways of communicating meaning. In addition to illustrations, other static visual elements contribute to multimodality, such as different font sizes, their shape and thickness, design and location (Tolva, 1996). How the space on the page is used, the layout of the text and illustrations, the font size, line structure, and blank

spaces create dynamics and rhetoric of expression and contribute to the cohesion of the formal rendering of text elements and communicated meaning (Bearne, 2009).

Multimodality is therefore typically found in the traditional repertoire of text media as well. Text genres such as newspapers, magazines, cookbooks, dictionaries, encyclopaedias, atlases, lists, and so on (Goody, 1977), utilize the representational capacity of static visual elements (including the way blocks of text are organized on a page) to extend the repertoire of meaning, its representational capabilities and to allow different readers find their own reading paths (Prior, 2005). A good example is the way in which the selection of a particular font can help communicate a specific meaning. The use of *Imperial Roman* fonts by classical Italian humanists, for example, emphasized their roots in ancient tradition, and their efforts to return the forgotten heritage of the ancient world to the European cultural space. By contrast the widely used *Blackletter* font was supposed to draw attention to itself (Wysocki, 2004). The way a word is written on the page of a book can express a richer variety of meanings than the word itself, simply by "suggesting" how the word should be read and what emotion should be identified behind it (Hasset, 2006). Even in this context, contrasts between the alphabetic text and the visual elements (highlighting the author's ironic tone, for example) cause no problem because they coexist side by side as text elements and help to communicate the meaning, by making reference to the alphabetic text. For example, in his philosophical semiotics, Foucault (2008) considers a drawing by Magritte drawing in which the title communicates something quite different from the drawing, forcing the reader to analyse more deeply the meaning denoted.

However, there is some predictability and synergy between alphabetic text and other elements of text genres. The way the text is typically arranged in a dictionary, encyclopaedia or newspaper allows the reader to recognize the genre and should prompt an appropriate reading path. The synergy between alphabetic text and other static visual elements comes from the fact that the elements of the other modalities support the meaning of the alphabetic text. For example, the relationship between an image and an alphabetic text can have an important illustrative and persuasive function. If the alphabetic text is linked to other static visual elements in paper-based text, greater attention is drawn to the alphabetic text. This is evident in children who are still at the pre-reading stage following the illustrations of the story to gain access to the meaning of the text they are not yet able to fully decode.

Multimodality of non-linear digital reading

However, the synergy between the alphabetic text and other visual elements may not always work well in on-screen texts. Digital text is arranged as a text of discontinuous meaning, making it possible to perceive different text forms (often of different modalities) as closed semantic units, in other words, as *blocks of texts* and in a loose format that is navigated in a non-sequential, non-linear way. Thus, the reader does not access the text as mediating continuous meaning (in sequential, linear form), but as specific blocks of text of variable structure that can be displayed on the digital media screen in different ways, depending on which one and in what order the reader chooses to focus on them (or open them if in hypertext) (Landow, 1994). Screen-based text lacks a clear chronology, which would in other situations impair understanding and make it impossible for the reader to continue. But in screen-based text the reader is able to skip parts (even when not authorized to do so) and arrive at generalizations that may be logically inconsistent.

When reading screen-based text, we navigate and process the page layout, illustrations, typeface, and typography (Walker et al., 2018). We can use these digital text design indicators to explore and identify how the changing text design and media transform the visual experience of reading and affect its processual features. There are pedagogical and didactic implications, because they change the way students approach the elements present in educational texts and how they benefit from them when studying a particular issue. However, in this study we go beyond the design of screen-based text and ask how text design modifications (including blocks of text of different modalities) affect the role of the written, alphabetic text in constructing meaning. Writing developed as an intellectual (cultural) tool, which uniquely, and through the change in the text architecture reflected in the architecture of the human mind, contributed to the formation of *textual minds* (van der Weel, 2011), which have influenced the development of formal school education (and the school itself).

Visual Experience of the Text and Access to Meaning

Access to meaning in the "era of linearity"

With the invention of the written language and its dissemination through the printing press, "print culture" was established. The written culture was

consolidated through written language genres, the authorship of texts, and books becoming the symbolic representation of the intellectual values of higher culture and the emergence of the concept of the reader (Hesse, 1996). In addition to the "print culture", terms such as "Gutenberg Galaxy" (McLuhan 2005, p. 35) or "Linearity Era" (Flusser 2011, p. 20) are used when talking about this period. All these terms denote the period in which linear, paper-based reading prevailed. The typical reading path in this era consists of the gradual, continuous reading of the alphabetic text of a book from first page to last page.

In this tradition, books and printed text enabled cultural production and reproduction, as they recorded the author's thoughts in a formally organized form (corresponding to the functional aspects of the written language and the corresponding text genre), cognitively representing the beginning and end of the author's reasoning. This *linear text* was a means whereby the author's ideas could reach a large number of readers who were then able, by decoding the linguistic features, to interpret it in an unlimited number of contexts and critically reflect upon them. The emergence of critical reflection in ancient times led to the transition from uncritical, mythical thinking to logos, or rational reasoning (Ong, 2002).

Some have criticized this monopolization of attention on the alphabetic text for suppressing our natural senses. Lanham (2001) therefore welcomes the development of textual designs that create the illusion of three-dimensional space (through the use of graphic techniques). Textual expression which uses a sophisticated visual text design and expands multimodality does not therefore have to rely solely on alphabetic text that acts as an "objective correlate" to express the spoken word and that is gradually losing its visual content and the power to encourage thinking (Lanham, 2001). The use of textual design to create the illusion of three-dimensional space thus enables the reader to go beyond a perception of the world that is based on the limited expressive form of the linear text. This is to be contrasted with situations in which visual perception is a spatial ("stereo" event taking place in a three-dimensional world) experienced through the long-term use of script as a communication medium.

In the era of linear code, the image was particularly dominant in children's books. However, thanks to digital texts, the image is increasingly found in texts for readers with advanced reading skills. To the detriment of alphabetic text, in digital text pictorial texts are displayed in numerous representations and overshadow the alphabetic text (Jewitt, 2005). Therefore,

when discussing the changes brought about by the transition to digital text, we ned to analyse the representational potential of the alphabetic text and image.

Accessing meaning through scriptorial and pictorial signs

The analysis of the representational potential of alphabetic text and image can be approached on several levels. In this section we will discuss the relationship between the form of external representation (sign) and the interpretation of its meaning, looking at how the different visual experiences of the alphabetic text and image affects the way individuals construct the meaning of the text and perceives the reality displayed through the alphabetic text and image.

The meaning of a sign is interpreted by interconnecting semiotic and psychological aspects. Meaning cannot be decoded without the individual who creates that relationship as it requires establishing the relationship between the sign and its mental or cognitive inner representation. Both scriptorial signs and pictorial signs (pictures) appear to be intentional signs that were created by someone to evoke meaning in those encountering them. Although, we can distinguish the representative potential of word and image in dimensions such as *motivated* versus *arbitrary*, *personal* versus *conventional* origin and *isolated* versus *systematic*, the difference between them will be shown in the dimension of *isolation* versus *systematicity* (Tolchinsky, 2003). Scriptorial devices are part of a system (alphabetical written language) and the meaning of each element in that system is determined by the system itself. By knowing which element belongs to the system and its position in the system, we can use these elements in different contexts and express different content and meaning. This characteristic of scriptorial features enables us to identify sequences of features with some degree of clarity, since we can clearly identify the features and the rules of arrangement, even if we interpret them differently. When identifying the various elements in an image, we do not have access to this unique system. Despite there being ample opportunity for interpretation, the meaning of the image is unclear and fragmentary (Fišerová, 2015b).

In any case, both pictorial and scriptorial signs have to be viewed in terms of their potency as tools of communication and cognition. They expand or change our mental abilities and allow us to adopt different perspectives on reality, and so are the drivers of multiple cognitive operations generating cognitive change, both in terms of quantity and cognitive flexibility (Tol-

chinsky, 2003). The special cognitive potential for interpreting scriptorial signs as communication and as cognitive tools seems to lie in reading "the mind's traffic in signs and signifiers," in "the most dynamic, changeful, and possibly transformational act we can imagine" (Birkerts, 2007).

However, to better understand the potentialities of scriptorial and pictorial signs as communication and cognitive tools, we have to go beyond the level of simply decoding the meaning of a particular sign and examine the conventions of written language. Because, while there is great degree of flexibility in the way pictorial features (image) can be arranged on the surface, written texts have to follow a particular directional orientation that results in consistency in text presentation, affirming the dominance of the author. This is achieved through page numbering, chapters that cannot be read in random order and location on the page. Readers then use these to navigate their way through the text, beginning on the left-hand page and reading from left to right, top to bottom and then continuing onto the right-hand page. The reading order is determined by the concept of print and the linguistic means (lexical, grammatical) of expression.

The written conventions and textual consistencies and the standard nature of composition draw readers' attention to the text. This is a crucial characteristic of reading, giving access to meaning. Readers are guided by the way the text is arranged and can therefore attribute meaning to the words, using their knowledge and ability to analyse, predict, ask questions and formulate assumptions. Readers therefore actively approach meaning as the act of constructing meaning – of interpreting and that establishes the openness of the text (Eco, 1962).

Alphabetic text is arranged in a linear form that implies a certain logic of its available functions, unfolding in a particular time sequence (Kress, 2005). Alphabetical text, with its predetermined arrangement, reveals its individual elements, unit by unit, to its readers who then come to gradually understand the meaning of the text as a whole. Kress (2005) argues that this gives the author some power over the reader, who is dependent on these elements of the text being gradually revealed to him or her. However, no matter how precisely the author uses the available language resources or tries to openly direct the reader, readers respond individually to the text. Reading is the result of the imagination of the reader, which goes beyond the interpretative possibilities of the text set by the author (Birkerts, 2007).

Images seem obvious to us in terms of their content. We recognize the individual elements, but we are not exactly sure what we know because we

lack the means to communicate what we "read" when we perceive the image (Kress & van Leeuwen, 1996). Therefore, according to Flusser (1993), images may indicate more than they designate. While designation has a clearer course, and meaning is a matter of sign function (the term denotes an idea), images merely indicate or specify an idea whose discovery may not be related to meaning. Images – surfaces with meaning – are two-dimensional and replete with meaning, while texts are open to meaning and contain and require in-depth analysis.

When navigating the elements of the image in an attempt to perceive or decode them, we must adopt a different approach with pictures. Although the elements of a picture are arranged in a particular way in space and are available to us the recipients, we have to arrange them into sequences that make sense to us according to our interest. Our imagination therefore focuses on creating organizational order out of the elements of the image that have the meaning expressed by the author (Kress, 2003).

Analytics and the abstract nature of reading an alphabetic text

The era of linearity, associated with the use of the alphabetic code, allowed humankind to reach more abstract levels of knowledge and go deeper and greater concentration into the meaning of the text. As a consequence, this kind of text contains more abstract terms and a larger vocabulary. It may employ depersonalized (and thus more decontextualized) language and be more explicit, elaborate (syntax) and formal (Goody, 1987). Studies analysing the implications of using written language as an intellectual tool in the field of human consciousness show that written language has an important function in the individual's development, but also in shaping the structure of society, that is related to the liberation of intellect. Concepts such as the "literary mind" (Turner, 1996) or the "textual mind" (van der Weel, 2011) are the outcome of research that has identified written language as a powerful cultural tool that changes the rational organization of our experience and our relationship with it. With this kind of reading, critical thinking is born, leaving behind the magical moments of humankind and mythical truths. The fact that we can return to a particular idea when reading or writing a text encourages us to analyse and adopt a more objective stance on the written text (Ong, 2002).

It is not only the nature of the written language that is important. The fact that it is received in the form of a linear code through visual means concentrates our attention on the different elements that make up the parts

of the sentences, which readers perceive gradually as the relations between them are formally revealed, set by the author or through writing conventions (syntax, reading direction, the placing of the word on the page, in the text). This, as Kress (2005) explains, entails *an epistemological commitment*, which results from the identified type of relationship between the individual elements of the alphabetic text, through the arrangement of the linguistic means. The elements of the alphabetic text are not left for the reader to encounter but are gradually revealed with reference to their mutual relations. For example, in the sentence "John throws a stone", the epistemological commitment is expressed in the relationship between "John" and "stone" as "throwing", where the activity is performed by "John" and focuses on the "stone". The relationship between the different elements of the text, "John", "stone" and "throwing", are not arbitrarily determined by readers; they are guided by the conventions of the written script through the linear code and their knowledge of grammar.

The relationship between the elements of a text therefore differs from that between the elements of an image. The latter is predominantly constructed by the recipient because the form of representation does not allow them to be determined. Therefore, while we work with the epistemological category of knowledge when reading an alphabetic text, when interpreting an image, we rely on the information that can be represented in this mode. We look at the image and preview (*Einsicht*) it, which brings us to a "space with meaning" (Flusser) but also gives us an initial view (*Ansicht*). Digital images (photography, e-books, hypertexts) have additional characteristics (we will look at this more in the next section). If we look at a digital image that offers us a more diverse structure and more selectable reading methods than the classical linearity of an alphabetic text, we realize that it does not go deeper than the information and does not allow us to look into deeper connections. Digital images are "more exciting" and stimulating, which can detract readers from the original storyline or line of reading. Let's take a closer look at these characteristics.

Digital Text Design and Accessing Meaning

With the digital revolution, the architecture of texts is changing. Their multimodality, the combination of visual, audio and alphabetic elements of text, draws the reader into a page design that, in the way it is used (approach to meaning), takes text reading away from the linear organization of elements revealed in time-ordered sequences and back to space (Lanham, 2001). This broadens the potential interpretative repertoire of the

text's meaning and weakens the status of the alphabetic text. As Lanham (1993) explains, the reinforcement of the multimodality of the text creates space for the reader's perceptual field to broaden, which, given the nature of human sensory abilities, should reunite visual intelligence with abstract thinking, which are separated in script and print. However, Miall and Dobson (2001) counter that this is not reflected in the empirical evidence. In fact, the presence of pictorial elements tends to evoke subliminal feelings and affects perception of the text without the reader having to consciously evaluate their meaning, that is, to critically analyse and reflect. A good example is advertising, which clearly taps into the most sensitive and receptive points of the human psyche. The reactivity to the icons (i.e., semiotic images) directly corresponds to their scope and helps the consumer to positively identifywith this icon.

This is also true of literary reading. If readers only have an alphabetic text, the text is received in terms of ability to create a fictional world from the symbolic language-based representation (Mangen, 2008), which is constructive and personal. The understanding readers obtain when reading an alphabetical text comes from the knowledge, beliefs and values that have a personal impact on them. When reading a text, individuals may not always be fully aware of how they create their own imaginations, yet experience reading the text as a personal event allowing them to engage with it and experience in-depth text reading (Wolf, 2016). Adding elements of other modalities to screen-based text (for example, illustrations, videos, signature tunes, banners) limits the range of available meanings and decreases the potential for personal reactions to and deeper reflection or immersion in the text (Mangen, 2008).

Broader context of reading screen-based texts

The availability of digital images has fundamentally transformed the way today's generation read. The great boom in digital media has led to the abstract thinking abilities available in deep reading being substituted by *skimming*, a process in which the subtle hues and *hermeneutical circle* of questions and answers are ignored in the search for explicit meaning. For today's generation, instant information, both in terms of presentation and expression, takes precedence over deep, analytical thinking (Baron, 2015).

When text is presented on a screen, the digital format simplifies and reduces the information, and the semantic richness of the content is no longer important. It is here that the phenomenon of image plays a very important

role; it is sufficiently "magical" to convey fascination (originally conveyed by texts as well), but at the same time it can convey it in a much easier way – without the need for a conceptual scheme. *Imago* provides opportunity for greater and better imaginations, which the young generation is surely bursting with. The typology of the text has been replaced by the typology of the picture, known as "icons" in semiotics (C. Peirce), symbolic images with meaning. Pictures provide enough incentives to saturate the intensity but do not allow definite signification in terms of meaning. In addition, the image can be "ambiguous" when compared to text, not indicating anything in particular.

An important aspect of digital reading – it would seem – is "experiential", "superficial" reading. Multimodality allows for greater variability, imaginativeness and a more sensual "fulfilment" of reading. While printed books offers us minimum incentives – just the stimulus of "simple impression" or the logical thread of the text – digital books enable a greater variety of modalities of reading and have a more colourful, attractive architecture. With linear text we can become more immersed in the text and focus on the content and "objective" information. Whereas digital text – image and script combined – has no clear definition.

Images that become part of the script in screen-based text simulate both and at the expense of both. Digital texts offer possible reading variations that show more creativity and proffer more interpretations, but they are not linear texts in the true sense of the word. Flusser calls them "surfaces" (*Oberfläche*). An image is a surface, a two-dimensional surface, with an indefinite meaning. The meaning is often understood once the idea has been identified, but that is a more complicated task than reading a text. On one hand, the combination of image and alphabetic text simulates the linearity of text, but at the same time the text is presented in a colourful and multistylized form that has no clear logic of expression. The symbolization of the image makes the deconstruction of meaning more difficult, resulting in a greater, creative sense in reading, and young people today are better able to identify the causal symbolism of partial semiotics and have better imaginations. However, it also hampers the ability to study broadly and deeply, concentrate on ambiguous texts for long period, stratify text architecture or logically analyse and find one's way around a text. The following summary of what the reading of digital texts inhibits, "reading longer texts, rereading, deep reading, memory of what was read, individual (rather than primarily social) encounters with books, stumble-upon possibilities, strong emotional involvement" (Baron, 2015, p. 213), raises the question of whether individu-

als really benefit from the potential offered by the multimodal textual design of digital texts.

Comprehension-related processes and reading screen-based texts

On one hand, readers working with digital texts have access to text elements of various modalities that can be read in the order of their choosing. They have multiple entry points, reading paths and exit points, and the knowledge obtained corresponds to readers' needs, preferences and knowledge. However, empirical research shows that the nature of reading is changing, and reader profiles (written language user) suggest these new opportunities are not being sufficiently exploited by readers to improve comprehension-related processes, or at least not convincingly (Delgado, Vargas, Ackerman & Salmeron, 2018). Readers have difficulty constructing meaning when it is presented using various modalities and is non-sequentially arranged on the page ("sound bites", "thoughts bites"), as is typically the case with screen-based texts. This is because they have to handle the meanings presented in the alphabetic text as well as in the image (or sound) and integrate meanings presented through different modalities. The design of digital texts therefore makes it easy for the reader to become distracted. As reading experts have noted, the processes most affected from the procedural point of view are those associated with deep reading – inferential and deductive reasoning, analogical skills, critical analyses, reflection and insight (Wolf & Barzillai, 2009).

This is confirmed by a meta-analysis on the effects of reading media on reading comprehension conducted by Delgado et al. (2018). They analysed 54 empirical studies, comparing the reading of comparable texts, print materials and on-screen texts published between 2000 and 2017. Their results show that respondents reading a digital text understood less, regardless of the research methodology and theoretical framework, and this has been confirmed by other research findings (Kong, Seo & Zhai, 2018; Singer & Alexander, 2017; Wang, Jiao, Young, Brooks & Olson, 2007). They concluded that the digital environment is not always appropriate for fostering deep comprehension and learning, and that "providing students with printed texts despite the appeal of computerized study environments might be an effective direction for improving comprehension outcomes" (Delgado et al., p. 34).

The digital environment does not suppress reading, it merely changes the appearance of the text, focusing more on "media design", and on a visual ap-

proach to meaning than on providing opportunities for concentrated reading, using alphabetic text above all. The type of reading that stimulates the acquisition of "cognitive patience" (Wolf, 2016), needed when reading more dense, demanding texts from any sphere closely related to education, is gradually disappearing. There is justified concern that the increasing use of digital reading will lead to "second orality" (Ong, 2002), in which the qualities of the human intellect that stimulated the transformation of visual and auditory perception, cognition and linguistic functions through the use of written speech are being lost.

Further incentives and implications for next generation education and literacy

The use of the image, investigated in previous studies in relation to teaching and learning opportunities in schools in the digital era, points to a paradigmatic change in educational approaches. The introduction of new digital media in schools, the transfer of some learning processes to the screen or online environment along with the creation of digital education platforms often prompts optimistic visions of better access to education and literacy, especially for vulnerable groups of individuals (Wolf, 2016), and analyses of the changes the transformation brings. The discussion in the field of reading and in response to the arrival of the digital era concerns the nature of the "new literacies", "multiliteracies" and "literacy for the 21st century" (Mills, 2010) and how readers have to be capable of understanding the code used when alphabetic text carries only part of the meaning. Kress and van Leeuwen (1996) recommend revisiting the way modes of representation are dealt with in the school curriculum and moving away from the preference for alphabetic text so various forms of representation can be included. This would require us to reduce the strong emphasis on the visual mode (image and text design) as the basis for a new kind of reading as it is insufficient, and explain how the status of print, reader and learner, and the role of the classroom teacher will change.

A number of studies show how the learning individual, digital media and teachers all interact, and point to the new kinds of reading, writing and play that emerge through contact with new media. They also indicate how meaning-making works in the multimodal environment of screen-based text, both in relation to reading and creating meaning. There is a relatively comprehensive summary on the situation regarding early childhood in *The Emerging Field of Digital Literacies in Early Childhood* edited by Erstad, Flewitt, Kümmerling-Meibauer and Pereira (2019). While *Learning to Read in a Digital World* (Barzillai, Thompson, Schroeder & van den Broek, 2018) has

a more general focus on reading. Other review studies mapping the changes in reading texts on screen show that the research on the multimodality of digital text or hybrid semiotic systems provides a fairly comprehensive picture of what forms of text design are available in the digital environment and how individuals read and learn in that environment (Jewitt, 2008), and include practical demonstrations and recommendations for educational practice (Walsh, 2010).

On the other hand, there are studies of on-screen reading that not only identify changes in the semiotic landscape of textual resources in the digital era but also set out an integrative conceptual and theoretical framework for investigating reading. When we focus on reading as a human-technology interaction and as an embodied act, we reveal the key dimensions of reading: ergonomic, attentional/perceptual, cognitive, emotional, phenomenological, socio-cultural and cultural-evolutionary (Mangen & van der Weel, 2016). Mangen and van der Weel (2016) have suggested we formulate research questions that reveal the effects of digitization on reading across these dimensions. Such an approach would support our understanding of "what reading is fundamentally, how it actually works as a process and which human faculties are involved" and "it should help explain better the effect of reading on the individual brain" (p. 121). In addition to understanding the reading process itself, whether on paper or on screen, this approach to investigating reading would make it possible to identify which kinds of abilities reading helps to develop and what we should seek to preserve in teaching reading and literacy development. Otherwise, the "new literacies" or "multiliteracies" era may be gradually replaced by the "post-literacy" era (Ong, 2002), and the specific functions brought into the architecture of our mind by written language would disappear. If written language and the related forms of access to knowledge are no longer a priority in the plurality of semiotic sources and individual forms of cognition, where will schools derive their legitimacy from? This question requires more detailed analysis examining the specificities of the use of digital texts in schools.

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Culturally inclusive pedagogies of care: A narrative inquiry

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Abstract: This paper is a reflection on culturally relevant pedagogies of care to achieve more equitable outcomes for diverse cultures within early childhood. The authors are academics at a tertiary institute in Auckland, New Zealand. Our aim is to share our experiences as teachers in a diverse and multi-ethnic city in New Zealand. Authors draw on narrative methodology to deconstruct our experiences and share how we position ourselves in teaching and learning. The paper emphasises an enactment of pedagogy that recognises diverse cultural knowledge and other ways of knowing.

Keywords: culturally inclusive pedagogy, narrative inquiry, diverse cultures.

Paper

The present discourse of globalisation has shaped the world of early childhood education as society has become more and more diverse. As the population becomes more diverse, teachers are challenged to incorporate inclusive pedagogies. New Zealand today is characterised by a number of cultures and identities. The authors share their experiences as teachers as we believe that culture and experiences of teachers and learners affect the enactment of pedagogies. Cherrington and Shuker (2012) highlight the importance of engaging with teachers' cultural identity and otherness and how they engage with children, their own and their peers' cultures. We argue that besides engaging with cultural otherness of teachers, there is also a need to look beyond the universalising approaches to otherness and move towards a culturally inclusive and relevant pedagogy.

Culturally inclusive pedagogy focuses on respect for cultural differences and inclusion of diversity. It also emphasises power sharing equity and justice. Culturally inclusive pedagogy is not a new concept. It has been extensively regarded as a useful strategy to improve educational outcomes for indigenous students worldwide (Habib, Densmore-James & Macfarlane, 2013). Relevant pedagogy thus recognises the experiences and cultural identities in teaching and learning. According to Ndemanu and Jordan (2018) culturally responsive pedagogy is about teachers growing knowledge about their students, their culture, perspectives, experiences and values. Authors strongly warn against including stereotypical information about different cultures and emphasise authentic knowledge as a tool to avoid stereotyping (Ndemanu & Jordan, 2018). The paper draws on experiences of two academics as we believe values and perspectives of teachers influence what goes on in education.

Critical pedagogy focuses on issues of culture identity and inclusion and how these influence what goes on in education and shapes the purpose of education. This paper draws on critical pedagogy to analyse the narratives to develop a discourse of care; empowerment and participative democracy that is authentic. Henry Giroux (2016) recognises critical pedagogy as an ideology where educators must encourage students to be critically engaged and attentive to the social issues of the time. The issue of cultural diversity in relation to inclusion has become a major focus in early childhood as a result of globalisation and migration of people from one country to another. The issue is also a complex one as it includes notions of culture, race, ethnicity, equality and inequality (Chan 2006; Robinson & Diaz, 2006; Ang, 2010).

Culture is a difficult term to define. It has been widely defined as shared values, people's way of doing things, social practices, attitudes of people and shared behaviours (Rata, Obrien, Murray, Mara, Gray & Rawlinson 2001; Verner & Beamer, 2005). These understandings of culture refer to everyday practices and values of groups of individuals and is used commonly today in sociological paradigm to define the notions of culture in an inclusive manner (Ang, 2010). Moreover, contemporary understandings of culture also celebrate complexity and diversity. The cultures of individuals include identities that are continuously evolving and changing. Homi Bhabha points out that culture represents diverse values and practices that interact with each other to form different cultures (Homi Bhabha cited in Ang, 2010). Thus in order to understand culture and diversity, one needs to recognise that cultures are not homogenous but heterogeneous. This paper deconstructs the discourse of diverse 'other' pedagogies in the early childhood context

of New Zealand to increase our awareness of diverse cultures in relation to teaching and learning. It also critically reflects and questions the dominant discourses that govern our ways of thinking about diverse pedagogy. Critical pedagogy locates human beings as agents of change and promote action against injustices in the society. Critical pedagogy allows teachers and learners to engage in critical discourses and take action around issues of hegemony, privilege and social justice Sauto-Manning (2017).

Current Context

Globalisation has resulted in migration of people to different parts of the world. This has resulted in immigration of people from developing nations like India to Westernised societies. (Sanagavarapu, 2010). As a result of immigration from Asia, the ethnic composition of early childhood centres in New Zealand has changed tremendously (Shuker & Cherrington, 2016). There has been a rapid increase in student teachers coming to New Zealand from different parts of the world including India.

It is also important here to recognise the bi-cultural nature of early Childhood sector of New Zealand. Treaty of Waitangi is the founding document of Aotearoa, (New Zealand). The three principles of the treaty: Partnership; Protection and Participation guide the teaching framework. The treaty is mandated in many policy documents and legislation. However, within the early childhood education sector, even though many teachers (both preservice and inservice), may recognise the importance of biculturalism, a large majority of early childhood centres continue to educate children from a monocultural, monolingual perspective and position (Ritchie, 2003). Early childhood sector is also influenced by the neo-liberal market ideology that emphasizes individualistic European American ideologies of child centered development that do not recognise other cultures that are influenced by others in the community and identities are construed in relationship and interactions with others (Kennedy, 2006; Rana, 2012). Sauto-Manning (2017) suggests it is important to recognise that early childhood teacher educators are cultural beings and have their own identities and pedagogies. We need to however also challenge the existing normative or privileged identities of early childhood teachers that view other cultures from the perspective of one's own. The privileged identities we are referring to here is the dominant western ideology that prescribes our curriculum. Critical pedagogy challenges the assumptions of dominant discourses around curriculum and other areas of teaching and learning (Sauto-Manning, 2017). We invite pre-service teachers to do the same in their student teaching placements.

The authors of this paper aim to incorporate culturally inclusive and relevant pedagogies into pre-service teacher education programme. Authors consider experiences in their cultures and context of teaching to promote a pedagogy of care for early childhood educators to work in diverse settings in critically inclusive and culturally relevant ways. The experiences shared as narratives include our stories of growing up in our respective cultures and values of teaching and learning.

A Brief Note on Methodology

In recent years narrative inquiry has become a popular method of inquiry and writing. Narrative inquiry as a research approach today is reshaping qualitative inquiry in the academic world. There is no single explanation of narrative inquiry. It has different meanings for different disciplines. Simply stated narrative inquiry is a way of understanding experience. They are stories that are lived and told (Richards, 2011, Clandinin & Connally, 2000). Narratives are mostly autobiographical in nature, they also include: memoirs, biography, diaries, documents, records, folk ballads, photographs and other visual representations (Richards, 2011, Clandinin & Connally, 2000). Narratives give voice to researchers' stories and has many links to events and subjective understandings of the researcher (Richards, 2011).

There is a lot of debate about narrative research and how it differs from traditional research. Traditional research "strives to discover and verify knowledge about the real state of the world. In contrast narratives strive to portray experience, to question common understandings..." (Coulter & Smith, 2009, p. 577). Our research explores our stories of cultural contexts and experience as teachers. Narrative research therefore is suitable to investigate our cultural contexts and social realms that would be difficult to investigate under traditional method (Richards, 2011). We employ a narrative framework to uncover our perceived truths based on our experiences. Our narratives offer our stories and values of teaching and learning. We are creating a space for us to listen to ourselves and also leaving further analysis to the reader. We included two different perspectives as it validates the need to understand and respect diverse knowledge.

Polkinghorne (2007) points out the validity of narratives is verified by its rich details and description. A narrative inquirer, by providing a detailed and rich description validates the research and arguments presented in the text. Drawing on Polkinghorne, we think narrative inquiry gives us an opportunity to analyse socio-cultural environment that shaped the experi-

ences (Polkinghorne, 2007). The authors also analyse their experiences and group them into themes.

In this narrative analysis we have two academics who are narrating their experiences from their cultural contexts. One is originally from India who is looking at narrating postcolonial discourse of teaching and learning. Second author is from Cook Island and Samoan descent, born in New Zealand. The two constructs of pedagogies in education reflect the diversity in education. This paper presents our values about teaching and learning as who we are as educators, shapes our day to day teaching in the classroom. This also impacts what students learn (Richards, 2011). Therefore, in the next section we present our narrative of who we are and our teaching philosophy.

Narrative One

I, Dr L, am an Indian academic in the school of education at a tertiary institute in Auckland. I grew up in Delhi, India in a Gujarati (ethnic group from Western parts of India) family. I grew up in a culture where families put a lot of emphasis on education. It was very important for the family to provide the best of education to children. I went to a private convent school and later to a prestigious college to complete my first degree. Research also highlights the importance of education for Asian families. Many of the Asian parents expect their child to engage in academic learning from a very young age (Chan, 2011, Wu & Singh, 2004). Findings of a research study about Indian migrant parents' perspectives about Australian early childhood too highlighted how Indian parents lay emphasis on academic excellence and disregard play as a form of learning (Patel & Agbenyega, 2013). Similar to these research my father was very keen that I and my siblings should go to the best schools in the region. My parents encouraged me to pursue my dream of becoming a teacher. I have five other siblings (four sisters and one brother), my parents always encouraged us to excel in whatever we did. My parents believed education was the best gift they could give their children. So here I am having fulfilled my dream of becoming a teacher and sharing my experiences with my students and peers.

The cultures of individuals include identities that are continuously evolving and changing (Ang, 2010). In this context my values and identity further evolved as I continued with my further education in India and overseas at an Australian university where I completed a doctorate program. As I reflect on my experiences of studying and migrating to the western world, the differences in approaches between western and traditional Indian ideologies

become very apparent. And this has influenced my identity and experience as a migrant educator. Today I identify myself as an Indian migrant academic in a multicultural society dominated by white European discourses. This gives me an opportunity to share my indigenous values and also encourage students to question neoliberal ideology of standardised tests and achievement levels prescribed by the corporate industries. I have grown up with values of respecting the elders, humility and tolerance. I remember as a child listening to the traditional legends and stories recited by the elders in the family out of respect for the members of the family.

Critical pedagogy recognises the significance of indigenous values and ways of doing, seeking to revive and foster indigenous epistemologies (Kirylo, Thirumurthy, Smith & McLaren, 2010). For example, indigenous values give significance to family. Education is not an individual effort but involves the whole family. If my students are not able to come to my class due to circumstances in the family, I do not judge them for it. I understand as I can relate to them and how they value their families. However, the dominant ideology that prevails among the academics find it difficult to understand how education which is an individual pursuit is affected by family and its wellbeing. Ling-Yin (2007) points out in this context that it is important to critically reflect and question the dominant discourses that govern our ways of thinking about diverse cultures.

My teaching philosophy is based on my experience and knowledge as a teacher and learner. It is influenced by the cultural values I grew up with and also recognises the influences of western developmental theories. It is greatly influenced by Rabindranath Tagore's (Indian philosopher) ideas and philosophy. Rabindranath was the first non- European to receive a Nobel Prize in Literature. Rabindranath Tagore saw education as a vehicle for appreciating other cultures while maintaining one's own cultural specificity. Tagore believed in democratic values and freedom of power in language. He believed in the power of education and how it empowered an individual to develop to the fullest extent (Singh & Rawat, 2013). Thus my decolonising pedagogy goes beyond the perspectives and norms of the dominant discourses in the west to include other cultural perspectives. My teaching thus incorporates a number of Indian cultural aspects. For example, I bring in practices related to celebration of festivals including telling stories about Indian legends. I also consciously share ideas and knowledge of great Indian philosophers like Rabindranath Tagore. For example, on the occasion of celebrating end of semester for year two students I shared the educational philosophy of Rabindranath Tagore that emphasises freedom and creativ-

ity of learners. Students and other staff immediately wanted to know more about his ideas.

Literature points out that the beliefs held by the teachers influence their practices (Gay, 2000). My teaching beliefs have also been shaped by western critical pedagogies and philosophers. Moreover, the cultural and educational experiences of teachers also influence their practices in the classroom. I believe teaching gives one an opportunity to inspire and empower students. I encourage students to be involved in discussions and activities in classroom. As Freire (1984) points out education is not about transference of knowledge, it is grounded in the reality of students' lives and is a collaborative and collective production of knowledge.

Today the world is changing at a very fast pace. I like to keep current with new technologies of learning so I can share and use these in my classroom. Freire saw dialogic relations between teachers and learners, and emphasised problem-posing as liberating that would develop a critical consciousness among students (Keesing-Styles, 2002). I encourage students to question and see outside the box when trying to understand a phenomenon. As a teacher I am flexible and like to centre my teaching to the context of students. Learning is something very individual and teaching needs to be in relation with the needs of learners. Moreover, engagement with the students is key to a good teaching and learning environment. It is the responsibility of educators to empower young people with the capacities to think, question, and doubt, and be attentive to significant social issues (Giroux, 2016).

Narrative Two

My (Y. Culbreath) ancestry is diverse and multi-ethnic. I am Cook Islander and Samoan, New Zealand born and educated. Education was an expectation and priority in the preparation for finding a job. In finding a job I would then be able to contribute to my family.

My parents believed a good education would enable success in New Zealand. A migrant view that emphasised the speaking of English as paramount to a successful life in New Zealand. I attended schools that were located in the vicinity as these were accessible to us. My journey in education has evolved through life experience as a mother with two children.

Involvement in my children's education was the catalyst for my pursuit of further educational knowledge. Over a ten-year span the achievement of

an Early childhood teaching diploma, a Bachelor of Education Degree and a Master of Arts in Education Degree was realised. Fifteen years ago this enabled me to enter into the Academy as a lecturer.

The experiences alongside the triumphs and challenges as a Pacific Nations lecturer in the academy will inform my narrative. This view is further informed by reflective analysis and a deepening understanding of the self or many selves. Although the ideas are perceived as my own, and my truth, how much of this thinking has come about as a result of what I have studied and learnt over almost twenty-five years.

I believe a holistic view enables many aspects to be called on to reveal what has been effective and meaningful when engaging with diverse groups of students. A holistic view means the responses, comments, queries students bring to the discussion are cues for me to engage with their views. Ensuring their ideas and world views have a place and contribute to a shared understanding. Students have a voice and in sharing their voices we learn from each other. Creating opportunities, utilizing spaces for this to take place empowers the learner and the teacher. It is very much a reciprocal relationship where the teacher and learner is interchangeable. The many views create further thinking that I believe empowers on many levels. Holistic is also the spirit, the emotion, the nuances, the questioning sometimes the biases and prejudices which are not obvious but I believe enable rich dialogue to take place. Always open to interpretation and always with respect and honor for students having the courage and freedom to step out.

We must first of all start with ourselves. Understanding yourself and your many selves requires careful unpacking as truths can be very confronting. However, this unpacking also liberates and frees taken for granted assumptions about who you are. Through the 17 years of teaching in the academy the students have been the impetus for me to carefully examine who I am in this place. Therefore, the reflections and revelations have sometimes been confronting for me. How I honor the many selves that make up who I am requires courage and strength that I believe is ancestral. Significant family members who have influenced and shaped me guide who I am today. Some views I leave, as my learning evolves, ideas change, thinking also is influenced by many factors. An understanding of me, past present and perhaps future opens up many possibilities to be examined.

The revelations require careful analysis and a 'kindness lens' which reawakens perhaps historical ideology that has become my mantra as I navi-

gate the teaching, learning space. 'Kindness lens' I am referring to here is about looking at myself with a lens that accepts who I am with all the frailties and strengths. This might not be a view that conforms to the academic rigour but is my cultural value that is a key to my teaching and learning. This lens allows me to bring in my cultural essence and wairua (spirit) to this teaching and learning space. I use a kindness lens as too often I can be harsh and judgmental of myself. This is based on what I have believed to be right, acceptable and appropriate given specific contexts and circumstances. Expectations of others determine ways of being and behaving in the academy. Therefore, I need to be mindful of ownership when advocating for my values, principles and beliefs. This is my response and view about teaching and learning.

Alongside the 'kindness lens' surveillance lens is another aspect of my teaching philosophy. This means awareness of my practice in relation to past events and considering the present moving towards the future. Surveillance lens ensures what is required in terms of the teaching and learning of prescribed content and knowledge takes place. My initial intention was to be aware of many things at the same time in a positive learning manner. One then becomes discerning as priorities require immediate response. Familiarity and different experiences means the lens changes over time. Therefore, alongside the academy requirements being an effective communicator, building meaningful relationships that have the interests of the students at heart has enhanced my philosophy of teaching.

One of my students said "you do not speak the language but you have a heart for our people." She said 'you always make sure you do not offend when you speak.' 'Our class is so diverse but we feel respected and heard".

Therefore, relationships based on respect for people and the richness of life experience they bring to the learning enables me to weave connections to the learning in the immediate (for example the prescribed knowledge) and also validation of the student world view. Relationships are at the core of Pacific nations' culture and continue to be foundational to teaching and learning.

Some Themes Arising

Culturally inclusive pedagogies in today's complex society is fraught with many challenges. These are in relation to role of teacher; role of education in today's globalised world and diverse ethnicities in a multicultural world.

Higher education today is challenged by social and cultural diversity and the rise of neoliberal ideology focusing on knowledge economy. Critical pedagogy provides a framework to analyse these challenges and issues in education. Culturally responsive pedagogy informed by the ideology of critical pedagogy that emphasises transforming relationships and production of knowledge that is inclusive provides for a better teaching and learning environment.

Culturally responsive and inclusive pedagogies as the above narratives highlight can be defined as using cultural knowledge and prior experiences. It also respects diverse student learning styles. Culturally responsive pedagogy is about cultivating an open attitude and acquiring new skills. It is about exploring and respecting your own culture and also learning about other cultures. It is about building meaningful relationships and creating a culture of care (Habib, Densmore-James & Macfarlane, 2013*).* The narratives above have emphasised prior experiences, recognition of diverse cultures, identity and meaningful relationships as being core to teaching.

In the context of New Zealand, culturally responsive pedagogy is aligned with the principles of the Treaty of Waitangi which is the founding document of Aotearoa, (New Zealand). The three principles of the treaty as mentioned before guide the teaching framework. The principle of partnership encourages power sharing and involvement of families and community in decision making. The principle of protection safeguards the cultural knowledge of indigenous people and respect for diverse cultures. Participation is about engaging and promoting equitable rights and opportunities (Habib, Densmore-James & Macfarlane, 2013). Gay (2000) also acknowledges cultural knowledge and prior experiences as key to providing appropriate and effective educational experiences.

On a final note, the authors would like to emphasise the need for educators as pointed out by Giroux (2016) to focus on democratic values and culture of care in a society influenced by neoliberal ideas of education as a form of training and teaching standardised skills. We have argued for a relevant pedagogy that is inclusive and does not marginalise other knowledge. Education should not be about transference of knowledge but rather the collaborative and collective production of knowledge grounded in the reality of students' lives. As Souto-Manning (2017) point out critical pedagogy positions human beings as agents of change who do not accept things as they are. This ideology is based on recognising that human beings are capable of naming injustices for transformation. Therefore, critical pedagogy is an ideology where educators encourage students to be critically engaged

and attentive to the social issues of the time and take action around issues of power, privilege and social justice. This paper draws on critical pedagogy to analyse the narratives to develop a discourse of care and empowerment. This paper hopes to further contextualise teaching pedagogies and identities in a world which is challenged by diversity. Further research is required to examine how teachers are prepared to be inclusive of diverse ways of being. Multiple perspectives need to be valued, including students' experiences and indigenous ways of knowing. This is an ongoing study and the next step is to explore students' narratives in this space.

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Cultural democracy and schooling in India: A subaltern perspective

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Abstract: It is argued that educational spaces often maintain certain forms of hierarchical cultural patterns to reproduce an unequal civil society. The history and contemporary nature of Indian civil society, ridden with relations of caste and class, often interpellates its agenda of hierarchical order in the cultures of schooling. Children from marginalized communities, particularly from the Adivasi (tribal) cultures, are more vulnerable to these undercurrents, and this often results in their dispirited autonomous participation in schooling. The content and nature of the curriculum and modes of pedagogical interactions are the focal channels of its operationalization. In recent times and earlier, various forms of contestations had emerged against this dominant agenda, particularly from subaltern contexts. These took the form of democratic resistances seeking to establish democratic cultures in classrooms and schools (Apple C James, 2007; Darder et.al, 2009). Creating a sphere of this order would promise to enable children to become transformative human beings and autonomous intellectuals. Viewing the regime of education as both liberatory and oppressive (McLaren, 2009), this paper is an attempt to engage with democratic concerns in the realm of schooling in India within the relations of culture, knowledge and its politics.

Key words: cultural democracy; schooling; hegemony, Adivasi children.

Introduction

Cultural democracy, as a term and as a discourse, projects concerns towards matters of social justice and the self-respect of culturally marginalized communities (Freire, 1968, 1970; Entwistle, 1977; Giroux, 1983; Darder et. al, 2009). The concept of cultural democracy holds a crucial stake in the realm of education, where the values of pluralism, equity and human autonomy collide against the supremacy of prejudices based on race, caste,

ethnic and regional formations (Arlen & Don, 1990). In the history of education, across the globe, this quest has its early origins in the beginning of the 20th century in different parts of the world. The philosophies of progressive thinkers like John Dewey and W. E. B Dubois of the United States are seen as its flagship and coincide with the trajectory of the radical educator of Latin America Paulo Freire and his critical pedagogy in recent decades. The slogans of their educational aspirations protest against the impediments of classism, racism, white supremacy, colonial domination, xenophobia and many versions of the hidden curriculum (Apple, 1980, 1993; Darder et.al, 2009). In a collective sense, these quests are said to be aimed at practices of (democratic) education which recognize the values of equality, freedom and social justice concerning the varying diversities of human cultural formations. It is contended that deviating from these ideals would create conflicts in the learning process, learning individuals and their political formations (Wringe, 1984; Apple & James, 2007).

In the recent past, certain struggles within this milieu raised similar contentions by projecting the issues of misrepresentation and de-legitimization of indigenous knowledge systems and cultural contexts as a major slogan (Semali & Kincheloe, 1999; Denzin & Lincoln, 2008). For instance, one of its genres was led by the Maori tribal communities in New Zealand demanding an indigenized curriculum in schools and universities (Harrison & Papa, 2005). Similarly, resistance and struggle have emerged among indigenous populations across the globe, such as the Samis in Canada, the Zapatistas in Mexico, the Mandarins in China and many of their counterparts, in pursuit of recognition of their indigenous cultural epistemologies (Mauro & Harrison, 2000; Barnhardt & Kawagley, 2005; Harrison & Papa, 2005). At the outset, these movements were at the forefront, competing for spaces of recognition for their language, culture, identity and the varied knowledge systems in academia from kindergartens to universities (Semali & Kincheloe, 1999; Smith, 1999, 2005). The questions they posed did not demand the formation of a new right, but protested for the recognition of rights already acknowledged by international law frameworks and rights forums such as ILO, UNDRIP, UNESCO and many other bodies within their frameworks of Cultural and Educational Rights (Burman, 1998).

Beginning from this premise, I intend to engage with the various impediments to the formation of these contentions in the larger perspective of the (tribal/ tribe of) Adivasi[1] communities in India as a subaltern community.

[1] The term adivasi refers to the tribal population in India administratively listed as

By subaltern[2], I mean people at the margins or populations who lack autonomous power in civil society (Gramsci, 1971; Green, 2002; Crehan, 2013). The objective of this paper lies in the right of the children of subaltern communities to engage with the educational systems, particularly schooling. The question is to what extent do the schooling processes respond to the democratic aspirations of these children, whose subjectivities are formed/ing under multiple relations of culture, knowledge and politics. More specifically, the paper enquires into the debates on curriculum and pedagogy and its socio-political implications. The paper is divided into three sections, (1) the politics of knowledge and its imperatives in relation to the exclusion of Adivasi children (2) the dilemma embodied in the pedagogical process associated with the formal schooling structures and (3) a discussion part along with some insights from field observations.

Education of Adivasis in India

The enterprise of education, and hence knowledge, is of tantamount importance in empowering socially and historically marginalized populations. Their conditions of un-freedom are largely subscribed by the hegemonic structure of civil society, which has a history of restricting knowledge to the privileged members of society. Reproduction theories of education content hold that education systems tend to reproduce existing inequalities, while the privileged continue to enjoy the fruits and the less privileged are increasingly restricted from accessing opportunities available to the privileged (Althusser, 1970; Bourdieu, 1973; Anyon, 2011). The history of social progress in India is also one of a dichotomy of unequal social access among populations divided across class, caste, ethnic and regional differences. It is argued that the subaltern societies such as the Adivasis are more vulnerable to this and are becoming subject to its various manifestations in educational settings (Heredia, 1992, 1995; Choudhury & Patnaik, 2008; Radhakrishna, 2016). Active interaction between the delivering and receiving ends is prerequisite to any form of democratic participation. Here education as a site of power restricts the autonomous participation of the children of subaltern

Scheduled Tribes (ST). Terms like *Girijan, Gothravasi, Vanavasi* and *Adivasi* are used interchangeably to denote the tribal populations. Recent academic and tribal intellectual collectives tend to use 'Adivasis' as the accepted term.

[2] The term subaltern is used to describe marginalized communities and was popularized after Antonio Gramsci's writing on Italian history and politics. By subaltern, Gramsci meant the working class, poor, women and other marginalized groups under the hegemonic social order (Gramsci, 1971). Although it is a politically loaded term that invites critique and debate, I use it to denote the Adivasis as the most marginalized group in Indian society. For reference, see Green, (2002); Crehan (2013).

societies through rigid and unwelcoming operatives (Freire, 1968, 1970). A perspective of this genre aims at the significance of democratic platforms in educational settings in enhancing and empowering marginalized children to become transformative human beings. Bringing the premise of this debate in India, we have profound examples in the contemporary scenario of the disparities in education for historically disadvantaged societies, which has inevitable affinities with the questions of cultural plurality and democratic concerns (Balagopalan, 2003, 2003, 2003a; Chatterjee, 2004; Govinda, 2002; Kumar, 1985; Sarangapani, 2002; Sujatha, 2002)

Adivasi communities in India have experienced exploitation and marginalization throughout their history (Choudhury & Patnaik, 2008; Radhakrishna, 2016). Although these communities have heterogeneous identities and are of a distinct social and cultural formation, they have all undergone severe levels of dispossession, losing land, forest and other natural resources as well as their autonomy in the domains of public and civil life (Xaxa, 1999, 2016; Kannabiran, 2016). Land alienation, caste/ethnic domination, and deprivation were coupled with the impediments under colonialism. Adivasis in India account for more than 8.2% of the total population live in more than 600 communities across regions (GoI, 2011). In post-independence India, the central and state ministries implemented various policies and programmes aimed at empowering Adivasi communities in different tribal areas. The development of Adivasi populations was the subject of various debates. The 'integration', 'assimilation' and 'isolation' debates were prominent in this, which led to debates on the subjective conditions of the Adivasis communities as the citizens of the welfare state mechanisms (Choudhury, 1982; Shaw, 2005). The juncture of conflict in this debate was the nature of centrality in these horizontal policies implemented against the real and democratic aspirations of these heterogeneous communities. In this milieu, the formal systems of elementary schools are a structure of contradiction for Adivasi children. If we take into consideration the social progress of socio-economically marginalized communities of Dalits, adivasis, backward castes and Muslims, the stagnation among Adivasi communities is more visible (Jena, 1991; Nambissan, 2002; Sujatha, 2002; Pradhan, 2004; Shaw, 2005). This juxtaposes the positional difference of Adivasi communities against the effectiveness of educational and empowerment programmes. Other than the structural determinants of economic and social hindrances, I would argue that there is a larger implication in their cultural and historical formation which is being jeopardized by the regime of schooling.

One of the premises of this predicament is the conflict between traditional communities and modern forms of schooling. It contains the argument that the horizontal model of schooling devalues or derecognizes the cultural milieu of marginalized sections and their epistemologies (Singh, 1995; Sarangapani, 2003a; Sundar, 2010; Manojan, 2018). In policy frameworks, although there are protective and welfare measures for Adivasis and Dalits, the public psyche of Indian society is not mature enough for them to be considered people of equal status with the mainstream (Janu, 2017). Education as a miniature social system resembles this presumption in more or less equal form. Taking schools as the site of interaction, most of the studies indicate that Adivasi children are considered strange and second-grade individuals in the classroom and surroundings (Varghese, 2015; Manojan, 2017, 2018). These mechanisms operating in the systems of education often tend to perpetuate the interests of the dominant order and create social conditions that silence the spaces of critical engagement and resistances against its legitimacy (Kumar, 1991; Chintis, 1977&1981). This is precisely how the 'agenda of marginalization' is pursued in the regimes of education (Gupta, 2012). The voices of critique and the senses of resistance are supposed to be acquired through the praxis of education. Yet, education replicates it, maintaining its structures of domination and creating subjugated subjectivities (Heredia, 1992, 1995; Manojan, 2018a).

Numerous research and studies conducted in this field report the incidents of marginalization and exclusion in several spheres of schooling (Kumar, 1985, 1989; Patel, 1991; Jena, 1991; Sachidanandha, 1999; Rani, 2009; Narayana, 2010; Nambissan & Rao, 2013). In the historical angle, certain studies contend that the current systems and practices of Indian education are a by-product and legacy of the colonial British Empire, which is still pervasive in propagating the colonial ideals (Kumar, 1989, 1991; Krishnaswami, 2001). It persists in creating disadvantageous conditions for the children, particularly for the ones from subaltern strata where the blind imitation and implementation of the dominant ideals of the curriculum give preference to a world and knowledge system of uneasy acquaintances (Kumar, 1985; Sundar 2002). Some of the most recent studies on Adivasi education signal that Adivasi children are deeply discouraged by uninteresting curriculums, resulting in high drop-out rates, absenteeism and passive participation (Sundar, 2002, 2010; Balagopal, 2003, 2003, 2003a; Narayana, 2010, Manojan, 2018).

A generic reading of the recent research on this theme highlights three major dimensions to the main predicaments the educational project has

for weaker sections (Patel, 1991; Jena, 1991; Heredia, 1992; Nambissan, 1994; Sridhar, 1996; Sachidanandha, 1999; Govinda, 2002; Sujatha, 2002; Rani, 2009). The first array of findings encompasses socio-economic problems relating to poverty that force children to help in the home and to assist parents with farming and other occupations. Secondly, there are structural constraints affecting schooling and Adivasi culture. The exclusionary attitudes shown by non-Adivasi school teachers and peer groups create stigmatized attitudes towards the life and culture of the Adivasi communities and children. In addition, the medium of pedagogic instruction and informal communication is the official state languages, and this has a hegemonic influence vis-à-vis the traditional dialect of these children causing alienation and estrangement. The holidays and vacations are incompatible with the seasonal cycle of Adivasis, which is more important to them than going to school compounds, presenting another conflict in their engagement with the schooling routine. The third category locates the discrepancies in the planning and management of various policies and schemes for educating tribal children. The failure in the organization of multiple administrative departments to implement the various schemes often makes the well-designed projects seem removed and ineffective.

The Knowledge Question

In the history of Indian education, colonialism is considered a major turn structuring the present education system and associated regimes of knowledge. The modern conditions scribed by the colonial ideals have created a sort of standardization and homogenization within the Indian education system (Chatterjee, 2004; Kumar, 1991). It is argued that the pluralistic trajectories of indigenous education in India were disrupted under the tutelage of the colonialist regime (Dharampal, 1982). The logic of a homogenized system of practices has propagated monolithic forms of knowledge in contrast to the diversified mass of varied cultural contexts, which it is argued results in the establishment of 'an epistemological and ontological hegemony' through its organs (Guptha, 2012). This led to circumventions that marginalize and suppress certain forms of knowledge through selective tradition, implicitly restricting particular forms of knowledge that do not correspond to 'the official' and 'the valid' ones (Apple, 1980). Notably, the missionary education in India reflecting various colonial regimes has spread across rural and urban areas and created momentum in expanding education services. But it is also contested for its stake in the imperatives of colonial modernity and its endorsement of a methodology of the dominant West (Pal & Chakraborty, 2001). There is a debate around the intervention of colonial as well as other

Christian missionaries on the grounds of their implicit/explicit evangelical agenda of propagating religion in remote rural areas and specifically among Dalit and Adivasi communities (Heredia, 1995a). Conversions to Christianity are considered evidence of this argument and vigilance is pervasive from the Hindu right political front even now (Choudhury & Patnaik, 2008). But a pertinent argument is that historically the missionary educational project throughout the twentieth century created a large community of educated people, mostly from the socially and economically marginalized strata, especially in the region of South India. Predominantly, it is apprehended that the missionary education systems were not terribly successful in providing justice for the marginalized sections and, on the contrary, they endorsed the dominant class-caste order by misrepresenting and underrepresenting the disadvantaged sections in society under their implicit agendas of religious propagation (Pinto, 2004; Panikar, 2006).

During the reign of the colonialism, the country witnessed several instances of counterhegemonic interventions and interrogations from intellectuals of the subaltern social strata against colonial as well as casteist dominations (Deshpande, 2002; Rege, 2010; Zene, 2013). Mahatma Joti Rao Phule, in the early stages of colonial educational advancement, perceived this predicament and put forward his vision of liberatory education in a highly dialectical perspective (Sunny, 2014). He considered the subaltern masses' aspiration for knowledge in a two-fold frame. He urged for educational institutions to be established in rural areas for the artisans, workers, peasants, women and other underprivileged populations under the *Brahmanical* social order. Simultaneously he critiqued the hegemony of the dominant caste ideals in the existing knowledge frameworks and its teaching through the teachers of the dominant strata (Rege, 2010). He advocated for knowledge that recognized the artisans, the working classes and their culture of labour. Essentially, it was an ambitious system integrating the potential of their manual labour and the possibilities of exploring their intellectual imaginaries. In fact, his presumption was profound in its utmost recognition of the culture of the toiling masses and emancipatory will in knowledge through education. Similarly, we can see the same current in the works of Gandhi, Gramsci, John Dewey and many others. Mahatma Gandhi, for instance, highlighted the necessity of appropriating the culture of the labouring class and its potential to attract the interest of the artisans and workers in education (Gandhi, 1917; Lohia, 1963). But Gandhi's formulation invited critique for the lack of emancipatory vigour in questioning the oppressing social structures (Teltumbe, 2018).

In the later currents, the post-independent slogans of homogenized unity under the umbrella of nationalism perpetuated the image of a homogenized Indian through policy frameworks and curricular organs (Kumar, 1991; Manmar & Madhu, 1999). Though there have been significant improvements in addressing this issue, it is contended that these measures have failed to address the subaltern life experiences, languages and the knowledge system in its different education policies (Singh, 1995; Nambissan, 2002; Sujatha, 2002). The National Policy on education (1968), NPE (1982) and POA (Programme of Action, 1992) could not do justice to this cause, other than providing lip service to those nuances. NCERT textbooks were the medium for propagating this agenda in different parts of the nation. It is argued that there were various instances in which knowledge forms in the classroom dangerously misrepresented Adivasi children and their culture. For instance, Krishna Kumar (1985) narrates a classroom representation in which Adivasi children were represented as symbols of backwardness, filth, and as groups holding subjugated positions in the society. For example, the Adivasi are commonly perceived to be a people living in the interior parts of the world, practising superstitions and black magic and posing obstacles to the progress of society. Remarkably, in another front, he describes two anecdotes from the Hindi textbooks in Madhya Pradesh. The first one is the story of an Adivasi boy, *Eklavya,* who cuts off his thumb as a *Dakshina* (offering) and presents to the *Acharya (Guru*-teacher*)*, who is entitled to teach archery to the children of royal families. The story portrays *Ekalavya* as an obedient fellow and illegitimate disciple of the Acharya, who in turn tactfully ignores the aspects of discrimination shown towards a *Bhil* boy. There is another narrative, about another Adivasi youth who saves a forest officer from a buffalo and is admired by the officer for his braveness and timely intervention as a saviour. These two instances are examples of the imperative of the hidden curriculum (Apple, 1980; Anyon 1980). The pervasiveness of the hidden curriculum in terms of the logic of misrepresentation of Adivasi children and their life worlds still functions as a major cause of children's disinterest and drop-out levels in formal education settings (Singh, 1994&1995; Sarangapani, 2003a; Rani, 2009; Manojan, 2017, 2018). The above instances demonstrate how the symbolic structures of domination create an ideal moral that citizens are always in search of admiration from the dominant sections. It also implies that those who are not the recipients of admiration are less qualified or insufficiently moral to be ideal citizens (Kumar, 1991).

This is one instance in which the life of the Adivasi is represented through textbook knowledge, and of textbooks being considered as doctrines of real and authentic fact beyond the scrutiny and criticisms (Manojan, 2018a, pp.

163-187). The crucial point here relates to introspection over the legitimacy of knowledge, to questions like who decides and who determines the validity and legitimacy of curricular knowledge (Dharak, 2012). It is the exercise of power by the dominant class and caste relations to reinforce the obedient psyche of the oppressed masses. This hegemony of textbook knowledge also contributes to structuring the minds of the learners as a process of manufacturing consent (ibid). This also applies to the notions of the middle class and capital-driven ideals propagated through textual knowledge that cultivates aspirations among children by highlighting the individualized achievements of middle-class society (Enstwistle, 1977). The operationalization of hegemony is much more visible here, where the system is capable of inventing the dreams and aspirations of the subaltern (Gramsci, 1971, Thomas, 2013). The processes of framing curricular knowledge involve certain platforms that make it legitimate. The processes of selection, codification, and transmission are decided under the tutelage of the (dominant) interest groups and their preferences. Michael Apple (1993, p.5) argues that the curriculum cannot be seen as the innocent arrangement of knowledge forms. Rather, it is the result of a selective tradition; a tradition in which selection and legitimization are executed by some sections, and more importantly, by degrading the knowledge of the powerless.

Once this is apprehended, there is a need to address the implications of this hegemony over knowledge within the curriculum as it acts in conflict with the learning experience of the children of subaltern strata. In the early discussions and debates on Adivasi education, it was lamented that the curricular knowledge creates a sense of estrangement in Adivasi children towards learning experiences because it has information that is alien to their life and culture (Kumar, 1985, Sachidanantha, 1999; Deep, 2010). The perspectives of the learner are barely accounted for in the planners' intentions, which thus represent a lame vision of the plurality of languages, cultures, and socio-economic statuses of the learners (Kumar, 1985). Here there are two regimes in contestation: one being the agency of Adivasi children, and the other the politics of marginalization they represent. As mentioned earlier, the contents of the curriculum are much more acceptable to students from the upper strata of society and in turn, this mainstreaming eventually leads the lower strata children to feel alienated and less engaged in learning. As a result, Adivasi students, largely, fail to develop their innate cognitive abilities derived from their socialization and experiences. In process, these children are forced attach with the concepts and operations mechanically without involving in the active process of constructing knowledge. This context, raises the question of the autonomy of the child towards his/her op-

portunities to learn completely. Learning in these contexts allows partial autonomy for these children to access the knowledge in a critical form. Once they fail to grasp something in its complete form, they become demotivated from probing or questioning specific forms of knowledge. This lays down the conditions that gradually impair the child's ability to ask questions or critique and criticize.

The Process of Learning and the Politics of Experience

Learning is a process of developing perspectives over given knowledge through understanding, dialogue (discussion) and reflection (Freire, 1968). Here, the three aspects of understanding, dialogue, and reflection require amounts of cognition largely bounded to one's intellect and experience. John Dewey, the champion of progressive education, envisioned the process of learning and its relation to children's experiences (Dewey, 1930). He focused upon the importance of experience in the learning process and insisted on a pedagogy that recognizes and encourages students to reflect on and understand social realities. Thus, the learners, the students, can engage freely with the social and political environment to construct knowledge with a sense of freedom (Dewey, 1916, 1930). Dewey considered 'experiences' as the major path to acquiring knowledge, and through action and participation. In other words, he was concerned more about the *process* than the *content*. In a way, learning is the reconstruction and reorganization of experiences by adding meaning to new experiences, and further learning from newer experiences. It is central to the thinking of Freire, as he emphasizes the basis of learning as the process of attaining critical consciousness or *conscientization*, which is an act of active engagement. It requires the rejection of the conditions of objective learning and requires learners to become the subjects of the learning process, in which the potential of experience becomes an important aspect of learning (Freire, 1970).

When we discuss formal knowledge structures, it is contended that they create opportunities for subjugating the agency of Adivasis and their knowledge systems acquired through generations. Their life experiences are seldom considered and are devalued by establishing certain hegemonic pedagogic ideals as the official and valid ones. According to Paulo Freire, this is an effort by the dominant section to deny the participation of the marginalized in acting as full human – the ontological vocation of the human being (ibid, p.32). He argues that the task of human beings is to enter into the social reality and participate in the dynamic processes of making histories according to their capabilities. In contrast, when the society continues to oper-

ate under the domination of the elite and superior forces, the participation of the downtrodden sections takes place under passivity and dependency. In a way, the dominant sections tend to monopolize the process of making histories by silencing a large section of the population as passive elements. Paulo Freire terms this the process of 'assistencialism' (Freire, 1968, pp.29-36). He explains that there are two dangers in this: first, it contradicts the natural vocation of a person being a natural subject and treats him or her as a passive object. Secondly, it contradicts and violates the fundamentals of democratization

The propagation and glorification of dominant imaginaries produced through textbooks and pedagogies, for instance the narratives or stories in the primary curriculum quite often are about kings, warriors and privileged heroes and their triumphs of monopoly (Kumar, 1985). Their lifestyles, language and morals are given as examples of good elements in society. This often leads to the formation of common sense opinions that victories in life are restricted for the privileged ones. These corollaries further result in the creation of another sense of 'subjugated other' within the learner: that he or she is in no way a part of history and that history is for the privileged. The life and experiences of the subaltern reduce to something 'less valued' at the intellectual grading of the dominant mainstream and are excommunicated from the 'real' and 'valid'. The child's cognition is constrained within the contours of certain authentic codes of textbook knowledge and there is an intense devaluation of spaces for the learner to think and connect with their memory and experience. The environment and the culture the children live in contributes to their sense of knowledge, but it does not have an authentic space in classrooms. The possibilities of invoking these memories constitutes the political process of cultivating resistance within them. Giroux argues that the politics of memory has to establish the power of local histories through the critical mode of remembering it. These episodes of encounters inaugurated at the cost of subjugated knowledge forms must be seen as a counter-memory against the hegemony of authoritative knowledge. Moreover, these aid learners in creating new forms of critique and self-respect by identifying the power within them through an act of 'liberating remembrance' (Freire, 1970; Giroux, 1983).

There is a dilemma between the mediums of instruction and the Adivasi children's traditional dialect, where the classroom pedagogic transaction often takes place in the approved language common in the region, either in the state language or other dominant language. For most of the Adivasi children, neither of these languages is their primary language or mother tongue.

In India, there are more than 450 Adivasi groups with different dialects as their mother tongue (Devy, 2013). Most of them have no written form. Even Adivasi groups like those found in the *Bhils* and *Santhals* compounds, accounting for a population of more than five million with their own dialect, are taught in Hindi, Marathi or Gujarati in the states of Rajasthan, Maharashtra and Gujarat respectively (Ommen, 2012). (There have been some recent efforts to consider their language as a pedagogic medium). This is the common situation of the majority of Adivasi children in formal schools. These children are forced to learn other languages at an early learning stage, which creates a sense of alienation in learning experiences. On the other hand, the imaginaries of the verbal exercises, grammar and syntaxes in the new language would appear to resemble their lived experiences and everyday practices. In terms of policy frameworks, there is still no mother tongue education for Adivasi children (Sujatha, 2002; Devy, 2013). The rejection of the dialect they acquired through natural socialization and being compelled to learn a new grammar causes significant discouragement among the children and is a major reason for them dropping out (Mishra, 1996; Chattarjee, 2004).

The issue of language is not just an issue limited to learning but has wider political implications within the regime of culture and rights of the culturally marginalized social groups (Sridhar, 1996). The neglect of the languages of marginalized communities has two effects: firstly, it leads to troubling experiences in the learning process, and secondly, it subjugates the potential within the lore of indigenous languages, which eventually leads to the erasure of oral traditions acquired over generations. Kishore Dharak (2012) argues that there is a larger politics of 'purity and pollution' embodied in the agenda of homogenizing and formalizing dominant languages. The languages of the upper caste/class are validated by devaluing the languages of the subaltern masses as unclean folk ways. He illustrates this with an example of a class eight Marathi language classroom. The teacher was narrating a story about the life and hardships of a de-notified nomadic tribe written by a Dalit writer. Soon after narrating the story he gave an exercise for the students to find the tribal language (*Boli bhasha*) in the story and to rewrite those into in standard Marathi language. This instance replicates the linguistic pleasure of the Brahmanical interest in celebrating their privileges by ascribing a low status to the subaltern adivasi languages and to establishing the purification processes to become a valid language (ibid).

Like in any society, the contradiction between the cultures is explicit here. Languages, being the carriers of culture, are not free from the dynamics of

power relations in reproducing the dominant forms. McLaren and Giroux (1995) depict the need to establish the potential embodied in the culture of the marginalized. In the same way, the subaltern cultures also have the potential to mobilize their contesting power to demolish the contributing structures of domination and oppression and to foment resistance among the subaltern. This should be the collective resistance of organic intellectuals within academia using language as the major tool. In this sense it is similar to the prime need to recognize the varied social contexts behind the creation of languages as a part of the culture and as a component bounded to their everyday forms of interactions and resistance forms. It implies that the educator's task is to link the experiences of the children to the official curriculum by unravelling the criticalities in it. Learners should be educated about the possibility of their own languages to challenge the hegemonic language forms. Importantly, the memories, experience and life of Adivasis exist within their cultural orbits, which enriches their self-respect, and self-education (Shor, 1993) would catalyse them to challenge the instances of de-recognition and exclusion.

The Need for Departures

The process of schooling is seen as the sites of hegemony wherein these spaces exercise the perpetuation of common-sense ideals on a par with the dominant mainstream images. For Gramsci, education is the means to produce intellectuals from the subaltern social groups who would be capable of opposing and transforming the existing social order. Throughout the process of instruction, the learners internalize the process of mechanically reviewing abstract notions and experiencing pure passivity. This becomes dangerous when the abstract notions become true for the learner's consciousness and later become part of the mainstream common sense (Gramsci, 1971). The responsibility here lies with the educator who should unravel the absurdities inherent in the schooling process and help the learner acquire a good sense of critical understanding. It is the duty of educators to make those sites of hegemony democratic spaces by being transformative intellectuals (Darder, et.al, 2009; Mayo, 2010; Anyon, 2011).

In the classroom especially, the process of learning revolves around the ability of the children to reproduce what they have heard in the previous class. The task is to identify who has learned something and who has failed, while explicitly neglecting to interrogate what the learner has learned (Kumar, 1985, Sundar, 2002; Balagopal, 2003 a). This is a suffocating practice, would estrange the children from the process of becoming their true self.

This would also prevent the formation of their critical agency which are built around the complex processes in society and in response to educational settings. The mediocre practices of instruction do not help learners discover their critical agency until and unless the dominant education practices are driven out of the pedagogical circle. In a context like this, the educator must be capable of unravelling these historical complexities and should help the children identify their historical agency, thereby guiding them so they can become the organic intellectuals from the subaltern masses (Gramsci, 1971)

As Freire (1970) established, there is a strong presence of a hierarchical power structure between the teacher and the learner. The power structure and authoritative agency privileging the educator have to be broken. Such a departure would call for a dialogic interaction between the teacher and the learner, enhancing their ability to engage without power barriers. Essentially, this is a call for freedom within the classroom, where the teacher has always appeared as a delegate of authority (both in knowledge and in the State power). It is a call for freedom from bondage within the binaries and for the organic potential of genuineness. Moreover, yes, genuineness can create conditions capable of breaking those structures of formalities by celebrating the informalities that used to occur among human beings.

The three terminologies here, informality, freedom and genuineness, are I feel worth elaborating in the context of Adivasi children. For this purpose, I looked at the case of children from the Paniya communities (Santhosh, 2008) in Kerala who dropped out of school[3] (Manojan, 2017; Manojan, 2018a). Paniya children generally enjoy an enormous amount of freedom within their communities (Manojan, 2018a). The community places almost no serious restrictions on their leisure in play, singing, hunting, wandering and many other childhood pleasures. Parents, as well as the community people, tend not to stop or discourage children from doing any of these things; parents do not advice against these things and so they literally have absolute freedom to celebrate their childhood. Moving from an environment like this to a place that is restricted and controlled within the walls of the classrooms presents great difficulties. The school bells indicating the start of the interval convey the temporality of their freedom. Possibly, in a micro sense, the formalities of disciplining involved in these spaces create frustrations and discouragement within the child. The norms of engagement,

[3] Inference from my PhD fieldwork by in Wayanad District in Kerala (Manojan, 2018a). The *Paniyar*s are a numerous Adivasi community in Kerala mainly inhabiting the Wayanad District in the Western Ghats Region of South India (Santhosh, 2008).

divisions of gender on the bench, and the instances of humiliations within the school atmosphere prevent them from becoming genuine learners. Also, in most cases, the authoritativeness of the teachers creates fear among the children and they feel trauma during schooling. These conditions are one of the determinants of the drop-out rates among Paniya children (Narayana, 2010; Manojan, 2017). Once they are out of school, the children move freely within their habitats and often refuse to return to school and reject appointments or compromise, while the teachers visit their homes to make them come back to school. Dropping out can be viewed as an act of withdrawing or escape by the children from a structure that tortures and discourages them from attending the educational setting for a period of time.

There may be different perspectives on how to approach this predicament in educating children from Adivasi communities. The crucial question is how we can prioritize the contexts in engaging with this. The process of formal structures undeniably fails at the two poles: in school, it fails to accommodate the Adivasi children in many domains concerning the delivery of knowledge and acceptance of the children. Simultaneously, on the other hand, the Adivasi children cannot identify with or and relate to the school practices and environment since it denies them their autonomous and active forms of participation. Thus, it would be democratic if we looked into the realm of schooling with optimum concern for the experience of the student subjected to all these sorts of hegemonic operations. The need might be for a radical restructuring of the existing practices, incorporating people's concerns and choices through democratic investigations. Such attempts can create the conceptions of democratic practices in the form of the 'pedagogies of insubordination' (Giroux, 2009) that facilitate liberation and emancipation as per their needs and aspirations.

Concluding Remarks

The above discussion was aimed at looking at the importance of education for Adivasi children. Certainly, education is about the optimum necessities, but how does it take place in the classroom? In what forms are the subjectivities of Adivasi children being constructed within the prescribed agenda of marginalization? I would argue that a turn in interrogation is inevitable in the current context. A variety of research findings and experiments confirm that Adivasi children lag behind in educational attainment. How many Adivasi students are able to access the best of higher education and employment in reputable institutions and organizations? How many intellectuals come from the various Adivasi communities across the regions? There are

many further questions. These are not just issues related to an attitude of 'apathy' but also to the question of the 'political' behind the subjugation and discrimination.

It can be argued that in their forms of structures of discipline and norms of formalities, the spaces of schooling tend to deny genuine performances, the joy of freedom and the autonomous learning processes of these children. The task is to liberate those spaces from the imperatives, control and formalities, and transform them into spaces of active engagement and informal interactions. This project entails a dialectical vision of the schooling process and educational settings within the larger realm of civil society following the pedagogies of love and freedom. McLaren (2009) reminds us that schooling should not only be seen as a place of indoctrination or socialization; rather it must be understood as a space of heterogeneous cultural entities that facilitates students' empowerment and self-transformation. It must be understood as two aspects of power dynamics. The first is the school as a platform which works around the causes of social justice and empowerment and the other is a terrain for reproducing the dominant class interest of making the obedient subjectivities.

In this paper, I do not subscribe to an essentialist view of Adivasi cultures as divine and free of criticism nor do I suggest the dogmatic inclusion of indigenous knowledge systems in the curriculum is a panacea for the issues Adivasi children face in schooling. Rather, I attempt to make a position on the nature and relevance of cultures and its politics. The milieus of their everyday social formation point to a need to facilitate their learning strategies in formal education endeavours. The continuing terrains of exploitation and marginalization should be responded to in such a way that creates conditions for combatting these structures by enabling children to participate and develop autonomously as equal to all learners who are privileged by certain historical conditions. The transformative possibilities in educating Adivasi children must not be seen from an apathetic or pessimistic angle, but drawn on in such a way that education cultivates synergies to combat those terrains of 'epistemic violence[4]' occurring within the plural society of altered power equations.

[4] Epistemic violence, according to Spivak (1988, p. 298), refers to the fact that subaltern people cannot speak with their full potential until they can express their views, and nobody but they can express their true self. The life worlds of the subaltern cannot be translated into the language of sciences and, philosophy until these sites are controlled by the dominant epistemologies. She visualizes this hegemony as 'epistemic violence' over the subaltern (Spivak, 1988).

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