RESEARCH REPORT

FRAMEWORK FOR AN INCLUSIVE-ORIENTED PEDAGOGICAL ASSESSMENT

Co-funded by the
Erasmus+ Programme
of the European Union

RESEARCH REPORT

INCLUSIVE ASSESSMENT MAP

FRAMEWORK FOR AN INCLUSIVE-ORIENTED PEDAGOGICAL ASSESSMENT

Silveira-Maia, M., Sanches-Ferreira, M., Alves, S., Aguiar, T., Bjorck, E., Signhild, S., Maxwell, G., Neuenhausen, L., Schleihs, D., Proyer, M., Schuppener, S., Kleinlein, E., Augustine, L., Parg, Y., Thalhammer, J., Gitschthaler, M., Moehlen, L-K., Hellmann, H. Neto, C., Durães, H. & Jaeckl, C. (2023). Framework for an inclusive-oriented pedagogical assessment. Porto Polytechnic. https://doi.org/10.26537/recipp-23839

This project has been funded with support from the European Commission. This communication reflects the views only of the author(s), the Commission cannot be held responsible for any use which may be made of the information contained therein.

Co-funded by the Erasmus+ Programme of the European Union

Framework for an inclusive-oriented pedagogical assessment

DOI: https://doi.org/10.26537/recipp-23839

Project "I AM": Inclusive Assessment Map

Project's Reference: 621435-EPP-1-2020-1-AT- EPPKA3-IPI-SOC-IN

This Project has been funded with support from the European Commission. This report only reflects the views of the author(s). The Commission cannot be responsible for any use which may be made of the information herein contained.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

INTRODUCTION

The assessment of educational needs is a core concept and process when approaching the goal of an inclusive education. As meaning the promotion of quality education for each and every student, inclusive-oriented practices entail context flexibility recognizing the plurality of students (as preconized by the Universal design) PLUS individualization to respond to each student unique profile.

Along the last decades, the assessment of educational needs has been subject to very different approaches. One dominant approach was influenced by a biologic perspective of disability, which determined a focus of the assessment placed on discovering and listing students' deficits to explain experienced difficulties. The critical importance of enabling the school environment - that underlines the all idea of inclusion -, brought to the center the need of replacing a deficit-based assessment by a socio-ecological one that recognizes environmental factors as an important domain to explain students' performance. At the base of inclusive-oriented practices is an assessment guided by the question: how environmental' demands and supports fit each student characteristics and needs?

The focus on the adoption of a socio-ecological approach as meaning the emphasis on adjusting context to students' needs instead of concentrating the efforts on fixing the student, has been a consistent and reinforced guideline across different countries of Europe.

In that context, the ICF-CY has been receiving attention as a framework that can support the description of student--environment interactions. With a taxonomy – organized by alpha-numeric codes – that acknowledges body functions/structures (b codes), activities and participation (d codes) and environmental factors (e codes), the ICF-CY framework can support an interactive description of human functioning in different contexts of life, including educational situations.

Even though these consensual assumptions, the use of the ICF-CY in educational context to support social-ecological assessments is a challenging process that demands knowledge and interprofessional collaboration to evaluate what is important in the environment to explain and support students' learning and participation.

Based on the experience of different countries (e.g., Sanches-Ferreira et al., 2013) the use of the ICF-CY by itself – if disattached from its framework – does not mean a linear move from a biological to a socio-ecological approach. Its use to support a focus on educational situations – as interactions between the student and the environment - depends on the perspective, values, knowledge and tools that shape professionals' actions.

As stated on the project proposal, the use of the ICF-CY in that direction (to operate a socio-ecological view) needs to be supported and adapted to the specificities of the educational context. As stated in the Project proposal (p.46-47):

"(...) currently available materials to assess students' needs mainly focus on their disability or ability and do not consider the connection between students' enabling environments and its effects on their participation. This has resulted in a strong focus on the students and their families, while not sufficiently considering the learning environment as a facilitator or barrier for students' participation. Material that also focuses on environmental factors, like the 'Index for Inclusion' (Booth & Ainscow, 2016/2000) has not turned out as an appropriate solution for educational practice due to targeting school development or providing unspecific criteria only."

" (...) In its current form the ICF-CY is not appropriate for practical use in classrooms as it is overloaded with formal and technical items and codes. Teachers are not familiar with the language used in the ICF-CY which deviates significantly from the common jargon in schools. Furthermore, many teachers feel overwhelmed by the number of ICF-CY categories focusing on all spheres of life and not only education and training. It is not feasible to be applied to a practical setting in its current form. Therefore, the ICF-CY's potential to improve assessment practice has not been realized so far, which can be considered as a loss as it aims to enable a more inclusive society. "

" (...) In the current form of ICF-CY teachers would find within the chapter "Classification of Activities and Participation" the subchapter "Learning and Application of Knowledge" with the category "d170" that refers to writing. If teachers want to find guidance on how to facilitate participation for students with dyslexia, they have to turn over to the chapter "Products and Technologies" within the chapter on "Classification on environmental factors" (= 'e-categories'). This shows that both chapters and the specific categories within them have not been connected yet and stand alone. A view on the categories "e130" and "e5855" (see table below) furthermore shows that the provided suggestions how to support students are very abstract, technical and therefore not helpful for teachers."

This report concerns the Work Package 1 (WP1) of the Inclusive Assessment Map project – so-called I AM project.

I AM is an Erasmus+ funded project (Agreement No. 621435-EPP-1-2020-1-AT- EPPKA3-IPI-SOC-IN) that aims to develop – based on the ICF-CY – an innovative assessment tool ('Inclusive Assessment Map – I AM') that provides teachers with guidance on how to create school environments in order to be inclusive places. Partner countries are: Austria, Germany, Sweden, Norway, Belgium and Portugal.

Three specific purposes are formulated for the I AM project:

To strengthen pedagogical assessment. More concretely, the project aims to raise teachers' awareness about institutional factors that hinder students from participating adequately in learning and helps to overcome the individual-centred perspective, which locates problems in the child;

To make the ICF-CY applicable for teachers by developing the innovative 'Inclusive Assessment Map - I AM'. The I AM establish a new way of assessing students' needs: instead of simply diagnosing a child's deficiencies it aims to provide an understanding of what is needed to provide ideal individualized learning environments, by matching ICF-CY's 'd-categories' (participation) with 'e-categories' (environment);

To provide a standardized less deficiency-oriented language to key actors in education (teachers, headmasters, school authorities, parents as well as students). Since ICF-CY provides specific codes for both participation (e.g. reading = d166) as well as environment (e.g. personal assistance and care personnel = e340) it enables to describe the participation of students and factors in their learning environments (facilitators or barriers) in a standardized and thus more universal, transparent and comparable but – and this is of utmost importance – first and foremost in a pedagogical way on local, regional, national, and international levels.

According with the project' goals, the WP1 entails a first stage of good practices analysis of inclusive-oriented assessment and supports implementation within educational context. The good practices analysis aims to inform the development of the I AM assessment tool by identifying the common trends on inclusive education policies of the 4 involved countries, the international guidelines on inclusive assessment and supports implementation and by revising evidence-based supports linked with students' participation in educational context. That will drive the I AM tool to match ICF-CY's 'd-categories' (participation) with 'e-categories' (environment) with reference to the classroom context, conducting the teachers to identify needed adjustments to meet the inclusive needs of all students.

The present report launches, then, a first contribution on the innovative feature of the I AM tool, specifically of:

developing relationships between meaningful 'd-categories' for teachers, thus those regarding participation in school, with those environmental categories ('e-categories') that aim to overcome barriers in students' participation,

providing internationally proven state of the art solutions/ good practices regarding 'e-categories' to teachers to facilitate participation for all students according to the ICF-CY taxonomy.

The FIoPA – Framework for Inclusive-oriented Pedagogical Assessment – that is presented in this report is the main delivery of the Work Package 1 and represents a first step on deciding which principles and contents base the I AM tool.

FRAMEWORK FOR INCLUSIVE-ORIENTED PEDAGOGICAL ASSESSMENT (FIOPA)

The FIoPA constitutes a theoretical basis – built through a policies' analysis and a literature review followed by a mapping process on ICF-CY – of guiding contents and principles that define inclusive-oriented practices of assessment and supports implementation in education context.

The FIoPA is composed by two main parts:

Part I.

1.1. Good Practices Analysis

a) Overview of values and policies of each of the 6 partner countries (Austria, Germany, Sweden, Norway, Belgium and Portugal) in the context of inclusive education, with the intention of providing relevant information for piloting/implementing I AM in the specific partner countries considering their context of inclusive education.

b) Literature Review of studies focusing the planning and enactment of supports framed by a model of inclusive education.

1.2. Grid of Good Practices

The grid of good practices consists in a synthesis of key guidelines for an inclusive assessment and supports implementation. It portrays key literature, policies and frameworks/tools regarding the purpose, the targets, the methods, the contexts, and the professionals (i.e., the "why" and the "for what", the "what", the "how", the where and the who questions) involved in conducting assessment and intervention processes directed to enable school contexts according with students' profiles.

Part II. Matrix of pedagogical relations

The matrix entails a crosstab in which categories on Activity/Participation are listed in relation to environmental factors that supports students' participation. The matrix aims to identify solutions by linking major domains and categories of activities and participation and of environmental factors identified on the selected literature. This part of the report includes a methodological note, a summary of results and the presentation of two matrixes: Matrix 1.0 (derived from the literature review) and Matrix 2.0 (derived from reference national and international documents).

PART I.
GOOD PRACTICES ANALYSIS

As framed by WHO (2017), **good practices** are defined as "a technique or method that through experience and research, has proven reliably to lead to the desired result" (p.6) Within the scope of the I AM project the appliance of this definition of good practices relates to techniques, methods and/or approaches (of educational assessment and supports implementation) leading to results defined in terms of achieving an inclusive educational environment.

The adopted definition of an **inclusive education environment** – according with this project's scope of intervention – is when students with additional support needs "are present, participate, learn and receive instruction in general education context with the same chronological age peers for all or part of a school day" (Amor, 2018, p.1281). Accordingly, the **inclusive education assessment** processes refer to methods that – framed by a socio-ecological view – address mismatches between student competencies and the demands of inclusive environments; and **inclusive support measures** are understood as any "strategies, materials, or actions that are delivered with the intent of improving access to and progress in general education context" (Hagiwara et al., 2019, p.5).

To identify the core principles and contents to be integrated on I AM tool, a systematization of **good practices for inclusive education assessment and inclusive support measures were derived from three lenses of analysis**:

a) **at values and policies level** – with the analysis of core documents that contextualize legislation on special education and inclusive education of each partner country, including the analysis of assessment and support frameworks and tools commonly used by each partner country;
b) **at literature level** – with the analysis of international perspectives and trends on inclusive education assessment and support methods

The information from both lenses was synthesized around **5 main questions**:

Why and for what ? – main purposes/reasons underlying the conduction and implementation of the assessment and support methods (i.e., reasons for conducting the assessment and what will be informing for – eligibility/educational planning/funding...);

What ? – targets of assessment and support;

How ? – methods used for the assessment and for supports' implementation (i.e., what kind of assessment and support methods, frameworks and/or tools guide the involved professionals);

Where ? – contexts in which that assessment and the supports implementation are conducted;

Who ? – professionals and persons involved in the assessment and supports implementation.

A) OVERVIEW OF VALUES AND POLICIES

Regulations

The reports of reference agencies were considered to contextualize each partner-country's regulations and trends defining inclusive education assessment and inclusive support measures. Information on each country was summarized in table 1, based on key reports provided by EASNIE, specifically the:

- Individual country "Organization of the system for inclusive education", considering the entries on: assessment within inclusive education contexts; and systems of support and specialist provision (https://www.european-agency.org/country-information).
- individual country reports on RAISING THE ACHIEVEMENT OF ALL LEARNERS IN INLSUIVE EDUCATION (https://www.european-agency.org/projects/raising-achievement-all-learners-inclusive-education/country-reports).

Table 1. Systems of inclusive education assessment and supports of the partner countries.

Country	Inclusive education assessment and inclusive support measures				
	Why and for what	What	How	Where	Who
Austria (A)	-To identify the needs of the pupils and determine the specific supports to be put in place -To help schools in the implementation of adapted pedagogy and drive inclusive pedagogies in ordinary schools	- Learners are understood as having special educational needs (SEN) when, as a consequence of physical or mental disabilities, they cannot follow teaching in a mainstream class at compulsory school without additional support measures. - SEN must be in a causal connection with an identified physical or mental disability. - Some SEN use mainstream curricula, some use adapted ones - Academic, behavioural, social and emotional aspects of the learner, as well as environmental factors - To identify accommodations and adaptations according to the students' performance level to access the curriculum - To identify the schools needs	- Before a learner can claim SEN, an application has to be submitted. This can be done before school entry (if there is a serious disability), but is usually done later, if it becomes apparent during schooling that the learner cannot follow lessons due to a disability. In order to apply for a SEN students generally must first fail a class. - Due to child development, the measures introduced (e.g. IKM – individuelle Kompetenzmessung, Salzburger Lesescreening) are checked at more or less regular intervals. In order to cancel or extend the SEN measures. - Inclusive schooling includes pedagogical measures such as co-operative working forms (team teaching), inner differentiation/ individualisation (consideration of specific needs), learner-centred work, open forms of learning, project-oriented and interdisciplinary learning. Generally, the classes have an additional full- or part-time teacher	- There is a two-track system in Austria. Learners officially labelled as having special educational needs attend either special schools or inclusive settings in mainstream schools. Parents have the right to choose the kind of schooling they prefer for their child. Inclusive schools are often (seen as) less good equipped than specialist schools. - When parents choose mainstream education for their children, the local authority has to make any necessary provisions to facilitate special education in mainstream schools.	- The Education Directorates carry out the assessment procedure. The application can come from the parents or legal guardians or from official sides. - professionals involved depend on the federal state and the case. Often there is a multidisciplinary team which involves education directorates, teachers, special educators, legal guardians and psychologists.
Sweden (S)	The Swedish education Act (2010:800) chapter 1 4§ education within the school system aims to ensure children and students acquire and develop skills and values. .....the training shall take account of children's and pupils different needs. Children and pupils should be given support and incentives so that they develop as far as possible. One aim will be to outweigh the differences in the children's and students' conditions to benefit from the program. Chapter 3 3§ all children and pupils shall be given all the support they need to learn and develop in perspective to their personal capacity, and also be given the opportunity to develop as far as possible according to the goal for education. All learners should be given support and encouragement to develop as far as possible. Additional adjustments should be given when there is a need Chapter 3 of the discrimination act identifies that disability is one of the types of discriminations that active measures need to be taken against. One is lack of accessibility (in this instance to education on equal terms)	Specialist provision in order to correspond to the national curricula, emphasizing individual learning needs. Staff are required to report to head if it can be anticipated that a learner will not achieve the minimum proficiency requirement IF learner has additional needs, these needs should be investigated- if investigation shows that learner needs special support, action-plan are developed. Schools have a learner welfare team- working primarily preventive and with health promotion Other difficulties that over time could lead to pupil not meeting the proficiency goals in curricula need to be supported. Such as psychosocial problems, mental problems, difficulties in social relations, absence and so forth.	Action plan of provision has to be drawn up. This plan is usually drawn up by the teacher in co-operation with family and special education teacher or special support teachers. This plan is regulated by skollagen (2010:800 9§) Teachers are consulted by a specialist teacher Teachers are supported by a resource centre at local level Learners receive teaching material adapted for their needs A Specialist teacher or assistant helps the teacher or works with the pupil. Learner leaves the larger group for limited periods of time to work with a specialist teacher A classroom assistant works with the SEND in or out of classroom Resource centres locally are supported by advisors at the national agency for special needs education and schools	In mainstream classrooms, sometimes in special settings, such as individual tutorials or special classes Special schools, 3 national and 5 regional state-run special schools: visually impaired combined with add. Disability, deafness or hearing impairment combined with learning disabilities or severe speech and language disorders. In Swedish compulsory school there are special programs for learners with severe learning disabilities: special needs compulsory school (Särskola) these programs are closely linked or included in mainstream compulsory school	The head of school is responsible for action plan School health services work with health promotion school doctors, school nurses, counsellors, special education teachers Resource centres locally are supported by advisors at the national agency for special needs education and schools. Teachers report children not meeting minimum requirement and create action plan.

Country	Inclusive education assessment and inclusive support measures				
	Why and for what	What	How	Where	Who
Portugal (P)	- To identify educational measures - framed in the multilevel system - appropriate to meets students' support needs; focus on the resource mobilization rather than on students' categories There is no special education legislation, but a law that responds to the diversity of needs and capabilities of each and every student (Decree-Law nº.54/2018).	- Academic, behavioral, social and emotional aspects of the learner, as well as environmental factors (namely the school and the classroom) - To identify accommodations and adaptations according to the students' performance level to access the curriculum - Assessment focused on learning and curriculum-based	Educational measures are based on universal design for learning and a multi-level approach to access the curriculum. This approach includes: (i) flexible curricular models; (ii) systematic monitoring of the effectiveness of the continuum of implemented interventions; (iii) dialogue between teachers and parents or caregivers; (iv) a choice of measures to support learning, organized at different levels of intervention. The measures are organized into three intervention levels: universal, selective and additional. - The "For an Inclusive Education - Manual to Support Practices" (DGE, 2018) includes a set of materials and assessment grids to guide the multidisciplinary team in the assessment and intervention process.	- The majority of students attend regular education, and only about 1% of students attend special schools (situations of complex needs and grounded on request from the respective parent) - Support measures are implemented with the material and human resources available in the school, privileging the context of the classroom. - For students whose additional measures includes significant adaptations on the curriculum, the learning support center guarantees a response that complements the work carried out in the classroom.	- Each cluster of school have a multidisciplinary team to support inclusive education, consisting of permanent members (one teacher who assists the school director; a special education teacher; three members of the pedagogical council with functions of pedagogical co-ordination in the different levels of education and teaching; a psychologist) and of variable members (depending on students' needs, including, if necessary, support technicians as occupational and speech therapists). - The multidisciplinary team prepares a technical-pedagogical report for the learner, where the selective or additional measures for learning and inclusion are reported; prepares individual educational programs and individual transition plans; monitors the Learning Support Centers)
Norway (N)	The Norwegian Educational Act: Inclusive education and adapted education (Norwegian Education Act, 1998, 2015) constitute the key strategies in Norwegian education to obtain full participation in school for all students. The regular school as a community must be inclusive. Students with special educational needs must take part in the social, academic and cultural community on an equal basis. It requires that all students basically get the education in their local school and belong to a class and student community (Ministry of Education 1996a, p. 58) Adapted education is described as a strategy to meet the students' diversity in an inclusive classroom. If students cannot benefit from the "regular adapted" education, they can be provided for SEN.	The legislation for IE and SEN is relatively clear, and the resources are good. There are individual (National and local) assessments for students applying for SEN, but no tools to assess the "needs" to reach inclusive education, e.g. what is necessary teacher competence, universal design, academic and social learning adaptions, etc.	Strategies are described in education legislation and the national curriculum provides directions and regulations to schools and teachers on interpreting the strategies and bringing them into practice. The education legislation contains sections for all students, but also sections specifically for students receiving special education. "STATPED"/ The Government Educational Support system, in addition to pedagogical phycological services (municipalities) assess and supervise schools to reach good quality of SEN and inclusive education. The supervision is applied for on individual student basis. A student receiving SEN get an individual education plan (IOP) every 3rd year, discussed end written in collaboration between teachers and parents. Yearly plans are made and evaluated based on the IOP. Academic and social aims and methods.	About 8% of the students receive SEN. Approx. 50% of these students have primarily their SEN organised within the regular class. In 1994 special schools were closed down, but the last 15 years more and more "special groups" and special schools are established, much because the regular schools do not change and adapt to become inclusive in practice.	Each school, usually the spes.ed.leader, decides how to organise the SEN – within the regular class or in self-contained classrooms, small groups or individual lessons. Lessons organised in the reg.class (for students with severe disability) are served with a para-professional or a spec.ed.teacher, in addition to the class-/general teacher.

Country	Inclusive education assessment and inclusive support measures				
	Why and for what	What	How	Where	Who
Germany (G)	- In Schools every pupil's performance is assessed in order to encourage each individual pupil to achieve all that they are capable of. - Logic of SEN: Identify individual educational needs in relation to tasks, requirements and support measures the school can provide. Individual needs are framed as 'special' in relation to practices of the current environment.	- Assessment is based on syllabus requirements and the knowledge, abilities and skills acquired in a particular class. Individual development, performance, working and social behaviour is monitored for pupils with and without SEN. - Some SEN use mainstream curricula, some use adapted ones - The diagnosis of SEN must be a precise definition of 'individual special needs': -- There are 9 different SEN with different terminology in different Länder: 'sight'; 'learning'; 'emotional and social development'; 'speech'; 'mental development'; 'hearing'; 'physical and motor development'; 'instruction for sick pupils'; and an additional one: 'autistic behaviour'. -- KMK 1994 states 8 Key elements for assessment: motor, perception, cognition, motivation, communication, interaction, emotion and creativity. -- The Content of the Diagnosis focuses on functioning as well as coping strategies	- Each pupil's performance or development is set out in a twice-yearly report, in the middle and at the end of the school year. - The SEN is based on multidisciplinary reports and a 'pupil and environment analysis' (Kind-Umfeld-Analyse), which processes Information about 1) learning and behavioural strategies, 2) Perception, 3) Social relationships, 4) Communication and interaction, 5) Individual and educational circumstances in life, 6) The school environment and possibilities for change, 7) The vocational environment and the necessary supporting factors. -- Addition: In each Land there are regulations on how exactly the information is collected. Normally there are manuals for the individual diagnosis-teacher. The individual diagnosis-teacher collects anamnestic data, interviews teachers, pupils and parents/guardians, conducts (psychological) tests and sends a suggestion to the local school authority which then decides whether a SEN is diagnosed or not.	- Pupils with SEN can attend mainstream or special schools. There is a large variety of cooperation between the two forms. Parents can object to a placement decision. In Principle it is always possible for pupils to return to mainstream schools. - in 2019/20 7,6% of all students had SEN, 4,2% of students attended special schools. (these numbers exclude the 11921 students who are listed for "Schule für Kranke")	- Assessment is carried out by the teacher in charge of lessons, who is educationally responsible for their decision - Parents can apply for assessment of SEN. If an institution makes an application, the parents must be informed and consulted. Parents can object to a placement decision. The school supervisory authorities are responsible for the procedure: either the authorities themselves have competence for SEN and sufficient experience, or they consult experts in the field of special educational support (special education schools).
Belgium (B)	-To identify the needs of the pupils and determine the best place for support and the specific supports to be put in place -To help schools in the implementation of adapted pedagogy and drive inclusive pedagogies in ordinary schools	-Academic, behavioural, social and emotional aspects of the learner, as well as environmental factors (at home, in the school and the classroom) -To identify accommodations and adaptations according to the pupils needs to access the curriculum -To identify the schools needs - ICF-based assessment -specific support plan with specific accommodation and adaptation for the pupils with special needs	The measures are organized into five intervention levels: **1.Right granted by decrees** -Compensation for disadvantages and grade protection -Didactic method and differentiation pedagogy **2.Low threshold support (ordinary and adaptive fundamental education)** *Target audience*: pupils with <u>any need</u> *Type of support:* – Hours granted to the organising authorities for support teachers in proportion to the number of pupils enrolled. Teachers are supported and supervised by the ZFP Competence Centre. **3.High threshold support (ordinary fundamental and secondary education)** *Target audience*: pupils with a <u>documented specific need</u> *Type of support:* – Integration project coordinated and supervised by the ZFP. 4.**Support on specific request (fundamental education, ordinary and specialised secondary education)** *Target audience*: pupils with <u>needs exceeding ordinary support</u> *Type of support*: Granting of staff in the framework of individual follow-up through a specific exemption from the Minister of Education 5.**Specialised school (fundamental and secondary education)** *Target audience*: pupils with a documented specific need whose educational needs are better met in specialised education.	-Fundamental and secondary education -Specialised school -For Pupils with <u>any need</u>	- All forms of support are either supervised, mentored or accompanied by specialised teaching. Specialised teaching maintains a key role in inclusive education and is intended to drive inclusive orientation in ordinary schools. We no longer work with the concept of types of disability, but with that of specific needs. -The Competence Centre supports and/or supervises these different measures - Support teachers -the director and a member of staff of the "ordinary" school - the principal and a member of staff of the specialised school - Kaleido (Psycho Medical Social Centre of the German-speaking community) assess and certify the child's specific need

From the summary above, a set of policy tendencies and principles can be outlined as sustaining the practices of inclusive education assessment and inclusive support measures across countries.

About the "why and what for" are serving the inclusive education assessment and support measures...

Across the countries the assessment processes of special education and inclusion systems are referred as being guided by the **purpose of portraying the students' needs and the required supports to be implemented in school** (A, S, P, G, B).

That needs analysis and supports identification relates to the aim of **providing conditions for the student to develop his/her full potential** ("acquire and develop skills and values", S; "to achieve all that they are capable of", G;), **to learn according to the educational goals** (e.g., "to identify accommodations and adaptations according to the students' performance level to access the curriculum", A, B, P; "to develop as far as possible according to the goal of education", S), as well as, of **creating conditions to take part take part and belong to school community** (e.g., "take part in the social, academic and cultural community on an equal basis(...) belong to a class and student community", N).

To base inclusive pedagogies is a main purpose underlying the assessment processes **in terms of informing the**: "implementation of adapted pedagogy and drive inclusive pedagogies" (A, B, N); development of action plans ("if investigation shows that learner needs special support, action-plan are developed ", S); enactment of support measures ("Measures to support learning and inclusion aim to adapt to the needs and potential of each pupil", P); and projection of the school' needs ("To identify the schools' needs", A, B). The assessment as basing the decision-making on placement is also referred in one of the countries ("determine the best place for support", B).

About the "what" – targets of assessment and support

Across the countries the focus of the assessment **converged to an individual support needs analysis** - commonly defined as additional adjustments required by the student in comparison to what is common or currently available (S, N, P, "individual needs are framed as special in relation to practices of the current environment", G). In that scope, **needs are identified in relation to educational tasks and requirements, and to the existing supports** ("Identify individual educational needs in relation to tasks, requirements and support measures the school can provide", G).

To find causal connections was an idea also emphasized as part of the assessment targets. Concretely, in some countries **the enactment of additional supports was explicitly related with disability circumstances** ("as a consequence of physical or mental disabilities ", A; "There are 9 different SEN with different terminology in different Länder: 'sight'; 'learning'; 'emotional and social development'; 'speech'; 'mental development'; (...) 'autistic behavior', G).

A factor explicitly and transversally mentioned as basing supports enactment was **the presence of difficulties on following the curricula or on learning** (e.g., "if learner not achieve the minimum proficiency requirement (...) not meeting the proficiency goals in curricula"", S; "other difficulties on meeting the curricula such as psychosocial problems, mental problems, difficult in social relations and so forth", S; "Identify individual educational needs in relation to tasks, requirements and support measures the school can provide", G; "if it becomes apparent during schooling that the learner cannot follow lessons", A).

Across the countries the assessment approach **is defined through a socio-ecological perspective** as **targeting the learner performance and the environmental factors** (e.g., "academic behavioral, social and emotional aspects of the learner, as well as environmental factors", A, B; "The SEN is based (...) a pupil and environment analysis", G: "The identification of the factors that facilitate and hinder the progress and development of a specific student's learning, namely school factors, contextual factors, and individual factors", P). The emphasis in students' performance is commonly stated in terms of **academic, behavioral and social and emotional areas** (P, "communication, interaction and emotion, motivation, creativity, (...) coping strategies", G).

An assessment covering general school environment on its potential/ competence to respond to the diversity – teachers'

competence, curricular flexibility.... –, is not commonly addressed as assessment target (*vd.* Norway resume). The approach to environment is commonly referred in relation to student individual performance.

About the "how" to assess and implement support measures

Learn and curricula-based assessment was an approach commonly referred on countries' information ("assessment focused on learning and curriculum-based", P; "assessment is based on syllabus requirements", G; "if it becomes apparent during schooling that the learner cannot follow lessons", A). In that context, and targeting a socio-ecological perspective, the ICF-based assessment was explicitly acknowledge in the policies and values information by one of the countries (" ICF-based assessment", B)

The idea of a **continuum of supports, including preventive responses**, is also documented in countries as S (with the establishment of welfare team), P and B (with the adoption of a multitier approach). On that scope the **mentioning to universal design for learning and to a multi-level approach to access the curriculum** is explicitly present in Portuguese education system. A Tiered model is also presented in the Belgium system with intervention methods being organized into 5 levels. That constellation of support that includes universal strategies (design to all students) and individualized ones (for special needs) is also referred in Norway system ("The education legislation contains sections for all students, but also sections specifically for students receiving special education").

Attached to the meaning of individualized needs, the **global screening and continuing monitoring** is a practice underlined on countries' information ("Individual development, performance, working and social behavior is monitored for pupils with and without SEN.", G; "the measures introduced are checked at more or less regular intervals, in order to cancel or extend SEN measures", A).

Support measures can entail accommodations to promote the access to the common curricula or the implementation of curricular adaptations (e.g., "Some SEN use mainstream curricula, some use adapted ones", A, G). Accordingly, one of the concepts defining support measures are the **differentiation and individualization according with students' needs** ("inner differentiation/individualization – considering students' specific needs", A).

Finding and **supporting other forms of involvement/ activities and participation performance** are an underlined requirement on implementing support measures ("leaner-centred work, open-forms of learning", A). **Additional and adapted material and human resources are called into the legislations** of the countries **in the form of adapted materials** ("learners receive teaching material adapted to their needs", S), and **extra-staff support into the classroom** ("team-teaching", A; " specialist teacher or assistant helps the teacher and works with the pupil", S)

About the "Where" to assess and implement supports

A two-track and multi-track approach[1] are defining the education system of some of the partner countries – in which special school/classroom or mainstream schools/ classrooms are the contexts for the education of the child with additional support needs ("learners officially labelled as having special educational needs attend either special schools or inclusive settings in mainstream schools ", A; "Pupils with SEN can attend mainstream or special schools.", G). In those cases, there are **clear statements on the relation/cooperation between the two options/forms of education** ("There is a large variety of cooperation between the two forms").

A one-track system seems to be shared between Portugal, Sweden, Norway – with the majority of the students attending to common contexts of education. **Adapted programs are closely linked or included in common settings within the school. The common classroom appears as a privileged context of education and supports' implementation** ("Support measures are implemented with the material and human resources available in the school, privileging the context of the classroom", P**). Time outside the classroom is conceived for specific and individual work** between a professional and the student, and **as being complementary to the classroom and used by a limited amount of time** ("Learner leaves the larger group for limited periods of time to work with a specialist teacher", S; "For students whose additional measures includes significant adaptations on the curriculum, the learning support

1 Multi-track approach has a multiplicity of approaches to inclusion. They offer a variety of services between the two systems (i.e. mainstream and special needs education systems) | Two-tack approach - there is a high share of specialized structures, with two rather distinct education systems for students with and without SEN | One-track approach - there are only a few specialized structures for students with SEN as mainstreaming is the most common practice (EASNEI, 2003).

center guarantees a response that complements the work carried out in the classroom.", P)

In both type of systems, the **parents are the key decision-makers on placement questions** ("Parents can object to a placement decision.", G; "students attend special schools (situations of complex needs and grounded on request from the respective parent)", P; "Parents have the right to choose the kind of schooling they prefer for their child", A).

About the "Who" – persons involved in the assessment and supports implementation

Processes of assessment are described as **involving multidisciplinary teams** ("Often there is a multidisciplinary team which involves education directorates, teachers, special educators, legal guardians and psychologists", A; "school director; a special education teacher(...) if necessary, support technicians as occupational and speech therapists", P; "The SEN is based on multidisciplinary reports", G). The existence of a health team is also reported in Swedish system with the involvement of "doctors, school nurses, counselors, special education teachers" for health promotion in school.

Directorates are involved in activating assessment processes which referral can be done by parents/guardians ("The Education Directorates carry out the assessment procedure. The application can come from the parents or legal guardians or from official sides", A; "Parents can apply for assessment of SEN", G). Besides the referral, there are systems that **explicitly included the head teacher as responsible for the educational/action plan** ("head of school is responsible for action plan", S; P). The **teachers are a key element on the process** either on reporting children' difficulties either on developing the supports' plan ("Teachers report children not meeting minimum requirement, and create action plan", S).

Specialized teachers are reported also as key-elements of multidisciplinary teams across countries. That role is defined with specificity in Belgium system synthesis, attributing to the specialized teacher the role of supervising, mentoring and accompanying the implementation of the supports.

Persons involved often seems, also, to depend on the local resources and on the case ("professionals involved depend on the federal state and the case.", A; "and of variable members (depending on students' needs)", P)

Cooperative forms of work seems to be an underlying requirement for assessment and supports implementation across countries – focusing co-teaching situations (""team teaching (...) classes have an additional full or part time teacher", A; "Lessons organized in the regular class (for students with severe disability) are served with a para-professional or a special education teacher, in addition to the class-/general teacher", N) and joint decision-making and planning with the family (" This plan is usually drawn up by the teacher in co-operation with family and special education teacher or special support teachers", S; "dialogue between teachers and parents or caregivers", P; "individual education plan (...) is discussed end written in collaboration between teachers and parents", N). Support provided to teachers by local resource centers, seems evident in the systems of different partner countries ("Teachers are supported by a resource center at local level", S; "Inclusive resource Centers", P; "Kaleido (Psycho Medical Social Centre of the German-speaking community) assess and certify the child's specific need", B). Connection with national and municipality agencies of the teams or the external resources to is also present on some countries systems ("Resource centers locally are supported by advisors at the national agency for special needs education and schools", S; "The Government Educational Support system, in addition to pedagogical phycological services (municipalities) assess and supervise schools to reach good quality of SEN and inclusive education", N).

Frameworks and tools

A sample of documents guiding and/or used on the processes of assessment and supports' implementation were shared by the partner countries. In addition to the policies analysis, the goal was to inform on orientations for the field of practices to conduct inclusive education assessment and supports implementation. Three of the partner countries (A, S and P) reported on the existence of such common documents – including tools, guides, sheets and assessment measures – that are part of government recommendations and/or of common use by educational professionals. On **table 2**, there is a summary of the guiding documents shared between those countries.

The examined documents entailed different levels of guidance on the bridging between policies / legislation and the field of practices. That included formal procedures between referral, eligibility and special needs status (including legal orientations for cases of need of classes' absence) (A), forms to outline the action plan for students with additional support needs (S and P), and reflection and/or self-assessment tools focusing the quality of education and the environmental adjustments in need to be mobilized (P).

Environmental adjustments are approached at different levels in the provided documents. In the National Action Plan on Disability (NAP) from Austria, measures at the school level included varied actions since **teachers' capacitation for using inclusive teaching methods** (e.g., including in-service training programs on diagnostic procedures to determine special education needs) towards the **creation and use of barrier--free teaching materials including easily understandable materials and the use of accessible language** (spoken and written). Furthermore, the guidelines refer generally to the design of learning environments that enable students to learn and acquire autonomy according with their individual skills and strengths.

Swedish information provided a form regulated by law, respecting to the "Action-Plan decision for students who needs special support". On that form the emphasis is placed **on the description of supports in need, considering activities developed within different learning environments**, which results from a pedagogical assessment and **that will base decision-making on support measures**.

A similar form for the description of an action-plan is also provided by the general board of education (from the Ministry of Education) in Portugal trough a manual guiding the implementation of Inclusive Education legislation. That form includes parts of information related with **potentialities, expectations and needs from student and families' perspectives; the description of factors influencing the student' progress and development, specifically facilitators and barriers of the school and family contexts along with individual factors.** That branches of information are used to base de decision-making about the support measures,

Table 2. Documents guiding and/or used on the processes of assessment and supports' implementation by government recommendation and/or of common use by educational professionals.

Country	Tools and assessment measures	Brief Description
Austria	Rundschreiben SPF 2019 NAP English NAP Evaluation Schulunterrichtsgesetz (SchUG) - JUSLINE Österreich Schulorganisationsgesetz (SchOG) - JUSLINE Österreich	This report informs about the updated Guidelines for the organization and implementation of special educational support for all federal states of Austria. It contains information about 1) The redesign of SEN decision procedures which take place in the Education Directorates; 2) The definition of SEN; 3) The distinction between learning problems and learning disability; 4) SEN and curriculum; 5) The rights for special educational support; 6) Cancellation of the SEN status The NATIONAL ACTION PLAN ON DISABILITY 2012 – 2020 is a detailed description of the "Strategy of the Austrian Federal Government for the implementation of the UN Disability Rights Convention" The evaluation of the NATIONAL ACTION PLAN ON DISABILITY 2012-2020 is a very distinctive analysis of the implementation of the NAP. It is based on document analysis and expert interviews and not only summarizes the results but also provides recommendations and suggestions for the following NAP 2022-2030. School Teaching Law School Organization Law
Sweden	Action plan of provision	This document is regulated by law and is needed to be formulated. Support focusing on education in general and not only specifically on the subject where goals are not met. 1) the need of special support that the student has. 2) what support that are suggested relevant. Focused and documented related both to need and to the demands of proficiency in curricula. (https://www.skolverket.se/download/18.5a061df817791f8257b1630/1616503324210/Beslut_om_atgardsprogram_for_elev_som_behover_sarskilt_stod.docx)
Portugal	Manual to support the Inclusive Education practices, from the General Board of Education of the Ministry of Education (2018)	This is a manual that provides general sheets/forms guiding data collection and school reflection on the process of supports implementation, since the referral to the assessment and decision-making. https://www.dge.mec.pt/sites/default/files/EEspecial/manual_de_apoio_a_pratica.pdf

including the discrimination of specific human, organizational and community resources. There is also a part of the form to define how to evaluate the efficacy of the support measures and to define the strategies to be used in order to involve the parents and the students in the process of decision-making,

1. For reflection and information gathering for the assessment, that manual proposes different tools and checklists, namely:
2. **on parents' engagement** (with a checklist for reflection on school practices – e.g., creating diversified opportunities for parents to discuss the progresses and concerns about his/her son/daughter; opportunities to participate on school decision-making...);
3. **on teams' collaborative work** (with reflective questions as if there is organized time together for joint discussion and analysis, if the goals are defined clearly and with evaluation indicators; if the students are heard during the supports decision-making...);
4. **on school culture, policies and practices for inclusion** with a summarized checklist of the inclusive index from Ainscow and Booth (2002);
5. **on students' potentialities, expectations, and needs** with a Portfolio of questions on students' perspectives (e.g., routines, preferences on activities, easiest and more difficult tasks, what makes the activity easier to be done; what to change on what surrounds you)
6. **on pedagogical contents for approaching diversity including gender, multiculturality, disability, socio-economic status and families.**

Environmental adjustments are approached on different tools, including:

1. **a list of accommodations – to check and monitor environmental supports implementation.** (examples of items includes: (i) Location in the classroom; (ii) contents presentation (e.g., segmentation, visual cues, time management); (iii) tasks and work-sheets (e.g., demonstration, examples, multisensory approach); (iv) assessment (e.g., providing extra time, allowing the execution in other format, allowing test transcription); (v) organizational skills (e.g., management of breaks); and (vi) behavior (e.g., self-determination strategies, rules establishment).
2. **Self-assessment scale about DUA implementation** (primary source from http://www.montgomeryschoolsmd.org/uploadedFiles/departments/hiattech/udl/UDL_self_reflection%20tool.pdf) – To analyze in which degree the lessons planning has being prompting multiple ways of representation, expression and involvement. Examples of items include: (i) Accessibility to materials/documentation; (ii) enabling choice-making to students (e.g., on the way to respond, on the materials used, activities to do...); (iii) small and large group working in terms of routines and activities promoted; (iv) promotion of self-knowledge; and (v) availability of scaffolds to respond to the questions.
3. **Factors affecting the progress and development of the student** – a grid of factors facilitating and hindering student's progress. It includes: (i) factors of the school (physical environment; reinforcement and feedback; classroom management; school organization; teaching and learning process); (ii) home and family (e.g., family beliefs on education; cultural background...); and (iii) individual factors (communication skills, learning styles, socio-emotional development, student's perceptions

B) LITERATURE REVIEW – INTERNATIONAL PERSPECTIVES AND TRENDS ON INCLUSIVE EDUCATION ASSESSMENT AND SUPPORT METHODS

Many reviews describing processes of assessment and intervention within the context of an inclusive-oriented education have been conducted. Based on the purpose of identifying good practices on inclusive assessment and intervention, as well, as in a second place, to map educational situations – focused on students' and environment interactions –, an overview of reviews was conducted.

Methodological Note

Materials and Methods

A meta-review was developed over **systematic and descriptive reviews that examine/describe practices on inclusive education assessment and support measures for students with additional support needs from elementary to secondary levels of education.**

Search Strategy

The search was performed between May and June of 2021 in multiple databases that index literature from the fields of health, psychology, and education: Via EBSCO: Academic Search Ultimate, ERIC, Medline Complete, Education Source, ERIC and Teacher Reference Center; Web of Science; Taylor and Francis; and Pro-Quest Education Database. A wide range of terms for "Inclusive Education" was combined with terms for "assessment and intervention" (**Table 3**). That terms were combined also with the terms "systematic review" and "descriptive review". The search was restricted to peer reviewed journals and academic journals.

Selection Criteria

The concept under search and analysis entails assessment and intervention processes implemented within the context of inclusive-oriented schools – from elementary to secondary education - for children and youth experiencing participation restrictions and/ or difficulties engaging in school and classroom activities. Therefore, the reviews were selected by focusing assessment and support methods, framed by inclusive education principles – targeting the engagement and progress of the student in terms of curricular and of activity and participation domains (e.g., learning, tasks management, interacting...) through practices consistent with a socio-ecological approach.

Selected systematic and descriptive reviews followed the criteria of focusing studies framed into an inclusive-oriented education, describing or examining programs/ approaches and environmental strategies to promote students' participation in elementary and secondary regular education settings. Exclusion criteria were: (i) not being published in peer-reviewed journals; (ii) not focusing the practices of assessment and intervention (reviews describing attitudes, understandings about inclusion and or concepts exploitations and/or analyzing the scope of research topics were excluded); (iii) not clearly related with inclusive-oriented practices (e.g., studies performed in special schools or only considering self--contained scenarios without contact with common contexts and with regular class-peers); (iv) not focusing elementary and secondary levels of education (higher education; early childhood education); (vii) studies which interventions are not documented within school context.

There were reviews covering a diverse spectrum of levels of education – since elementary to higher education (e.g., Capp, 2017). On that cases the systematic or descriptive review were included in this overview, focusing the synthesis in the analysis of outcomes and strategies that were linked with elementary or secondary education. There was also a review that included other contexts of intervention besides school, namely the home environment (e.g., Aldabas, 2020). Again,

Table 3. Study search terminology.

Context: Inclusive Education	***Concept: Assessment and Intervention***
Inclusive school system	Support needs assessment
Inclusive pedagogy	Environmental barriers/facilitators
Inclusive school	Classroom Strategies
Inclusive Classroom	Classroom interventions
	Support measures
	Accommodations/Modifications

the outcomes and strategies were synthetized focusing the reported results relative to school environments.

Figure 1 gives an overview of the selection process. This resulted in a final database of 19 reviews which were read thoroughly.

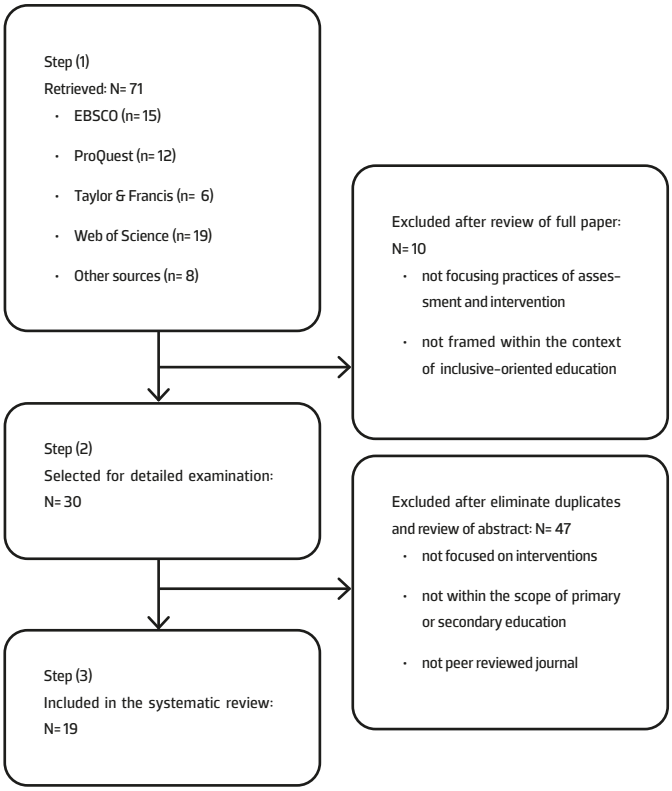


Figure 1. Flow-diagram of the process of this review

An overview of the details of these studies (author(s); publication year; topics investigated; number of articles included; target group; context of assessment and intervention; type of designs included; and time frame of the systematic search) is presented in **Table 4**.

Table 4. Overview of selected reviews (n= 19)

Review number	Author(s)	Year	Number of articles included	Target group	Context of assessment and intervention	Type of studies included	Time frame systematic search
1	Reichrath, Witte & Winkens	2009	20	Students with disabilities (e.g., communication; hearing, learning, severe intellectual/ physical)	General education context, including primary education; secondary education; post-secondary education.	Intervention studies (designs no specified)	2002- 2007
2	Leeuw, Boer & Minnaert	2020	7	Students with social-emotional problems or behavioural difficulties experience challenges with their social participation	regular primary schools classroom-based interventions	Intervention studies (designs no specified)	1994 - 2019
3	Hagiwara et al	2019	98	students with disabilities (e.g., learning disabilities, autism, health impairments, emotional disturbance)	Inclusive K-12 settings	Intervention studies (mostly Single-case design)	2002 - 2016
4	Lindner & Schwab	2020	17	sample is broadly defined.	inclusive educational setting at the primary or secondary level	empirical research (quantitative, qualitative or mixed methods designs).	2007 - 2019
5	Kuntz & Carter	2019	40	students with intellectual disability	general education classes (middle or high school students)	intervention studies (studies used experimental group or single-case designs)	1994 -2017
6	Rademaker, Boer, Kupers & Minnaert	2020	55	students with disabilities (autism, intellectual disability, physical disability)	general education (primary education)	Intervention studies	1994 - 2018
7	Sanches-Ferreira et al	2021	27	Children with social, emotional, and behavioural difficulties	general classrooms (primary and elementary education)	Intervention studies, specifically experimental single-subject research design	2000 - 2017
8	Capp	2017	18	All learners	all educational levels from early childhood to university/ college were included.	empirical research, containing pre- and post-testing	2013 - 2016
9	Aldabas	2020	16	Children with autism spectrum disorder	School and home contexts	studies using a single-subject design	1970 - 2017
10	Watkins et al.	2015	14	Students with Autism	general education settings (all educational levels)	experimental research design (i.e., single case design or group comparison design)	2008 - 2014
11	Lory et al.	2020	15	Students with Developmental Disabilities (challenging behavior)	Inclusive school settings (3 – 22 years of age)	Intervention studies, specifically single-case experimental design	1995 - 2017
12	Morris et al.	2021	27	Students with Autism Spectrum Disorder	General educational settings (all educational levels)	Intervention studies	1994 - 2019
13	Okkinga et al.	2018	52	All learners (specially focused on reading comprehension)	General educational settings (from grade 3 to grade 12)	Intervention studies	2000 - 2015
14	Anderson et al.	2004	17	Students with learning disabilities	Middle and high school students (grades 6 to 12)	Empirical studies	1986 - 2002
15	Garrote et al.	2017	35	Students with special educational needs	Mainstream preschools and primary classrooms	Intervention studies (experimental, quasi-experimental or single-case experimental design)	1990 - 2016
16	Cordier et al.	2018	17	Students with Attention-Deficit Hyperactivity Disorder	General education (6 to 16 years of age)	Randomized controlled trials and controlled quasi-experimental studies	1990 - 2017
17	Gaastra et al.	2016	89	Students with attention-deficit/hyperactivity disorder	General education (grades 1 to 12)	Intervention studies in the classroom	1970 - 2013
18	Leifler et al.	2020	14	Students with autism spectrum	Mainstream school (5 to 19 years of age)	Randomized and non-randomized studies of interventions, mixed method studies	1990 - 2019
19	Sutton et al.	2018	22	Students with autism spectrum	Mainstream elementary schools	School-based interventions (that employed an experimental design)	1994 - 2016

Analysis

A thematic analysis was conducted over the selected studies by two researchers after a random distribution of papers per each one. Full papers were analyzed, according to the following thematic areas: (i) measured outcomes; (ii) assessment measures; and (iii) support responses (**annex 1**).

Results

The examined reviews considered interventions in general education context, including as search terms general education, mainstreaming, inclusive, practice, approach, intervention, teacher strategies, difficulties, educational achievement, access to curriculum (...). As defined in the review Kuntz and Carter (2019), **as interventions we considered "any instruction, support or environmental arrangements" (p.105) towards the improvement of education practices in response to students' and contextual' needs**. The majority of the studies addressed the needs of a particular group of students, specifically students with disabilities (Reichrath et al., 2009; Hagiwara et al., 2019; Rademaker et al., 2020), including reviews focusing school-based interventions over autism (Aldabas, 2020; Watkins et al., 2015, Morris et al., 2021; Leifler et al., 2020; Sutton et al., 2018), Attention Deficit and Hiperactivity Disorder (Cordier et al., 2018; Gaastra et al., 2016), social emotional problems and behavioral difficulties (Leeuw et al., 2020; Sanches-Ferreira et al., 2021) and intellectual and developmental disabilities (Kuntz & Carter, 2019; Lory et al., 2020; Anderson et al., 2004). Three reviews sought for interventions towards all learners within the educational setting (Okkinga et al., 2018; Capp et al., 2017; Lindner & Schwab, 2020). The reviews systematized results of a range of 7 to 98 intervention studies, covering a time frame of search between 1970-2019. A positive impact of the interventions on all or on part of the measured outcomes, was globally reported across the reviews.

Our overview focused critical outcomes and implemented support measures found on the selected reviews, informing the *what and how* questions on inclusive-oriented assessment and support measures. Attention was also devoted to other factors embodying good practices that were informed by the reviews, such as *who* were involved in the processes and *where* the assessment and intervention were conducted.

ABOUT *WHAT AND HOW* TO ASSESS AND IMPLEMENT SUPPORT MEASURES

The selected reviews underlined inclusive-oriented interventions which targets varied from academic-achievement to social-participation outcomes mostly measured at the student level (**table 5**).

Table 5. Critical outcomes reported on the examined reviews

	Academic oriented Outcomes	**Social Participation oriented Outcomes**
Student level outcomes	• Writing |d145, d170| • Reading |d140, d166| • Problem solving |d175| • Tasks involvement |d210, d220| • Following curricula |d820|	• Interacting with others |d7| • Building friendships/relationships |d720| • Communicating |d3| • Managing own behavior |d250| • Self-determination and self-advocacy
School/ community level outcomes	• Referrals to special education • Satisfaction of the professionals	• Peers Attitudes • School climate

1. ACADEMIC ORIENTED OUTCOMES

Reading |d140, d166|

There were two reviews focusing their analysis on outcomes and support measures focused on reading (Rechtrath et al., 2009; Okkinga et al., 2018). In both, the systematized interventions were targeting reading fluency and comprehension through supports implemented within the classroom.

The systematic review of Reichrath and colleagues (2009)–considering the enormous variety of types of interventions and outcomes - was focused on reading interventions to improve reading skills of students with disabilities in general education contexts. Based on 8 reading interventions with positive impact on **reading skills**, success factors were measured in terms of reading fluency, amount of correctly read words, decoding, phonological and comprehension skills, spelling outcomes, recalling. Alongside with student-centred outcomes, some of the success factors addressed in the studies included school-level outcomes such as: **satisfaction of the professionals, school climate and referrals to special education**. Interventions were mainly relative to primary and secondary education. Support responses included diverse approaches including: organizing the class in tutor–tutee pairs and work together rather than independently or in small groups work; and reading focused strategies as "(1) preview: brainstorm about a topic before reading; (2) click and clunk: identification of parts of a passage/words that are hard to understand; (3) get the gist: identification of the most important information in a passage; and (4) wrap up: asking and answering questions that demonstrate understanding" (Reichart et al., 2009, p.46). Other strategies included "paraphrasing: expressing main idea and details in their own words; self-questioning, that is developing questions concerning reading passages and reading to find answers; visual imagery, that is visualization of scenes in detail; and word identification, which is decoding unfamiliar words by using context clues and word analysis" (Reichart et al., 2009, p.46).

Also, the review of Okkinga and colleagues (2018) focused reading-strategy interventions in whole-classroom settings. Reported supports were very aligned with Reichrath review, including: (i) before reading - predicting about the text content; activating prior knowledge (mental search about what the reader already knows about the text); setting reading goals (what the reader wants to achieve by reading the text); (ii) during the reading - implementing strategies as questioning (to monitor understanding), paraphrasing (restating the meaning of a sentence), summarizing and inferencing (relating information with prior knowledge), underlining important information, using of graphic/visual organizers, using text structure, using of mental imagery and explicit monitoring strategies (clarifying word meanings, setting boundaries, error detection and fix-up strategies – rereading); (iii) after reading – recalling the main ideas for later use. Outcomes were measured mainly in terms of **reading comprehension and strategic ability** (i.e., the quality of application of reading strategies).

Following curricula and tasks engagement |d820; d210; d220|

Five reviews were mainly concerned with intervention studies focused mostly on the academic achievements (Hagiwara et al., 2009; Kunts and Carter, 2019; Capp, 2017; Anderson, 2004; Leifler et al., 2020). Academic content knowledge, as well as task engagement (following direction and completing tasks) were the main outcomes addressed.

In Hagiwara et al. (2019) review, the supports implemented to enhance learning and performance were documented regarding students with disabilities in inclusive settings. Most of the examined studies targeted **academic content knowledge and task engagement.** Hagiwara et al. (2019) organized support measures within three categories : (i) curricular adaptations ; (ii) instructional supports; (iii) participation supports. Some of the specific strategies that were mapped within that categories were peer-mediated embedded instruction trough students' engagement in small groups of learning (participation support) while providing students with opportunities to work on inquiry science lessons (instructional support). Other instructional supports included mnemonic strategies, constant time delay, simultaneous prompting, enhanced anchor instruction and disability awareness curriculum. Participation supports included strategies as: graphic/cognitive organizer, guided notes, behavior specific praise, task analysis, choice of consequence and picture response cards.

Kuntz and Carter (2019) review focused research-based interventions for students with intellectual disability in general education classes. Common intervention components found included: (i) **systematic instruction**, namely the use of task analytic instruction,

corrective feedback, simultaneous prompting and time--delay procedures to support **academic related skills (e.g.,**

science vocabulary, following directions); (ii) Peer support arrangements (involved peers in providing academic and/or social support directly) and peer-mediated communication interventions (using communication books as a tool for students to engage in conversations with their peers) were also underlined as important interventions to academic-achievement; and (iii) the teaching of self-management strategies for participation behavior of the students in terms of **following directions and completing the tasks** (Kuntz & Carter, 2019). Placement was also took as an intervention approach, moving students from special education to general education classes.

Capp (2017) review focused intervention studies – mediated by the universal design for learning (UDL) – to promote the **access and performance on curricular areas as science, literacy/language, social studies and transition for all students**. Using the three principles of UDL, the environmental arrangements were listed as: (i) multiple ways of representation - use of video games and alternative print-based texts, supplemental texts, repeated practice opportunities, digital-based instructional environment; (ii) multiple ways of action and expression – use of cognitive modelling, scaffolds, and mnemonics, the multimodal option of listening to the text they typed; (iii) multiple ways of engagement - creating inclusive environments and improving student engagement through social and emotional learning, inclusive instructional practices, and student autonomy.

Anderson review (2004) underlined evidence-base support measures that can be applied to various subject areas for secondary students' with learning disabilities. Interventions found were grouped into: (i) mnemonic instructions for helping the student to remember and retain information; (ii) graphic organizers to organize concepts into visual representations; (iii) guided notes – teachers prepared notes for future reference; (iv) class-wide peer tutoring (tutors are taught to increase their partner's on-task behaviors, and provide feedback and reinforcement during the acquisition and maintenance of the academic content being covered, and to determine their partner's mistakes and provide correct responses during academic engaged), (v) teacher questioning to link students' current knowledge with the new knowledge.

On approaching academic achievement and function of children with autism in mainstream schools, the review of Leifler and colleagues (2020) revealed as effective pedagogical strategies the use of prompting fading, praise and tokens during task acquisition, simultaneous prompting in small group arrangement. Also the reinforcement and cooperative learning groups with instructional strategies were reported on **promoting problem solving and enhanced on-task engagement (and tasks completation)**, as well as the use of assistive technology in the form of an

Android touch tablet with vocal output on completion of academic tasks (e.g. mathematics or history).

Although the emphasis on reading-interventions, Reichrath and colleagues review (2009) included interventions in general education which outcomes were also related with the task involvement.

Other outcomes mentioned in the reviews but with less emphasis and detail on the type/components and effects of the interventions, included **writing** (Reichrath, Witte & Winkens, 2009; Anderson et al., 2004) and **problem-solving** skills (Reichrath et al., 2009). Also the review of Capp et al. (2017) mentioned the **self-determination and the self-advocacy skills** as an outcome of the UDL appliance in transition programs.

2. SOCIAL PARTICIPATION-ORIENTED INTERVENTIONS

Social interactions and relationships |d7, d720, d3|

There were nine reviews reporting intervention studies mainly focused on social participation, in terms of promoting social interaction, building and maintaining relationships and communicating (Leewn et al., 2020; Rademaker et al., 2020; Leifler et al., 2020; Garrote et al., 2016; Aldabas et al., 2020; Watkins et al., 2015; Sutton et al., 2019; Cordier et al., 2018; Morris et al., 2021).

The systematic review of Leewn, Boer and Minnaert (2020) focused classroom-based interventions implemented by teachers to facilitate social participation of students with socio-emotional problems or behavioral difficulties (SEBD). Along with the measuring of **interactions with typically developing peers, other outcomes included social acceptance and students' social perception**. Intervention components reported by Leewn and colleagues (2020) included rules visible placed in the classroom, classroom buddy seating arrangements and clear structures regarding activities and prompts provided by the teacher, working in small groups and giving to the target student a leadership role (to change the reputation of that student).

Contact and information about students with disabilities were also underlined in the review of Rademaker et al (2020) as an intervention that promotes the attitudes of typically developing peers (cognitive, affective and behavioral attitudes) and the social participation of students with disabilities: **acceptance by classmates; contact interactions, friendships/relationships and social self-perception**. Contact included intervention components such as: cooperative tasks, games of social skills, social integration activities (e.g., Stay, play and Talk), circle of friends meetings, integrated and structured play groups, cooperative learning groups, buddy days, peer-tutoring, socio-dramatic activities. Information included: discussions about strengths and difficulties of the focused student, disability awareness sessions, storybooks and video to discuss the concept of disability, social skills training to initiate interactions, information on alternative systems of communication.

On Leifler et al. (2020) review on learning accommodations for children with autism in mainstream school, the training of peers to use strategies to engage children with ASD on the playground (i.e., peers were taught to identify children who were not involved in play and engage the children through role play, modelling or direct instruction), along with the use of social groups (held by trained paraprofessionals), lunch clubs and class-wide peer tutoring were reported as effective psychosocial environmental strategies. **Sense of belonging and social participation** were outcomes measured.

Cooperative learning and peer-tutoring in the academic context and group activities in social context (interest clubs, friendship activities, and structured play) was also highlighted in Garrote and colleagues review (2016) as an effective intervention for **social participation** of children with SEN in mainstream classrooms. That review showed that teaching interaction strategies to typically developing peers improved their social interaction of pupils with SEN (including children with autism, developmental and intellectual disabilities), namely by teaching to peers the initiation and maintenance of social interactions during episodes of free play (e.g., suggesting games, sharing or exchanging objects, initiating a conversation, making compliments or commenting on an ongoing game) were an effective approach. The review also revealed good results from involving paraprofessionals on receiving short training in how to facilitate social interactions between peers. Training involved techniques as modelling, triggering, and positive reinforcement to stimulate the initiation and maintenance of social interactions between peers.

Aldabas (2020) review also emphasized peer-mediated interventions to promote **social interactions** of children with autism, including **number of turn-taking interactions, initiation behaviors, rate of responses per initiations, initiation of requests for actions and requests for information, spontaneous requests to peers**. Peer-mediated intervention included peer training in using low technology augmentative communication; structured lunchtime clubs based on students' interests and joint activity schedule. Also, Watkins et al. (2015) conduced a review over intervention studies using peer-mediated interventions to increase social interaction skills of children with autism spectrum disorder. Outcomes were centered also in **initiation of interaction** (i.e., beginning or maintaining a conversation, beginning a joint activity or conversing during an ongoing joint activity) and **responses as including verbal or nonverbal behaviors produced by the student to answering an initiation made by a peer**, maintaining a joint activity with a peer, and demonstrating understanding of an initiation made by a peer. Elementary school age peers initiating interaction during games and activities at recess along with prompting and reinforcing strategies (with peers offering a verbal or gestural prompt in order to

elicit the participants' use of scripted social phrases, offering praise for each correctly used phrase, verbally prompting a participant to engage in a play activity and reinforcing interaction with participants by responding to participants' initiations in conversation and play). A proximity strategy was also documented ranging from placing participants and peers together at a shared cafeteria table during lunch periods to placing participants in social clubs with students sharing similar interests.

Devoted also to outcomes as **initiating and responding to peers of** students with autism in mainstream elementary schools, Sutton and colleagues (2019) highlighted child-specific intervention in terms of direct instruction, social skills training, priming, reinforcement, and prompting to teach social communication behaviors; and peer-mediated interventions as the use of cooperative learning groups. So-called ecological interventions included social clubs based on shared interests and the training of teaching assistants to stablish and facilitate these clubs.

Same nature of intervention components were revealed on Cordier and colleagues (2018) review about peer inclusion interventions for the **social skills' improvement** of students with Attention Deficit and Hiperactivity (ADHD). Peer proximity, peer modelling and role-plays (children were presented with social skills scenarios and were required to teach the other the correct and incorrect use) were the reported approaches. The involvement of parents and teachers was also documented in terms of promoting the generalization of intervention effects.

Completely centered on **peers' stigmatization** towards children with autism, the review of Morris and colleagues (2021) examined de-stigmatization interventions on school settings. To provide descriptive, explanatory and directive information on ASD, trough the use of vignettes, online contents, flyers and videos portraying a child with autism, were used. Discussion on strengths and challenges of a target child, as well as, prompting brainstorms around ways of supporting the child in the school environment are other support actions directed to the peers. **Attitudes shifts are reported as well as increased understanding and recognition of similarities**. In Hagiwara review (2019) besides studies devoted to enhance academic content knowledge, other studies investigated interventions to improve social outcomes, including **social skills and social interaction** with peers without disabilities. **Peer support** was also highlight on the review as an important element of support to increase **peer interaction skills.**

Finally, on the review of Kuntz and Carter (2019), the use of communication books were found as a peer-mediated communication intervention for students with intellectual disability to engage in **conversations with their peers**. Books consisted in conversation prompts and questions using words and pictures as cues for students' conversation during down-time in their classes.

Managing own behavior |d250|

Three reviews were devoted to systematize research-based evidences regarding behavior management (Sanches-Ferreira et al., 2021; Lory et al., 2020; Gaastra et al., 2016).

On the review of Sanches-Ferreira et al. (2021) the examined studies were focusing school **interventions over disruptive, challenging and problematic behaviors** - as negative verbal or physical interactions, not staying seated and off-task behaviors – on students with SEBD. Academic factors - as engagement, achievement - along with social skills - were secondary dependent variables that were considered in some of the studies. The majority of studies included function based interventions, using antecedent adjustments (e.g., public posting/reminding of classroom rules); provision of instruction in modelling of, or role-play of appropriate behaviours; setting behavioural goals with the students; self-monitoring; reduction in task duration, provision of opportunities to ask for or take breaks); consequent-based strategies (e.g., positive reinforcement and feedback on students' performance, such as praise for appropriate behaviours; rewards through a token system or opportunities to participate in preferred activities; corrective statements or prompts; extinction procedures, such as ignoring disruptive behaviours).

Also, Lory and colleagues review (2020), focusing students with developmental disabilities, identified evidence-based practices to address **challenging behaviors** in inclusive settings. Peers' involvement, the teaching and reinforcement of a replacement behavior (e.g., referring to written instructions, verbal praise or tokens when the replacement behavior is used), the use of visual prompts (e.g., monitoring the performance of appropriate behaviors on a visual schedule or checklist) and the incorporation of students' preference or interest (e.g., use of preferred activities of students with developmental delays and provided opportunities to select and engage with preferred activities as a prevention strategy) were reported strategies.

Again framed by function-based interventions, Gaastra and colleagues (2016) addressed classroom interventions applied by teachers in order to **decrease off-task and disruptive behaviors** in children with ADHD. Classroom types of intervention were divided into antecedent-based, consequence--based and self-regulation, but no information on particular environmental arrangements were described. Important to note that in this review the positive effects were larger in general education classrooms when compared with interventions implemented in other classroom settings (i.e., special education classrooms).

Environmental adjustments for differentiated and individualized approaches with no relation with specific outcomes

The study of Lindner and Schwab (2020) targets the teaching practices in inclusive classroom settings for all learners. Results were presented trough a grouping of strategies entailing differentiated instruction (i.e., accommodating the diversity of students) and individualized instruction (i.e., personalized to the experiences, aptitudes and interests of each student). Both - differentiation and individualization - were characterized by practices of **collaboration, co-teaching and collaborative educational organization of lessons.** On that scope the personnel support of students – one-on-one support and one to group support - was also highlighted as successful for a differentiated and individual support to students. Therefore the support of several professionals for one class was reported as well as discussed the ration of the number of supporting teachers to the number of pupils. The collaboration of multiple teachers or organized clusters of teams facilitate the creation of differentiated and individualized lessons. Other features defining a successful response to the different needs of all students in one class is **grouping as a method that "all students, regardless of their abilities, can support their classmates' learning processes" (p. 11)**. Academic performance, interests and/or individual competencies were common criteria to gather the students into diverse groups.

Modifications is also acknowledged on Lindner and Schwab review as defining differentiated and individualized practices namely on: **assessment** (e.g., additional time, ignoring specific types of mistakes, oral instead of written exams, a different learning environment such as a separate room, enlarged test pages, a variation of the length of tests, and the use of dictionaries or other support materials, use of peer- and self-assessment strategies rather than teacher grading systems); **content** in which the "simplification of content-related characteristics is at the forefront of content modification in inclusive settings" (p.12) with the goal of creating individualized achievable goals for the students; **extent** in which students gets "a certain amount of tasks, exercises and homework according to their competencies and abilities" (p.12); **instruction** meaning the adaptation of instruction and explanations as well as the preparation of content in the form of methodological diversity (e.g., talking more slowly and articulating more clearly to make it easier for target students to follow her instructions); **learning environment** including the use of adjoining classrooms with the goals of "silently working on tasks, possibility to interact with specific students, provision of individual support and adaptation to individual needs (nevertheless that kind of modification was critically questioned in the discussion section of the review); **material** including the use of assistive devices; **process** introducing choice-making opportunities; **product** – adaptation on the expected outcomes; **time frame** – provide more time, allow for breaks, not use timed assignments, remind students of the time requirements and passage of time; **individual motivation and feedback** - clarification of behavioural expectations and feedback on the behaviour of students.

Other good-practices highlighted across the reviews

Besides the critical outcomes covered on inclusive-oriented interventions and the research-based supports, across the reviews it was possible to identify relevant descriptions on assessment and intervention practices. An **intervention informed by data gathering was a requirement underlining the intervention-studies examined on the reviews** (Reichart et al., 2009). As discussed in the review of Leewn and colleagues (2020) based on Fuch et al. (2012) there is a **need to support data-driven decisions by the teachers. To provide measurements to assess students' responsiveness to the components of the intervention** are critical to the success of supports' implementation. Moreover, although much reviews were placing attention on differential impact of different supports or environmental adjustments, most of the reviews documented and evaluated the effects of **interventions combining different components or strategies** (Watkins et al., 2015; Sanches-Ferreira et al., 2021; Lory et al., 2020; Gaastra et al., 2016, Sutton et al., 2019).

A multi-perspective approach was also acknowledged in the reviews by **practices of assessment and counselling that included students, parents, teachers and other professionals**. The **involvement of different actors, besides teachers**, on implementing the support measures were documented in different reviews (Lory et al., 2020; Leewn, Boer & Minnaert, 2020; Lindner & Schwab, 2020; Sutton et al., 2019). In specific, the review of Leewn, Boer and Minnaert (2020) was reported that in some studies the **tasks of implementation were divided between teacher and other agents such as the educational psychologist, the research therapist, graduate students or a special education teacher or support assistant. Collaboration and teamwork** were highlighted as critical good practice for individualization and differentiation on the review of Lindner and Schwab (2020).

Hearing the student, as well as, **involving the parents** and taking their perception seriously were underlined as a relevant practice for the assessment (Reichart et al., 2009; Lindner & Schawb, 2020). On some of the reported interventions parents assumed an important role in implementing and extending the intervention beyond school scenario. Moreover, as recommended in the conclusion of Leewn and colleagues (2020) review **the perspectives and needs of the target students and families should be heard to create a needs-based intervention**. Within the reviews focusing peers' support for students' learning and social participation, it was also highlighted **the importance of collecting data related with peers' perceptions and experiences** (Hagiwara et al., 2019).

The interventions reported on the reviews were frequently **implying a training component directed to teachers and other paraprofessionals**. Indeed, **teachers' and paraprofessionals' capacitation** was an underlying requirement for the environmental arrangements and supports implementation (Sanches-Ferreira et al., 2021; Capp, 2017). In the same faction, in the interventions mediated by peers, an underlined requirement was the **peers' training** (Watkins et al., 2015; Aldabas, 2020). Considering **intervention integrity**, the need of checking the implementation of intervention components during the period of intervention was also emphasized (Sanches-Ferreira et al., 2021; Lory et al., 2020; Morris et al., 2021)

In some of the reviews (Leewn, Boer & Minnaert, 2020; Leifler et al., 2020) there is reported **interventions that goes beyond the classroom to include other school settings as the recess, cafeteria and resource room**. In the reviews of Lindner and Schwab (2020) as well as on the review of Kuntz and Carter (2019) the modification of learning environment in terms of placement was also identified as an intervention component underlying some of the reviewed studies.

The need of studies showing how the strategies and intervention components can be applied within curricular areas was emphasized by Kuntz and Carter (2019) review. Most of the intervention studies acknowledged academic skills and only few ones invested on academic-acquisition referred to a specific curricular area (e.g., acquiring vocabulary on sciences). The emphasis on academic, behavior and social skills immersed on the access to the curricula is a required progress to support todays' challenges of inclusive education.

C) GRID OF GOOD PRACTICES

The following grid presents the intersection of the main values and principles outlined from countries policies on special education and inclusion systems, with the directions of research-based interventions about critical outcomes and corresponding practices conceived within inclusive-oriented education contexts. The following principles and good practices may contextualize critical aims and means of use of the I AM tool, as well as the concepts and practices embedding its use.

Table 6. Grid of Good Practices

Dimensions of analysis	Values and Principles at national level	Research-based practices
Why and For What? *Main purposes underlying the inclusive education assessment and support measures*	- To portrait students' needs and the required supports - To identify the school' needs - To base inclusive pedagogies in terms of informing the design of action plans with the projection of supports in need to be enacted - To provide conditions for the student to develop his/her full potential, to learn according with the educational goals and to take part/ pertain to school community	- To promote individualized and differentiated instruction, in terms of being accommodated to the diversity of ALL students and personalized to the experiences, aptitudes and interests of EACH student. - To promote the access and performance on curricular areas.
What? *Targets of inclusive education assessment and support measures*	Target of assessment is commonly stated in terms of support needs. - Support needs are conceived as additional adjustments required by the student when compared to what is common or currently available >> *what supports are needed to add or intensity in the current context?* -Needs of additional supports are conditionally linked with the presence of difficulties on following the curricula and/or functional circumstances >> *there are difficulties on following the curricula or functional circumstances that should be addressed for a well-succeeded engagement?* **-** Support needs are identified in relation to educational activities/ tasks and requirements and to the existing supports >> *what supports are needed in the different educational activities and participation domains?* - Critical targets to assess support needs are defined in terms of learner performance and the environmental factors - academic, behavioral, and socio-emotional aspects of the learner - contextual factors that facilitate and hinder the progress and development of the student - Students and families' perspectives on potentialities, expectations and needs are central elements of assessment and supports planning - Support measures include the discrimination of specific human, organizational and community resources -Quality of the school environment (e.g., as teacher competencies, flexibility of curriculum and physical surroundings, cooperation, students agency…) is emerging as a critical target of assessment	- Interventions are defined as any instruction, support or environmental arrangements to improve educational practices in response to students and contextual' needs. - Common support targets are predominantly defined at students' level in terms of: a) academic performance: writing, reading, problem-solving, tasks involvement and following curricula b) social participation: interacting with others, building friendships and relationships, communicating, managing own behavior and self-determination and self-advocacy - Students' perspectives and needs are critical on informing intervention design -Supports arrangements are commonly conceived at: a) curricular and instructional level (e.g., use of prediction, questioning, graph organizers, guide notes, task analysis (…)) b) as well as participation level (e.g., use of cooperative tasks, group activities, buddy days, training peers to initiate and maintain social interactions, conversation prompts and questions (…)) - Supports outcomes also include indicators at school and community levels, namely peers' attitudes and school climate
How? *Ways to approach the assessment and supports implementation*	- Assessment are commonly guided by a learning-focused and curricula-based approach, acknowledging student and contextual factors according with learning and curricular demands/goals. - Supports implementation is organized into a continuum, since preventive and universal responses promoting the access to the curriculum and the school and students' welfare >> towards the implementation of individualized strategies and curricular adaptations - To support other forms of involvement and mobilize additional and adapted material and human resources, namely trough teachers' capacitation and the creation and use of barrier-free teaching materials are addressed as common lines of action - Global screening and continuing monitoring are considered critical to adjust supports to individual needs	- Multicomponent interventions are commonly addressed as most effective plans, using and combining diverse strategies and environmental adjustments - Principles of universal design of learning are often recognized as intervention branches targeting whole-classroom performance and participation - Grouping is defined as a common way to provide personalized support and as a method in which all students can support their classmates' learning processes - Peer mediated interventions are commonly used towards academic achievements as well as for reaching participation-oriented outcomes - Teachers, paraprofessionals and peers' capacitation are often the means for supports' implementation - Data-driven decision making and intervention planning well as reporting on participant responsiveness to the intervention components are main characters defining effective supports implementation - Considering the monitoring of intervention integrity – checking the implementation of intervention components and strategies - is other critical feature defining support and inclusion plans.

Where? *Contexts of assessment and the supports implementation*	- Common contexts of education, at school and classroom levels are privileged - Different settings (as resource rooms) for specific and individual work are used in strict relation with common contexts and for limited amounts of time - Parents are the key decision-makers about placement	- Support measures involve a spectrum of strategies applied to whole-classroom and/ or to a group or to individual' student predominantly within common contexts of education - Interventions go beyond the classroom to include other school setting as the recess, cafeteria and, when necessary, resource rooms.
Who? *Professionals and persons involved in the assessment and supports implementation*	- Collaborative work between a pluridisciplinary team, involving teachers, principals, parents, support professionals (psychologists, therapists) - Principal' involvement is privileged on mobilizing school community for implementing support measures, from the start with the enactment of the assessment process - Teachers occupy a central role either on reporting students' difficulties either on developing the support plan - Specialized teachers are of high importance on team, supervising, mentoring and following the supports' implementation - Teams are composed according with student specific circumstances and the local resources - Cooperative forms of work are privileged, including team teaching and joint decision-making. -Parents are part of the team being key-partners on the decision making and supports' planning.	- It is stressed as essential a multi-perspective approach, with practices of assessment that include the perspectives of students, parents, teachers and other professionals - To create a needs-based intervention it is crucial to hear the student and to involve the parents - Considering peers' perceptions and experiences in data collection it is also critical namely within interventions centred on mobilizing peers' support - Collaboration of multiple teachers or teams are commonly described for effective support - in dynamics such as team-teaching and collaborative educational organization of lessons

PART II. MATRIX OF PEDAGOGICAL RELATIONS

This part of the scientific report is focused on the mapping of d-e relations concerned inclusive education-oriented interventions implemented in elementary and secondary educational contexts.

Grounded in a previous overview of reviews which informed on good practices in inclusive education assessment and support measures (part 1 of the scientific report), in this study the purpose is to draw/ map the relations between students' performance (d codes) and environmental arrangements or supports (e codes) addressed in the intervention studies framed into inclusive-education oriented contexts.

From the meta-review, global associations were outlined between outcomes (predominantly defined at Activities and Participation domains) and the supports (Environmental factors enacted or modified at the classroom and at the school level) (**table 7**).

Table 7. Associations between the target d domains and environmental factors found in reviews related to inclusive education assessment and support measures.

Outcomes	Supports
Reading |d140, d166| Specific Outcomes: reading fluency, amount of correctly read words, decoding, phonological and comprehension skills, spelling outcomes, recalling, reading comprehension and strategic ability	*Methods for education |e130|* >>Prior activity: brainstorm about a topic before reading; predicting about the text content; activating prior knowledge; setting reading goals (what the reader wants to achieve by reading the text); >>During activity: identification of parts of a passage/ words that are hard to understand; identification of the most important information in a passage; paraphrasing (restating the meaning of a sentence), summarizing and inferencing (relating information with prior knowledge), underlining important information, using of graphic/visual organizers, using text structure, using of mental imagery and explicit monitoring strategies (clarifying word meanings, setting boundaries, error detection and fix-up strategies – rereading) >>Post activity: asking and answering questions that demonstrate understanding; recalling the main ideas for later use
Following curricula and tasks engagement |d820; d210; d220| Specific Outcomes: academic content knowledge and task engagement; following directions and completing the tasks academic related skills (e.g., science vocabulary, following directions); access and performance on curricular areas.	*Methods for education |e130|* >>Mnemonic strategies, constant time delay, simultaneous prompting, prompting fading, enhanced anchor instruction and disability awareness curriculum >>Graphic/cognitive organizer, guided notes, behavior specific praise, tokens, task analysis, choice of consequence and picture response cards use of task analytic instruction, corrective feedback, simultaneous prompting and time-delay procedures >>Reinforcement and cooperative learning groups teacher questioning to link students' current knowledge with the new knowledge >>Teaching of self-management strategies UDL – (i) multiple ways of representation - use of video games and alternative print-based texts, supplemental texts, repeated practice opportunities, digital-based instructional environment; (ii) multiple ways of action and expression – use of cognitive modelling, scaffolds, and mnemonics, the multimodal option of listening to the text they typed; (iii) multiple ways of engagement - creating inclusive environments and improving student engagement through social and emotional learning, inclusive instructional practices, and student autonomy *Peer Support |e325|* >>Peer-mediated embedded instruction trough students' engagement in small groups of learning >>Peer support arrangements (involved peers in providing academic and/or social support directly) and peer-mediated communication interventions (using communication books as a tool for students to engage in conversations with their peers) >>Class-wide peer tutoring (tutors are taught to increase their partner's on-task behaviors, and provide feedback and reinforcement during the acquisition and maintenance of the academic content being covered, and to determine their partner's mistakes and provide correct responses during academic engaged)

Social interactions and relationships |d7, d720, d3| interactions with typically developing peers, other outcomes included social acceptance and students' social perception Sense of belonging and social participation number of turn-taking interactions, initiation behaviors, rate of responses per initiations, initiation of requests for actions and requests for information, spontaneous requests to peers. initiation of interaction (i.e., beginning or maintaining a conversation, beginning a joint activity or conversing during an ongoing joint activity) and responses as including verbal or nonverbal behaviors produced by the student to answering an initiation made by a peer, maintaining a joint activity with a peer, and demonstrating understanding of an initiation made by a peer.	*Methods for education |e130|* >>Rules visible placed in the classroom, classroom buddy seating arrangements and clear structures regarding activities and prompts provided by the teacher, working in small groups and giving to the target student a leadership role >>Training of peers to use strategies to engage children with ASD on the playground (i.e., peers were taught to identify children who were not involved in play and engage the children through role play, modelling or direct instruction), along with the use of social groups (held by trained paraprofessionals), lunch clubs and class-wide peer tutoring >>Cooperative learning and peer-tutoring in the academic context and group activities in social context (interest clubs, friendship activities, and structured play) >>Proximity strategy – ranging from placing participants and peers together at a shared cafeteria table during lunch periods to placing participants in social clubs with students sharing similar interests Child-specific intervention in terms of direct instruction, social skills training, priming, reinforcement, and prompting to teach social communication behaviors *Peer Support |e325|* >>Initiating interaction during games and activities at recess along with prompting and reinforcing strategies (with peers offering a verbal or gestural prompt in order to elicit the participants' use of scripted social phrases, offering praise for each correctly used phrase, verbally prompting a participant to engage in a play activity and reinforcing interaction with participants by responding to participants' initiations in conversation and play). *Paraprofessionals Support |e355|* involving paraprofessionals on receiving short training in how to facilitate social interactions between peers
Peer Support |e325| & Peer Attitudes |e425| (cognitive, affective and behavioral attitudes) Peers' stigmatization- increased understanding and recognition of similarities	*Methods for education |e130|* >>Contact and information about students with disabilities >>Contact included intervention components such as: cooperative tasks, games of social skills, social integration activities (e.g., Stay, play and Talk), circle of friends meetings, integrated and structured play groups, cooperative learning groups, buddy days, peer-tutoring, socio-dramatic activities. >>Information included: discussions about strengths and difficulties of the focused student, disability awareness sessions, storybooks and video to discuss the concept of disability, social skills training to initiate interactions, information on alternative systems of communication. >>Teaching to peers the initiation and maintenance of social interactions during episodes of free play (e.g., suggesting games, sharing or exchanging objects, initiating a conversation, making compliments or commenting on an ongoing game) >>De-stigmatization interventions: provide descriptive, explanatory and directive information on ASD, trough the use of vignettes, online contents, flyers and videos portraying a child with autism; discussion on strengths and challenges of a target child, as well as, prompting brainstorms around ways of supporting the child in the school environment
Managing own behavior |d250| Frequency/ duration of disruptive, challenging and problematic behaviors decrease off-task and disruptive behaviors	*Methods for education |e130|* >>Using antecedent adjustments (e.g., public posting/reminding of classroom rules); provision of instruction in modelling of, or role-play of appropriate behaviours; setting behavioural goals with the students; self-monitoring; reduction in task duration, provision of opportunities to ask for or take breaks); consequent-based strategies (e.g., positive reinforcement and feedback on students' performance, such as praise for appropriate behaviours; rewards through a token system or opportunities to participate in preferred activities; corrective statements or prompts; extinction procedures, such as ignoring disruptive behaviours) >>Peers' involvement, the teaching and reinforcement of a replacement behavior (e.g., referring to written instructions, verbal praise or tokens when the replacement behavior is used), the use of visual prompts (e.g., monitoring the performance of appropriate behaviors on a visual schedule or checklist) and the incorporation of students' preference or interest (e.g., use of preferred activities of students with developmental delays and provided opportunities to select and engage with preferred activities as a prevention strategy)

In this study we sought to build a matrix of a set of educational situations commonly addressed on intervention studies documenting an interchanging process between environmental factors and students' social participation and academic achievement within inclusive-oriented educational contexts.

METHODOLOGICAL NOTE

MATERIALS

A subsample of articles meeting the criteria of presenting specific information on targets of assessment and on implemented environmental supports were selected from the pool of articles included in the reviews considered in the previous meta-review.

By specific information we refer to **participation and education situations focusing student engagement on classroom activities and curriculum in the relation to environmental factors** – i.e., focus on classroom or school situations described through socio-ecological perspective. In other words, articles were selected by describing their empirical experience with focus on educational-related activities and participation paired with environmental factors.

A list of the included studies in the selected reviews of the previous meta-review, was produced to be examined by the partners: JU-Sweden, IPP- Portugal, UL -Germany, UNIVIE – Vienna. From the list, each partner selected intervention articles to be subject to further examination – if accomplishing the following cumulative criteria:

- Focused on an educational situation within elementary and secondary levels
- Using a broad approach (not too narrow – e.g., testing one specific technology)
- Using an experimental or quasi-experimental design (e.g., literature reviews entailed in systematic reviews should be excluded, as well, as non-intervention studies)
- Being published in peer reviewed journals (exclusion of books, manuals....)
- Being published 2001 and after
- Having high quality - in terms of transferability (its applicable in your local context?); and transparency (information on the outcomes and environmental interventions)

Co-funded by the Erasmus+ Programme of the European Union

The criteria-analysis was conducted by two reviewers – from two different partner institutions in order to prevent country-based biases – over 25% of the articles randomly assigned to each partner institution. From that process and considering a pool of a total of 474 primary studies, 102 met the inclusion criteria.

On **figure 2** is presented the flow-diagram of the number of articles considered in each stage of the selection process which ended with the inclusion on 116 articles to be subject to the mapping process.

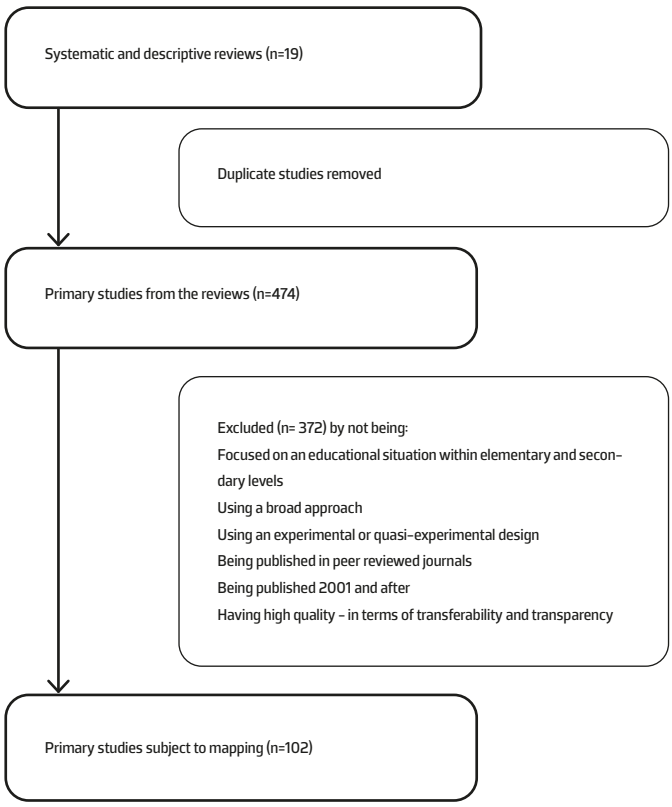


Figure 2. Flow-diagram of studies considered for mapping.

The information of the articles that accomplished the inclusion criteria was extracted to a synthesis table that was framed according with the dimensions defining educational situations as defined by Hollenweger (2021) (**figure 3**):

- Target students of the study – descriptions related to the target group of students and that are relevant for the participation or activity domain under support (who? And for what?);
- Participation/ Activities/tasks/acts assessed or analyzed (what?)
- Measured Outcomes - life domain/ participation restrictions addressed by the study (how?)
- Environmental supports – environmental factors mobilized or analyzed in relation to the activities/ tasks/ acts and to the participation measured outcomes (where?)
- Obtained results – results reported by the study

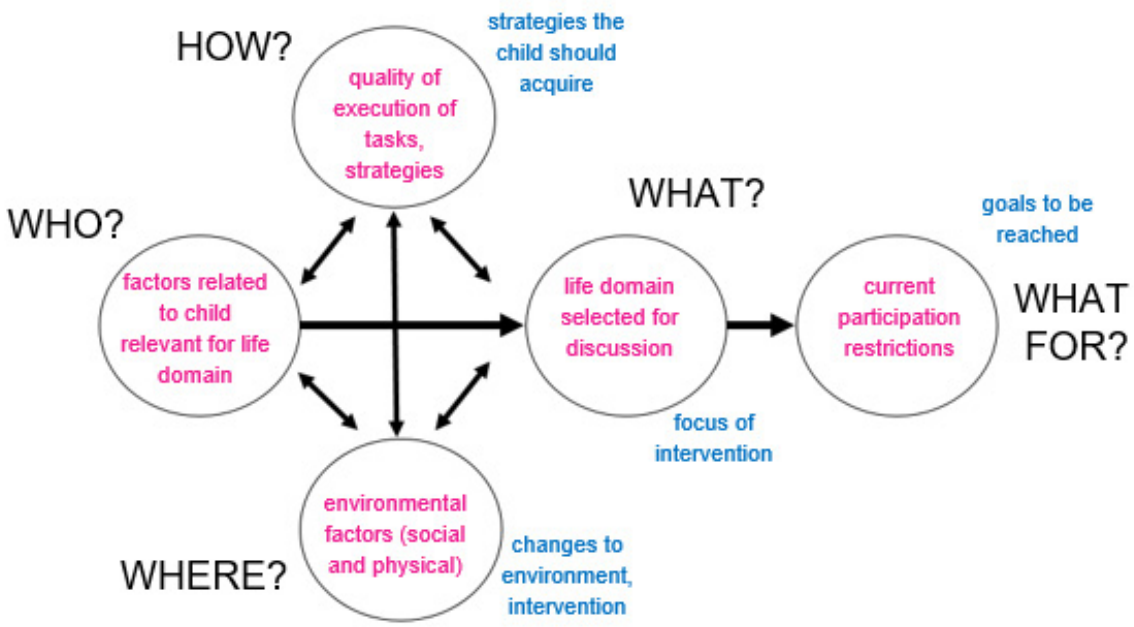


Figure 3. Situational Approach by Hollenweger (2021)

LINKING PROCESS TO THE ICF-CY

The synthesis tables were then subject to a mapping process of the information to the ICF-CY framework. In each study the relations between the Activities and Participation outcomes and the Environmental Supports were identified and linked with ICF-CY taxonomy (e.g., activities: writing [d170]; environmental supports: adjustments related to the time of evaluation [e5855] and use of a computer [e1300]). That translation process using ICF-CY was done along with qualitative information, categorizing - within the ICF-CY codes - the specific environmental strategies or supports that were mobilized (table 2).

The mapping process followed as guiding orientation the linkage of the meaningful units to the most precise ICF-CY categories. On that process and responding to the intention of categorizing specific environmental strategies and supports some codes were ramified based on the code meaning. Specifically, the contents linkable with the code e130 - Products and Technology for Education, defined as "*Equipment, products, processes, methods and technology used for acquisition of knowledge, expertise or skill, including those adapted or specially designed*" (WHO, 2007; p.223) – were organized into:

- "e130 processes for education " – when the support refers to a set of teaching supporting actions (processes)
- "e130 methods for education" - when the support refers to a specific instruction methods/ techniques (methods)
- and "e130 Products for Education" – when the support refers to a specific material, product or equipment (products).

Co-funded by the Erasmus+ Programme of the European Union

Table 8. Example of the coding and categorization process

Meaningful units from the article	Linkage to Activities and Participation	Linkage to Environmental Factors
"promoting students' skills on decoding, spelling and phonemic awareness" (...) "strategies included the teaching on blending, segmenting and manipulate sounds (...) use of word cards (...) clapping in sentences and in words (...)"	**|d1400|** Recognize symbols including figures, icons, characters, alphabet letters and words **|d1401|** Sound out Written Words	**|e130| Processes for Education** >> promote letter knowledge characterize letters and letter combinations as pictures of sounds; >> Teach to blend, segment, and manipulate sounds **|e130|Methods for Education** >> Promote phonological and phonemic awareness - clapping words in sentences, clapping syllables within a multisyllabic word **|e130|Products for Education** >> use word with pictures

For interrater reliability, the coding process were implemented separately by two researchers of the Portuguese team.

Debriefing sessions were regularly developed during the linking process, solving disagreements on coding. On that process, some clarifications on the coding were underlined:

- For distinguishing methods for education (e130) and teacher support (e330): methods of education were considered as methods specifically linked with instruction process or the access to learning contents (e.g., brief corrective feedback about fluency, phrasing or decoding errors between readings). While teacher support was considered when referring to ways of supporting trough interaction, and/or affection to emotional or physical support (e.g., make students feel they belong to a group, by recognizing each and every child);
- For distinguishing the involvement of peers trough specific methods of education coded as e130 – when referring to the access to instruction or learning and that are a strategy implemented by the teacher (e.g., use of peer tutoring, use of cooperative learning methods) - or trough promoting peers physical or emotional support coded as e325 – when referring to peers supportive actions that can be promoted or encouraged by the teacher but are performed by the peer (e.g., encourage the peers to provide verbal encouragement in the beginning and end of the task; encourage peer to sit in physical proximity)

Methodological adjustment – literature and mapping extension

After this first stage of analysis and the mapping of d-e relations, an adaptation of the methodology underlying matrix development was performed, in order to cover a broader scope of pedagogical situations within the matrix. Due a mismatch between the pedagogical situations mapped from the literature, and the extent in need to be covered by I AM tool, an extension of the review was needed. Therefore, the literature review encompassed two stages:

>> a first stage in which an overview of reviews – entailing the analysis of 19 systematic and descriptive reviews - was performed and followed by the selection of 102 intervention studies that were subject to the content analysis and mapping to the ICF-CY (previously described). From that process resulted what we called **Matrix 1.0**;

>> complemented by a second stage of analysis that entailed the selection – by each partner country – of reference documents published by international and/ or national authorities (such as the European Agency and/or National Boards of Education). In this stage, documents were intentionally selected by including approaches/strategies or supports to specific pedagogical situations that were uncovered in the first produced matrix. From that process resulted what we called **Matrix 2.0**.

Results

Matrix 1.0

From the total of 102 articles focusing environmental supports within inclusive-oriented educational contexts, the outcomes of reading and social relationships achieved greater representation (**table 9**).

Table 9. Outcomes domains/categories focused in the examined studies.

Outcomes	N and % of studies	Identification of studies
Reading	26; 25.4%	[10, 23, 79, 80, 81, 82, 83, 85, 88, 92, 93, 94, 98, 101, 74, 51, 32, 57, 61, 62, 63, 41, 65, 43, 68, 48]
Writing	4; 3.9%	[4, 9, 69, 52]
Social relationships	35; 34.3%	[9, 10, 13, 16, 19, 22, 25, 78, 84, 86, 87, 89, 99, 100, 102, 70, 71, 72, 73, 75, 53, 28, 29, 30, 31, 34, 58, 35, 37, 38, 40, 44, 66, 47, 67]
Behavior management	26; 25.5%	[10, 23, 79, 80, 81, 82, 83, 85, 88, 92, 93, 94, 98, 101, 74, 51, 32, 57, 61, 62, 63, 41, 65, 43, 68, 48]
Following curricula	16; 15.6%	[14, 15, 17, 21, 24, 95, 76, 49, 50, 27, 28, 34, 59, 60, 36, 46]

- To note that some studies focused more than 1 primary outcome.

To each of these domains of outcomes it was drawn a matrix of relations with evidence based environmental supports. On **table 10** there is summary of environmental categories that were identified per each of the Activities and Participation outcomes.

Table 10. Categories entailed in relations found in the examined studies.

Outcomes	Activities and Participation Categories	Environmental Factors Categories	N of Evidence-based specific supports	Target students or groups
Reading	d140/ d1400 d1401/ d1402 d1660/ d1661	e130	63	Students with reading difficulties; Students not responding to tier 1 and 2 of interventions; Students with mild to moderate intellectual disability; Students with chronic disabilities; All students within the class; Students with hyperactive behaviours; All students in which class have some with reading and writing difficulties; Students from a low performing school; Students with a high incidence disabilities
Writing	d170/ d1702	e130	8	Low performing Students; Students with difficulties in reading and writing; All students in the classroom; Students with autism spectrum disorder
Behavior management	d250/ d210 d220	e130/ e325/ e330	46	Students with emotional and behavioral problems; Students with adhd; Students with autism; Students with challenging behaviors; Students with externalizing behaviors; Students at risk for developing emotional and behavioral disorders; Students with pervasive development disorder not otherwise specified and with ADHD; Students with ASD and ADHD; Students with extensive support needs
Following the curricula	d820 d210/ d220	e130/ e325/ e5852/ e5853 e5854	27	Students with disabilities; Students with learning or intellectual disabilities; All class; Students with learning disabilities; Students with autism, intellectual disabilities or multiple disabilities; Students with ADHD; Learners with moderate to severe disabilities; Learners with significant cognitive disabilities
Social relationships	d350/ d360 d720/ d7200 d7500	e130/ e325 e330/ e345	61	Peers of students with autism; Peers of other students with low receptive vocabulary; Students without disabilities; Students with varying degrees of reading skills; Peers of students with behavioural problems; Students with severe disabilities; Students using speech generating devices; Students with autism; Students with high-functioning Autism and Asperger's syndrome; Students with pervasive developmental disorder and peers; Students at risk for emotional and behavioral disorders
Total	17 d categories	7 e categories	205	

Typically, the matrix of d-e relations, in each outcome there were diverse rows linking 1 to 3 d categories that match a set of environmental supports. That informs about the specificity of the relations found.

A total of 49 documents of reference authorities was considered to sought uncovered d categories of the version 2.0.

Table 11. Examples of documents of reference used.

International authorities	National authorities
[D] Education, Audiovisual and Culture Executive Agency, 2011. Mathematics Education in Europe: Common Challenges and National Policies. Brussels [E] OECD (2014). PISA 2012 Results: Students and Money: Financial Literacy Skills for the 21st Century (Volume VI), PISA, OECD Publishing [C] European Commission (2021). Union of Equality Strategy for the Rights of Persons with Disabilities 2021-2030. Luxembourg [1] European Agency for Special Needs and Inclusive Education, 2011. Key Principles for Promoting Quality in Inclusive Education – Recommendations for Practice. (V. Donnelly, ed.). Odense, Denmark https://www.european-agency.org/file/11239/download?token=WPNEhxar [2] European Agency for Special Needs and Inclusive Education, 2001. Inclusive Education and Effective Classroom Practice 2001. (C.J.W. Meijer, ed.). Odense, Denmark https://www.european-agency.org/file/10948/download?token=yLZO0Dav	[X] FACM (2021). Educação Financeira para Pessoas com Necessidades Adicionais de Suporte: guia de apoio ao formador. Fundação Dr. António Cupertino Miranda. [W] Monteiro & David (2020). Implementação do PIT: uma proposta da APSA. APSA - Associação Portuguesa de Síndrome de Asperger em colaboração com o Ministério da educação. [S] Sweden's National Agency for Special Needs Education and Schools, 2016. The HODA Project - Assistive Listening and Communication Devices at School (English Translation). (H. Bergkvist, L. Coniavitis Gellerstedt). Stockholm Sweden. https://webbutiken.spsm.se/globalassets/publikationer/filer/assistive-listening-and-communication-devices-a-t-school2.pdf/

A list of uncovered d categories was produced by the lead partner of the I AM tool building. Missing categories were distributed by the partners who sought intentionally for reference documents approaching support strategies for each d code (**table 12**).

Table 12. Categories entailed in relations found in the reference documents.

Domains	Missing d Categories	Environmental Factors Categories	N of Evidence-based specific supports	Target students or groups
Numeracy and calculation	d1500/ d1501/ d1502 d1720 /d721	e130/ e330/ e310	18	All students
Interactions and Relationships	d7100/ d7101/ d7400/ d7102/ d7103/ d7104/ d7106/ d7204/ d7105/ d7202/ d7203/ d7200/ d7201/ d7402/ d730	e130/ e330/ e325	24	All students
Transactions	d860/ d865/ d870	e5852/ e130/ e310	15	All students, Students with additional support needs
Work	d845 / d855	e130/ e5852/ e310	11	People in employment and vulnerable groups, Students with individual transition plans
Writing	d1450/ d1451/ d1452/ d170	e130 e5850	8	All students
Mobility	d415/ d430/ d450 /d470	e130 e5855	10	All students; Students with physical disabilities;
Community, social and civic life	d920/ d930/ d940	e130/ e5852	7	All students
Daily Routines	d230/ d2303/ d2400/ d2401/ d2402/ d2504/ d210/ d220/ d160	e330/ e130/ e5850/ e310/ e5852/ e325	33	All students
Self-care	d510/ d5120/ d530/ d570/ d560/ d550	e130/ e330/ e5853/ e310	11	All students
Communication	d315/ d310/ d320/ d325/ d335/ d332/ d331/ d345/ d360	e130/ e5850/ e325/ e5855	34	All students; Students with disabilities (specially students with hearing impairment and students with communication difficulties)
Acquiring Language	d1330/ d1331/ d1332/ d134	e130/ e5850	16	Students with disabilities (specially students with hearing impairment, students with communication difficulties and students with another mother tongue)
Learning and acquiring Knowledge	d110/d115/d120/ d130/ d131/ d135/ d137/ d138/ d163/ d175/ d177	e130	36	All students; Students with low vision; Students with hearing problems
Total	60 d categories	8 e categories	223	

Matrix 1.0 – Pedagogical Situations About Reading

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	Environmental Factors (how and where?)	Studies	
Students with reading difficulties **[11] [39]** Students not responding to tier 1 and 2 of interventions **[1]** Mild to moderate intellectual disability **[2] [90]** Students with chronic disabilities **[5]** All students within the class **[6] [26] [33]** Students with hyperactive behaviours **[42]**	Learning to read|d140| **Recognize symbols including figures, icons, characters, alphabet letters and words |d1400|** **Sound out Written Words |d1401|** *Related words: decoding, spelling, phonemic awareness*	Processes for Education |e130| >> promote letter knowledge, characterize letters and letter combinations and make use of pictures to represent a sound; >> teach students to pay attention to each grapheme-phoneme unit to build a word >> Teach to blend, segment, and manipulate sounds	**[1], [2], [5] [11]**	>> Reading fluency **[1] [5] [11]** >> decoding **[1] [2] [5] [39]** >> word/phrases comprehension **[1] [2] [42]** >> phonemic awareness **[2] [11] [26]** >> language **[2]** >> reading attitude and satisfaction **[6] [33]** >> reading or defining words **[90]**
		Methods for Education |e130| >> Promote phonological and phonemic awareness - clapping words in sentences, clapping syllables within a multisyllabic word	[2]	
		Processes for Education |e130| >> Teach students five sequenced decoding strategies: - sounding out (letter-sound decoding), - rhyming (word identification by analogy), peeling off (identifying affixes in words), - vowel alert (attempting variable vowels pronunciations), - and spy (seeking familiar parts of unfamiliar words)	[39]	
		Processes for Education |e130| >> Give students a paper with the instruction to reading tasks broken into achievable milestones >> Reward students for completing each milestone (e.g. allowing them to make physical movements)	**[42]**	
		Processes for Education |e130| >> Present the student with a flash card containing the target word, present a model on how to pronounce the word and invite the student to repeat. >> Reinforce the correct answers and use the error correction (provide feedback, repeat the initial prompt and direct the student to imitate the model) when the student doesn't respond to the model or responds incorrectly	**[90]**	
		Products for Education |e130| >> use word cards	**[1] [90]**	
		Products for Education |e130| >> associate pictures to words	**[1] [42]**	
		Products for Education |e130| >> use phonograms (e.g., letter or combination of letters that represent a sound) to introduce words	**[26]**	
	Learning to read|d140| **Sound out Written Words |d1401|** **Understand written words and phrases |d1402|** *Related words: Fluency*	Methods for Education |e130| >> Teach students how to pronounce difficult words before they work on exercises and ask them to re-read them a few times to consolidate their memory by raising phonological awareness	[42]	
		Methods for Education |e130| >> Provide a model (i.e., reading along with an audiotape, CD, or computer application to scaffold accuracy and fluency)	[1] [33]	
		Methods for Education |e130| >> Partner reading – use a coach (tutor) to read first to serve as a model to the partner (tutee)	[5] [6] [12]	
		Methods for Education |e130| >> Provide opportunities to repeat the reading	**[1] [2]**	
		Processes for Education |e130| >> Set a goal for fluency with the student >> Monitor the progress (i.e., repeatedly measuring and recording oral fluency rates, so that students and teachers are aware of even small increments of progress)	**[1] [8]**	
		Processes for Education |e130| >> List key vocabulary words >> Provide brief definitions of key words >> Revise key-words with the student	**[1] [2]**	
		Methods for Education |e130| >> Brief corrective feedback about fluency, phrasing or decoding errors between readings	**[1]**	
		Methods for Education |e130| >> Provide extensive opportunities for practice	[1]	

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	Environmental Factors (how and where?)	Studies	
All students in which class have some with reading **[39]** and writing difficulties **[3] [9]** Mild to moderate intellectual disability **[2]** All students within the class **[6] [12] [26] [33] [45] [54] [77] [96] [97] [55] [69] [18] [20]** Students from a low performing school **[7] [91]** Students with a high incidence disabilities **[64]** Reading |d166| **Using general skills and strategies of the reading process |d1660|** **Comprehending written language |d1661|** *Related words: reading comprehension, retelling, vocabulary achievement, content comprehension, content vocabulary*		Methods for Education |e130| >> Explain concepts of print – pointing to the title and author of a book, tracking text from left to right, and pointing to individual words while repeating a sentence	[2]	>> reading comprehension **[3] [2] [10] [5] [6] [7] [12] [26] [39] [45] [54] [64] [77] [91] [96] [97] [55] [69] [18] [20]** >> reading attitude and satisfaction **[6] [33] [20]** >> vocabulary acquisition **[7]** >> reading fluency **[20p]**
		Methods for Education |e130| >> Connect readers' background knowledge to the content of the texts	[3] [8]	
		Methods for Education |e130| >> Set goals with the students, identifying what they know and what they want to learn with the text content	[8]	
		Methods for Education |e130| >> Model the understanding of the text by thinking aloud during reading (e.g., retelling the main idea in each paragraph)	[3]	
		Products for Education |e130| >> Use classroom posters, bookmarks, and cue cards reminding the students to use the strategies to help them comprehend and learn from text	[3] [33]	
		Methods for Education |e130| >> Encourage the students/or make together with students notes about the reading text – e.g., a sequence of actions	[8]	
		Processes for Education |e130| >> Lead the students to rereading when something is not understood >> Lead the students to check unknown vocabulary	[8] [33]	
		Methods for Education |e130| >> Use of synonyms – teach students to try and substitute the word by a similar one	[7]	
		Methods for Education |e130| >> Mine your memory – teach students to try to remember if they know a word from before and if they remember its meaning	[7]	
		Methods for Education |e130| >> Ask an expert – teach students to ask for help from peers to figure it out together	[7]	
		Methods for Education |e130| >> Teach students to mark a word they don't know about to look it up in the dictionary later or to ask the teacher	[7] [26]	
		Methods for Education |e130| >> Spotlight Vocabulary – teach students to use the spotlight as to identify whether they know a word (green light), they think they know a word but are not sure what it means (yellow light) or they have no idea what the word means (red light).	[7]	
		Processes for Education |e130| >> Lead student to identify the main idea, summarize and retelling the reading history	[8]	
		Methods for Education |e130| >> Make deeper-level questions for classroom dialogue and discussion promoting knowledge-driven reading	[3]	
		Processes for Education |e130| >> Use small groups to work together on predicting the text, on generating good questions to text, on clarifying terms and expressions and on summarizing read passages	[3] [2]	
		Processes for Education |e130| >> Organize students into research groups, where they read collaborately, ask each other questions and give feedback, summarize content, discuss and clarify any difficulties, and make predictions about future content	[69]	
		Processes for Education |e130| >> Paragraph Shrinking – tutor and tutee summarize the reading and identify the main idea >> Prediction Relay – tutor and tutee extend the summarization and identification of the main idea to larger units of text to confirm and disconfirm predictions	[5] [6] [12]	
		Methods for Education |e130| >> Help students focus on themes they can become "experts" on, which increases their expressiveness and prosody: allow students to choose subtopics and texts of their interest to further exploration of concepts trough real word interactions, demonstrations and field trips (choice and relevance).	[3] [33]	
		Methods for Education |e130| >> Consider the context – teach students how to look at information in a sentence and in the whole paragraph to figure out its meaning	[7]	
		Methods for Education |e130| >> Study the structure – teach students to try and find out the root word and to use clues from the word to figure out the meaning	[7]	

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	Environmental Factors (how and where?)	Studies	
All students in which class have some with reading **[39]** and writing difficulties **[3] [9]** Mild to moderate intellectual disability **[2]** All students within the class **[6] [12] [26] [33] [45] [54] [77] [96] [97] [55] [69] [18] [20]** Students from a low performing school **[7] [91]** Students with a high incidence disabilities **[64]** Reading |d166| **Using general skills and strategies of the reading process |d1660|** **Comprehending written language |d1661|** *Related words: reading comprehension, retelling, vocabulary achievement, content comprehension, content vocabulary*		Methods for Education |e130| >> Schema Activation – teach students to make a first approach to a story, by scanning it, looking at pictures and highlighting unknown words.	[26]	>> reading comprehension **[3] [2] [10] [5] [6] [7] [12] [26] [39] [45] [54] [64] [77] [91] [96] [97] [55] [69] [18] [20]** >> reading attitude and satisfaction **[6] [33] [20]** >> vocabulary acquisition **[7]** >> reading fluency **[20p]**
		Methods for Education |e130| >> Purpose of reading – instruct students to be aware of the reasons for reading a story	[26]	
		Methods for Education |e130| >> Stop and think – teach students to, while reading, stop occasionally to think whether they are understanding what they are reading.	[26]	
		Methods for Education |e130| >> Visualization – encourage students to look at pictures in the story and try to relate them to points in the story.	[26]	
		Methods for Education |e130| >> Ask a question – encourage students to makes questions as directed to the author of the story	[26]	
		Methods for Education |e130| >> Summarize – teach students to recall the main ideas from a passage of the story they just read.	[26] [64]	
		Methods for Education |e130| >> Invite students to stop reading at purposely selected points and ask general meaning-based questions about the text to discover the text segment's main ideas	[91]	
		Products for Education |e130| >> Choose books at students' reading level.	[33]	
		Methods for Education |e130| >> Give students opportunities to read aloud together in small groups	[33]	
		Methods for Education |e130| >> Help students understand the author's plan for a text – why the author selects particular words, sentences and paragraphs and how this helps making predictions, setting reading goals, activating prior knowledge, identify organizational plans and focus on important information	[39]	
		Processes for Education |e130| >> Teach students to use the comprehension strategies: - predicting (making predictions about what they will learn), - activating prior knowledge (activating what they already know about a subject), - clarifying (spotting and clarifying words that are confusing to restore comprehension), - evaluating through questioning (monitor comprehension of what is being read) - and summarizing (focus on important information in a text and use a structure for a text summary).	[39] [96] [18]	
		Processes for Education |e130| >> Pre-teach proper nouns (pronouncing the words and providing definitions or explanations) and review, >> ask and answer questions, use the main idea strategy (help students identify the "big idea" on the section read) >> summarize using a graphic organizer	[45]	
		Processes for Education |e130| >> Teach students critical vocabulary, >> Use vocabulary maps for target words (integrating strategies such as: reviewing word definition, viewing illustrations, identifying root word, using word in context, associating new vocabulary with related vocabulary), >> Connect content and vocabulary through chapter organizers, practice activities (to provide multiple exposures to new words, such as word association games), >> Build background knowledge through anticipation guides and use context clue strategy (use contextual and morphological clues to determine words' meaning)	[45]	
		Products for Education |e130| >> Use short expository texts and questions for student to make gap-filling inferences and answer inference-demanding questions	[54]	
		Products for Education |e130| >> Use graphic organizers students have to fill-in with information	[54]	
		Processes for Education |e130| >> Text Setup – teach students four activities: - introduce critical question and purpose for reading (preview the story by setting up the problem in the story); - preview critical content knowledge (build background knowledge on characters, setting, topic, structure, social and historical context, etc.); - teach critical vocabulary (identify 2 to 4 words essential for understanding the text); - and teacher-directed comprehension monitoring (preview the text to determine difficulty and logical places to stop and check comprehension)	**[77]**	
		Methods for Education |e130| >> Teach students different strategies to use at the stop points during reading, such as: summarizing, predicting, drawing inferences, question generation, and comprehension monitoring.	**[91] [55]**	
		Methods for Education |e130| >> Organize reading groups, where each student takes the role of the teacher, deciding the strategy to be used and providing feedback	[96]	

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	Environmental Factors (how and where?)	Studies	
All students in which class have some with reading **[39]** and writing difficulties **[3] [9]** Mild to moderate intellectual disability **[2]**		Processes for Education |e130| >> Teach and practice the use of self-regulated learning procedures, such as: - setting goals (students choose which strategy they will use), - monitoring the effective use of that specific strategy - and self-evaluation (through a quiz with a self-correction sheet)	[96] [97]	>> reading comprehension **[3] [2] [10] [5] [6] [7] [12] [26] [39] [45] [54] [64] [77] [91] [96] [97] [55] [69] [18] [20]**
All students within the class **[6] [12] [26] [33] [45] [54] [77] [96] [97] [55] [69] [18] [20]** Students from a low performing school **[7] [91]**		Processes for Education |e130| >> Teach students cognitive strategies, such as: - thinking about the headline of a story (to activate prior knowledge) - and forming mental images while reading (which supports looking for details and reading slowly, elaborating information of a text and integrating it with prior knowledge and beliefs)	[97]	>> reading attitude and satisfaction **[6] [33] [20]** >> vocabulary acquisition **[7]**
Students with a high incidence disabilities **[64]** Reading |d166| **Using general skills and strategies of the reading process |d1660|** **Comprehending written language |d1661|** *Related words: reading comprehension, retelling, vocabulary achievement, content comprehension, content vocabulary*		Methods for Education |e130| >> Teach students to condense information and differentiate between more or less important passages in a text by using a text with redundancies.	[97]	>> reading fluency **[20p]**
		Processes for Education |e130| >> Teach students one reading strategy per week and then, ask students to read on book per week, while practicing each strategy and share it with a family member	[55]	
		Materials for Education |e130| >> Introduce new books each day, instead of the traditional reading of a novel from cover to cover	[20]	
		Materials for Education |e130| >> Select literature based on the interests and needs of students and use a variety of literary genres	[20]	
		Materials for Education |e130| >> Use bookmarks with higher order questions focusing on skills such as synthesis and evaluation	[20]	
		Materials for Education |e130| >> Give students a reading log to record their daily progress (featuring the book title and number of minutes spent in reading)	[20]	
		Methods for Education |e130| >> Allow students to choose from self-choice enrichment activities, such as: exploring new technology and engaging in discussion groups, creative writing, buddy reading, creativity training in language arts, learning centers, interest-based projects, continuation of self-selected reading and book discussion groups	[20]	

MATRIX 1.0 – PEDAGOGICAL SITUATIONS ABOUT WRITING

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	**Environmental Factors (how and where?)**	**Studies**	
Low performing Students **[4]** Students with difficulties in reading and writing **[9]** All students in the classroom **[69]** Students with autism spectrum disorder **[52]**	Writing|d170| **Using general skills and strategies to complete compositions |d1702|** *Related words: written products, text-structure elements*	Products for Education |e130| >> Prompt the use of a sheet for planning the writing with four sections: introduction, main event, conclusion and emotion	[4]	>> writing narratives **[4]** >> writing expression **[9]** >> writing competence **[69]**
		Methods for Education |e130| >> Teach the students about the narrative text structure – lead them to identify 5 basic story parts (setting, character, main event, resolution and emotion)	[4]	
		Methods for Education |e130| >> Set a writing goal with the student, listing specific elements to include in their writing (e.g., combine two sentences into one using connector words)	[9]	
		Methods for Education |e130| >> Create time for the students to detect and correct errors and for revise the draft of the writing product	[4]	
		Products for Education |e130| >> Invite students to use self-management sheets to externalize reflective thinking. On the 1st sheet students are asked to relate to three features of their writing assignment - topic, audience and goals; On the 2nd sheet they have to brainstorm on the topic, think about different main ideas, organize them and specify details; On the 3rd sheet, students have to mark organization (introduction, body and conclusion), topic sentences, connecting words and questionable writing conventions (repetitive ideas, poor wording or sentence structure).	[69]	
		Methods for Education |e130| >> Use personal narrative prompts, that is, a written story starter prompt to serve as a transfer/generalization strategy for students	[52]	
		Products for Education |e130| >> Encourage students to use a mnemonic device, POW (Pick my ideas, Organize my notes and Write and say more) to help organize the planning and writing process.	[52]	
		Products for Education |e130| >> Teach students the WWW mnemonic to remind students to generate notes for seven parts of a story: Who? When? Where? What? How?	[52]	

MATRIX 1.0 – PEDAGOGICAL SITUATIONS ABOUT BEHAVIOR MANAGEMENT

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students with emotional and behavioral problems **[10]** Students with adhd **[74] [80] [81] [88]** Student with autism **[41] [43]** Students with challenging behaviors **[57] [85] [92] [101]** Students with externalizing behaviors **[68]** Students at risk for developing emotional and behavioral disorders **[51] [79] [94]** Students with pervasive development disorder not otherwise specified and with ADHD **[83]** Students with ASD and ADHD **[61]**	**Managing one's own behavior |d250|** *Related words: emotional and behavior problems, disruptive behaviors, non-compliance*	Methods for Education |e130| >> Encourage students to choose positive behavior rules for the classroom	**[10]**	>> reduction in emotional and behavioral problems **[10] [74]** >> reduce minor disruptive behavior **[41] [57] [81] [85] [88]** >> reduction of non-compliance **[74]** >> externalizing behaviors **[68]** >> reduce problem behaviors **[79] [101]** >> classroom preparation behaviors **[80]** >> academic engagement **[85] [88] [92] [94]** >> behavioral performance **[92]** >> reduction off-task behavior **[43]** >> increase on-task behaviors **[61]** >> task engagement **[51]**
		Peers Support |e325| >> Teach the peers to get engaged on reminding the target learner about the expected behavior	**[41]**	
		Peers Support |e325| >> Teach the peers to provide to the target learner with verbal encouragement in the beginning and end of the task	**[41] [43]**	
		Processes for education |e130| >> Use cards of rules to be maintained with the students to be followed during a defined period of time >> Provide positive feedback when students follow the cards rules during the stablished time	**[10]**	
		Methods for Education |e130| >> Minimize distractions	**[74]**	
		Teachers' support |e330| >> Maintain eye contact during and after the instruction	**[74]**	
		Products for Education |e130| >> Use rating forms for the student register and monitor her/him own behavior and to register and monitor the behavior of the others for each classroom rule (The class receives prizes when both ratings match)	**[57]**	
		Peers Support |e325| >> Adjust classroom sitting arrangements so that target learners sit paired with buddies (children with prosocial behaviors and with a high social status)	**[68]**	
		Methods for Education |e130| >> Change classroom arrangements sits so that the target student sits away from preferred peers (who typically respond to his disruptive behavior)	**[81]**	
		Processes for education |e130| >> Identify the reinforcer for appropriate behavior and for problem behaviors >> Eliminate the reinforcer for competing problem behaviors >> Delivering a reinforcer for appropriate competing behaviors	**[79] [83] [94]**	
		Methods for Education |e130| >> Identify the antecedent conditions for the disruptive behaviors and the consequences that maintain those behaviors	**[81] [94] [101]**	
		Methods for Education |e130| >> Teach target students specific social skills using direct instruction, rehearsal, feedback and reductive procedures	**[79]**	
		Products for Education |e130| >> Introduce a logbook and a self-monitoring checklist to help students recognize and improve problematic areas	**[80]**	
		Peers Support |e325| >> Teach the peers to ignore disruptive behaviors from the target students	**[81]**	
		Products for Education |e130| >> Use "Social Stories" for each of the target problem or alternative behaviors. The story should be read and understood by the target students	**[83]**	
		Processes for Education |e130| >> Use a "CICO" – "check-in/ check-out" methodology, which includes: - telling students the behavioral expectations for the classroom, - praising appropriate behaviors, - minimizing attention given to any noted inappropriate behavior - and using tokens students can exchange to rewards	**[85] [92]**	
		Methods for Education |e130| >> Use negative reinforcement, for example, students can earn out of a supplemental math test for presenting appropriate behaviors	**[85]**	
		Products for Education |e130| >> Use a Daily Progress Report to provide students with behavioral expectations and with feedback on specific replacement behaviors	**[85] [92]**	
		Products for Education |e130| >> Use a green/ red card. The green card is shown when the student has an appropriate behavior. The red cart is shown when the behavior is inappropriate. Student gets points on the cards according to his behavior	**[88]**	
		Methods for Education |e130| >> Use a Mystery Motivator procedure, which is used when the problem behavior is stable or decreasing. It consists in a mystery reward for students meeting the behavioral goals (indiscriminable contingency)	**[89]**	
		Methods for Education |e130| >> Teach students to use self-monitoring of their own behavior, followed by verbal praise and access to preferred activities for correct self-monitoring and on-task behavior	**[94]**	
		Methods for Education |e130| >> Provide a specific positive directed prompt as an opportunity for student to respond	**[101]**	
		Methods for Education |e130| >> Maintain a ratio of 4 to 1, i.e., 4 positive feedbacks to 1 negative feedback	**[101]**	
		Methods for Education |e130| >> Remind the expected behaviors before each activity	**[43]**	
		Methods for Education |e130| >> Teach students to use a "taking time area" when they get angry or frustrated and to take a break until they calm down	**[43]**	
		Products for Education |e130| >> Use a token reinforcement system, e.g., students receive tokens for appropriate behaviors, which they can exchange for preferred activities	**[43] [61]**	
		Methods for Education |e130| >> Provide students with praise statements that explicitly describe the behavior being praised (e.g., raising their hands appropriately to answer a question)	**[51] [63]**	
		Methods for Education |e130| >> Use a contingency contract with students, that states behavioral expectations and costs of rewards	**[61]**	

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation (what?)	**Environmental Factors (how and where?)**	**Studies**	
Student with autism **[32] [41] [43]** Student with ADHD **[48] [65] [98] [23]** Students with or at risk for Emotional/ Behavioral Disabilities **[62]** Students exhibiting disruptive behaviors **[63] [93] [101]** Students with extensive support needs **[82]**	**Undertaking a task |d210||d220|** *Related words: on-task behavior, task engagement*	Methods for Education |e130| >> Use a wait time of at least 3 seconds for a student to start responding or performing an action based on instructional talk, prompts or feedback	**[101]**	>> maintenance on-task behavior **[32]** >> reduction off-task behavior **[41] [43] [48] [62] [93]** >> decrease inappropriate teacher engagement **[48]** >> task engagement **[62] [63]** >> increase on-task behaviors **65] [98]** >> increase task performance **[82] [23]**
		Methods for Education |e130| >> Provide behavior-specific praise	**[32]**	
		Methods for Education |e130| >> Allow brief breaks upon on-task behavior	**[32]**	
		Teachers' support |e330| >> Not provide attention when off-task	**[32]**	
		Peers' support |e325| >> Teach the peers to provide encouragement when peer is on-task	**[32]**	
		Teachers' support |e330| >> Redirect learners' attention when off-task	**[41]**	
		Products for Education |e130| >> Use of a visual system indicating when the learner is working independently (green light), when he/she needs help from peer or from teachers (yellow light)	**[32] [98]**	
		Materials for Education |e130| >> Use of self-monitoring forms about the actions/ tasks entailed in the task/activity	**[32] [48] [65] [98]**	
		Methods for Education |e130| >> For each student exhibiting off-task behavior, identify the antecedent conditions for the behaviors and the consequences that maintain those behaviors	**[43] [48] [62] [93] [98]**	
		Products for Education |e130| >> Teach students to use a visual schedule to complete tasks independently	**[43]**	
		Methods for Education |e130| >> Teach students to raise their hand when they have a question or need the teachers' help	**[43]**	
		Methods for Education |e130| >> Allow students to choose the medium they prefer to use during assessment tasks (e.g. computer)	**[62]**	
		Products for Education |e130| >> Use response cards to promote students answering questions and to evaluate understanding	**[63]**	
		Methods for Education |e130| >> Define and model examples of staying on-task, as well as the contrary	**[65]**	
		Methods for Education |e130| >> Use task reduction time to increase on-task behavior (accompanied by more instructions specific to each task, instead of a single instruction at the beginning of a longer task)	**[93]**	
		Process for Education |e130| >> Place students' work in a folder at their desks before they enter the classroom, >> Tell students how long they have to complete their work, >> Set a digital timer and tell students to start working, >> Monitor students' behavior, >> Give students feedback on the accuracy of their completed work, >> Score the worksheets and ask students to make any corrections needed before continuing on the next worksheet	**[23]**	
		Materials for Education |e130| >> Use a daily report card for students to target seatwork completion	**[23]**	
		Materials for Education |e130| >> Allow students who meet academic and behavioral goals free time	**[23]**	

MATRIX 1.0 – PEDAGOGICAL SITUATIONS ABOUT FOLLOWING CURRICULA

Factors related to the child, group or context (who?)	d-e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students with disabilities **[27]** **[49]** Students with learning or intellectual disabilities **[76]** All class **[36]** Students with learning disabilities **[36]** All students **[46]** Students with autism, intellectual disabilities or multiple disabilities **[50]** Students with ADHD **[34]** **[17]**	School Education |d820| *Related words: academic attainment; access to the general education curriculum*	Special education and training services |e5853| >> Use a progression guidance to track learners' progress and to adapt interventions	**[27]**	>> academic attainment for math >> Academic attainment for native language **[27]** >> access to the general curriculum **[76]** >> attainment of transition goals **[76]** >> attainment of specific-discipline goal (e.g., chemistry) **[36]** **>>** academic, intellectual and social engagement **[46]** **>>** attainment of IEP goals (e.g., follow direction, contribute to class, organizational skills, initiating conversations...) **[49]** **[50]** **>>** perform classroom preparation tasks (complete homework, arrive on time for class, prepare the notebook and the pencil...) **[34]** >> academic skills **[17]**
		Special education and training services |e5853| >> Set curriculum goals/targets and interventions to support the learners to work towards that goals/targets (adjusted curricula)	**[27]**	
		Special education and training services |e5853| >> Make use of structured conversations with parents about their learner' academic targets	**[27]**	
		Special education and training services |e5853| >> Use communication strategies with parents (active listening, paraphrasing, identifying priorities, agreeing targets, developing a plan, summarizing and clarifying next steps)	**[27]**	
		Special education and training services |e5853| >> Use practices of targeting progresses not only at individual level, but also at class and school level and share with educational staff	**[27]**	
		Special education and training systems |e5854| >> Use of information management systems to record and track assessment and intervention data	**[27]**	
		Education and training policies |e5852| >> Set goals/targets at the school level (e.g., reducing bullying, develop positive relationships, increase participation in school life)	**[27]**	
		Education and training policies |e5852| >> Set initiatives for school-wide interventions (e.g., circle-time, behavioral expectation systems, staff training, social and emotional learning materials, develop sector voluntary projects)	**[27]**	
		Processes for Education |e130| >> Guide the student to set educational goals >> Guide the student to plan and take action >> Guide the student to adjust goal or plan	**[76]** **[49]** **[50]** **[34]** **[24]**	
		Materials for Education |e130| >> Use videos for demonstration on how to solve a problem	**[36]**	
		Materials for Education |e130| >> Use a checklist to as a mnemonic with steps about how to solve a problem step-by-step (what to do and in what order)	**[36]**	
		Materials for Education |e130| >> Use graphic to illustrate sequence of actions	**[36]**	
		Materials for Education |e130| >> Compile difference materials in a handbook (e.g., slides, demonstrations, clips, problems)	**[36]**	
		Education and training policies |e5852| >> Inclusion of respect of unique gifts and challenges within the curricula	**[46]**	
		Materials for Education |e130| >> Connect contents with students experiences and ideas within and outside the classroom	**[46]**	
		Special education and training services |e5853| >> Conduct screening sessions to identify prospective target skills and instructive feedback stimuli for each student	**[17]**	
		Methods for Education |e130| >> Use simultaneous prompting procedures to teach target skills	**[17]**	

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students with moderate to severe disabilities **[28] [15] [21]** All students **[46] [95]** Students with ADHD **[34] [14]** Students with significant cognitive disabilities **[59]** Students with intellectual disability **[60]**	Undertaking a simple task |d210| Undertaking multiple tasks |d220| *Related words: academic engagement, students engagement, academic behavior chains, productivity*	Peers |e325| >> Teach the peers to invite the learner to work together on the assigned tasks	**[28]**	>> following teachers' instruction; looking at classroom materials, asking questions **[28]** **>>** academic, intellectual and social engagement **[46]** **>>** perform classroom preparation tasks (complete homework, arrive on time for class, prepare the notebook and the pencil...) **[34]** **>>** attainment of IEP goals (e.g., follow direction, contribute to class, organizational skills, initiating conversations...) **[59]** **>>** acquisition of academic behavioral chains **[60]** >> percentage of correct responses **[60]** >> math productivity and accuracy **[95]** >> on-task behavior **[14]** >> specific target skills **[15]** >> inquiry science **[21]**
		Peers |e325| >> Teach the peers to praise correct answers and provide corrective feedback	**[28] [59]**	
		Peers |e325| >> Teach the peers to use constant time delay prompting others response to the instruction	**[59] [21]**	
		Methods for Education |e130| >> Involve students in choice-making and decision making in democratic classroom meetings (to discuss ideas and events important for them, and make changes in classroom rules and procedures)	**[46]**	
		Materials for Education |e130| >> Use of checklists or forms about the tasks/actions to be completed (for student self-monitorization)	**[34] [14]**	
		Methods for Education |e130| >> Teach chains of academic behavior using task analysis (discriminating each step of a task)	**[60]**	
		Methods for Education |e130| >> Teach chains of academic behavior using constant time delay (technique for presenting a stimulus to the learner and systematically reducing the time to respond over several trials or exercises)	**[60]**	
		Methods for Education |e130| >> Teach chains of academic behavior using reinforcement when a step of the task is completed	**[60]**	
		Methods for Education |e130| >> Teach chains of academic behavior using error correction following every incorrect response	**[60]**	
		Products for Education |e130| >> Use of digital programs (e.g., for math) that guide the learners for individualized sequence of assignments, providing immediate and individualized feedback (showing what mistake each student did and producing final scores of each student performance).	**[95]**	
		People in positions of authority |e330| >> Teach paraprofessionals to use constant time delay and simultaneous prompting procedures (provide an initial prompt for students and model the correct response). Correct responses receive feedback and social reinforcement, incorrect responses follow error correction procedures.	**[15]**	
		Methods for Education |e130| Peers |e325| >> Teach students to use a knowledge chart: K – What do you know?, W – What do you want to know?, H – How will you find out?, L – What did you learn?	**[21]**	

MATRIX 1.0 – PEDAGOGICAL SITUATIONS ABOUT SOCIAL RELATIONSHIPS

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Peers of students with autism **[9] [70]** Peers of other students with low receptive vocabulary **[10]** Students without disabilities **[72] [75] [71] [99]** Students with varying degrees of reading skills **[73]** Peers of students with behavioural problems **[30]**	Peers Attitudes |e425| *Related words: empathy, acceptance, social acceptance, social attitudes, behavior towards children with disabilities*	Products for Education |e130| >> Promoting a reading activity with books focusing the peer specific condition or background (e.g., autism; country culture)	**[9]**	>> cognitive and affective empathy **[10]** >> peer acceptance for boys with low receptive vocabulary **[11]** >> cognitive and behavioral attitudes **[70]** >> attitudes towards peers with disabilities **[72] [71] [99]** >> social acceptance and attitudes towards peers with learning disabilities **[73]** >> disability related attitudes and self-efficacy **[75]** >> social behaviour, peer acceptance and social reputation **[30]** >> behavioural intentions **[99]**
		Products for Education |e130| >> Presentation of a video about the peer specific condition or background (e.g., autism; country culture)	**[9] [70] [71] [99]**	
		Methods for Education |e130| >> Grouping of students with and without difficulties to engage in games of rules accomplishment	**[10]**	
		Process for Education |e130| >> Present a story or video of a character or a child with a specific type of disability (physical, intellectual or both) >> Subsequent to the video or story conduct a group discussion >> In a subsequent lesson, use an activity to show the impact of that disability in daily life.	**[72]**	
		Methods for Education |e130| >> Use peer tutoring (structured activities that require peers to engage in frequent interaction, provide feedback to each other and take turns as tutor and tutee)	**[73]**	
		Methods for Education |e130| >> Provide target-students general information about people with disabilities and specific information about specific disabilities of the students they are about to meet	**[75]**	
		Methods for Education |e130| >> Promote direct contact between students with and without disabilities through monitored joint activities (such as sports, music, art and social games)	**[75]**	
		Methods for Education |e130| >> Involve students in activities, such as role playing, positive reinforcement, modelling, shaping and cooperation	**[30]**	
		Methods for Education |e130| >> Organize workshops on social skills	**[30]**	
		Methods for Education |e130| >> Involve students in cooperative teaching educational activities with peers with high prosocial skills	**[30]**	

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students with severe disabilities **[28] [29]** Students using speech generating devices **[29]** Students with autism **[29] [34] [38] [40] [53] [89] [13] [19]** Students with autism and their peers **[47] [58]** Students with high-functioning Autism and Asperger's syndrome **[44]** Students with pervasive developmental disorder and peers **[100]**	Conversation |d350| *Related words: communication behaviors, social interactions, social behaviour, social engagement, social communication*	Peers |e325| >> Teach the peers to extend conversational turns	**[28]**	>> verbal and nonverbal communicative behaviors **[28] [40] [47] [53] [58]** >> students interactions **[29] [38] [40] [86]** >> social behaviour **[31] [13]** >> social engagement **[34]** >> social competence, social perception **[44] [13]** >> increase communication **[100] [19]**
		Peers |e325| >> Teach the peers to get the attention of the focus learner (by saying his/her name and/or using a gentil touch) before talking	**[29]**	
		Peers |e325| >> Teach the peers to use diverse ways of communication (e.g., gestures, sign and using communication devices)	**[29]**	
		Peers |e325| >> Teach the peers to redirect inappropriate conversations	**[28]**	
		People in positions of authority |e330| >> Paraprofessionals support on increasing learners' proximity (e.g., sitting each other in a talking distance)	**[28] [29]**	
		People in positions of authority |e330| >> Paraprofessionals support on redirecting learners' questions to each other	**[28]**	
		People in positions of authority |e330| >> Paraprofessionals support on providing periodic feedback to peer supports (e.g., giving intermittent verbal reinforcement)	**[28] [29] [38] [40]**	
		People in positions of authority |e330| >> Paraprofessionals involvement on explaining peer's nonverbal/verbal behaviors for the focus learner	**[29]**	
		People in positions of authority |e330| >> Paraprofessionals action on modeling different ways for interaction	**[29] [38] [25]**	
		Peers |e325| >> Teach students how to effectively talk to their peers by explaining several important elements, giving examples and prompting students to use those elements when interacting with peers (e.g., eye contact, body language, audibility and topic choice)	**[34] [40]**	
		Peers |e325| >> Teach peers to implement the following peer mediated phases: sit next or across the target learner, get his/her attention by saying their name or using a greeting, initiate conversation by using topic starters or comment on an ongoing activity or conversation, respond to his/her responses, repeat	**[44]**	
		Peers |e325| >> Teach peers to implement the following proximity steps: sit next or across the target learner, do not initiate with the target learner, if the target learner initiates with the peer, he/she responds appropriately but only for one conversational turn	**[44]**	
		Products for Education |e130| >> Give peers a notebook to remember the four skills on how to engage with the target learner: get your friend's attention, talk about what you are doing, ask and answer questions and take turns, decide on rules and solve problems together	**[47]**	
		Process for Education |e130| >> Provide learners with a direct social skills instruction, comprised of: – instruction using social stories, – text cues and pictures of social skills (securing attention, initiating comments, initiating requests, contingent responses), – social interaction moment using the learnt skills and videotaped feedback	**[47]**	
		Products for Education |e130| >> Use video self modelling to show learners how to initiate interaction with their peers prior to recess time	**[53]**	
		Peers |e325| >> Teach peers to help target learners on using communication books (through direct instruction, such as modelling, prompting, repeated practice and contingent praise)	**[58]**	
		Products for Education |e130| >> Use communication books (containing questions to start conversations on a variety of topics)	**[58]**	
		Peers |e325| >> Teach peers five facilitative social skills, which are: "look, wait and listen", "answer questions", "keep talking", "say something nice" and "start talking"	**[100]**	
		Products for Education |e130| >> Use a reinforcement card, in which students receive a smile each time they use a new skill, being allowed to choose an item from the treat bag at the end of recess	**[19]**	
		Process for Education |e130| Peers |e325| >> Start by introducing the specific social skills >> Using an activity for recess, ask students examples of things to talk about, share and how to play nice with friends >> Write down the examples on a cue card >> Introduce the reinforcement card >> Invite the students to play telling them you will be listening and helping them remember the skills >> Provide behavior specific verbal praise when target students deliver a communicative act >> If the target students don't initiate a communicative act, prompt one of the peers to prompt the focus student, by using the cue card >> After 10 min. of play, offer verbal praise for using the skill, mentioning the specific communicative acts used	**[19]**	

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students using speech generating devices **[29] [67]**	Using communication devices and techniques |d360|	People in positions of authority |e330| >> Ensure that the communication device is on and ready to be used during the class	**[29]**	>> students interactions **[29] [67]**
		Peers |e325| >> Encourage the peers to initiate conversation by asking different questions that can be answered through the use of the device	**[29]**	
		Peers |e325| >> Teach peers to wait for responses while looking at the target learner.	**[29]**	
		Peers |e325| >> Teach peers to ask for clarification if they did not understand what the focus student said	**[29]**	
		People in positions of authority |e330| >> Paraprofessionals know/ are familiarized with the content of the communication device to prompt learner interaction	**[29]**	
		Peers |e325| >> Teach peers to help target learners to use speech-generating devices during games, by modeling its use and prompting its activation	**[67]**	

Factors related to the child, group or context (who?)	d–e relation			Outcomes Achieved (for what?)
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies**	
Students with autism **[35] [37] [66] [87] [38] [84] [40] [89] [16] [22]** Students with severe disabilities **[78] [28]** Students with autism and their peers **[31]** Students at risk for emotional and behavioral disorders **[102]** Students using speech generating devices **[29]**	Complex interpersonal interactions |d720| Beginning and maintaining interactions |d7200| Informal relationships with friends |d7500| *Related words: Social behavior, friendships, peer relationships, peer engagement*	Peers |e325| >> Invite peers to participate with the target students in scripted skills lessons, comprise of: warming up or review (introduction of the skill, motivation and skill identification (story with a conflict to resolve), modelling (demonstration of the appropriate skills), rehearsal (in practice scenarios), role-playing, reinforcement, feedback and homework (exercises to reflect, apply or practice the target skill)	**[102]**	>> increase (social) on-task behavior, appropriate conflict resolution and cooperation **[102]** >> social network connections **[35] [66]** >> Peer engagement **[37]** >> improve academic and social outcomes **[78]** >> improve socialization **[87]** >> students interactions **[84] [40] [38] [29]** >> verbal and nonverbal communicative behaviors **[28]** >> increase communication and interaction **[89]** >> increase social skills **[16]**
		Products for Education |e130| >> Use a portable skill poster card listing the specific steps for the social skill	**[102]**	
		Methods for Education |e130| >> Teach learners to use specific social skills through interactive lessons, homework to practice specific skills, rewards, praising and role playing. Examples of content are: Being a Social Detective, Greetings and Goodbyes, Body Talk, Humor, Conversation, Dealing with Teasing, Perspective Taking, Dealing with Emotions and Friendship Tips.	**[35]**	
		Peers |e325| >> Teach peers strategies to engage students in social interactions (to identify isolated children and to engage them)	**[84]**	
		People in positions of authority |e330| >> Paraprofessionals monitor social interactions, helping the learner and their peers in identifying play activities, providing instructions on how to initiate and respond to each other and how to engage in social interactions	**[31] [38] [40]**	
		People in positions of authority |e330| >> Paraprofessionals review and practice briefly initiation behaviors before they learner enters the classroom/ play area	**[38]**	
		Peers |e325| >> Encourage peers to introduce the learner to other classmates based on their shared interests and /or commonalities	**[28]**	
		Peers |e325| >> Organize a peer network intervention, which starts with introducing a skill to both target students and peers, picking an activity for recess, praising the students for playing together and prompting students when they don't initiate communication	**[89]**	
		People in positions of authority |e330| >> Paraprofessionals support on highlighting similarities and shared interests among students	**[28] [29]**	
		Methods for Education |e130| >> Invite peers that are viewed as positive role models to encourage cohesiveness among the group, through activities such as: conversational exercises, structured games, free play, improvised storytelling and music.	**[35]**	
		People in positions of authority |e330| >> Paraprofessionals identify learners who were having difficulties in interacting with peers, model strategies to help learners engage with each other (e.g. teaching how to start games and activities that are appropriate)	**[37]**	
		Peers |e325| >> Ask peers to sit in physical proximity to target students and support them academically (encouraging contributions to class and group discussion, sharing materials, collaborating on class assignments) and socially (talking about activities, modelling appropriate social skills, making introductions to other classmates)	**[78]**	
		Products for Education |e130| >> Develop with peers an individualized support plan for each target student with support strategies, background on the target student, goals for increasing social interactions between the target student and his/her peers, etc.	**[78]**	
		Methods for Education |e130| >> Assess target students preferred interests and incorporate them into club activities during lunchtime	**[87]**	
		Methods for Education |e130| >> Encourage students to complete home challenges related to the intervention objectives and goals (e.g. observe how others begin conversations and writing a journal about it)	**[13]**	
		Methods for Education |e130| >> During discussions, use a talking stick to remind students to speak one at a time	**[13]**	
		Methods for Education |e130| >> Ask students to say a short sentence several different times with different emotions, and take turns guessing what emotion in being conveyed. This helps students understand the differences in tone and prosody and how these contribute to meaning	**[13]**	
		Methods for Education |e130| >> Ask students to move across a room pretending that the room is filled with different emotions. This way they practice body language to communicate feelings	**[13]**	
		Methods for Education |e130| >> Ask students to pretend to be detectives. They have to interview crime witnesses (other students) and examine nonverbal and contextual cues to solve a mystery	**[13]**	
		Materials for Education |e130| >> Ask students to co-construct a concept diagram on chart paper. This diagram contains characteristics, examples and non-examples, and definition of the target social skill	**[16]**	
		Methods for Education |e130| >> Set up opportunities for students to practice concepts related to the target social skill (e.g. answering questions and reading facial expressions)	**[16]**	
		People in positions of authority |e330| >> Teach paraprofessionals to incorporate students' interests into social games/ activities	**[22]**	
		People in positions of authority |e330| >> Teach paraprofessionals to provide cooperative arrangements (e.g. when playing Legos, sort the pieces by color and assign each student a different color so that students have to cooperate to complete the activity	**[22]**	
		People in positions of authority |e330| >> Teach paraprofessionals to maintain an appropriate distance from the target student	**[22]**	

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT NUMERACY AND CALCULATION

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Acquiring skills |d155| Acquiring skills of numeracy |d1500| Acquiring skills to recognize numerals, arithmetic signs and symbols |d1501| Acquiring skills in using basic operations |d1502| Using skills and strategies to perform simple/ complex numeric calculations |d1720/ d1721|	Products for Education |e130| >> Use of manipulatives to support the counting and basic operations Methods for Education |e130| >> Involve the students in co-operative learning (e.g., small groups of learners working together as a team to solve a problem, complete a task, or accomplish a common goal) Methods for Education |e130| >> Relate numeracy skills and operations to real life contexts Methods for Education |e130| >> Use of problem-based learning activities (i.e., applying facts, concepts and procedures to solve routine problems' or 'deciding procedures for solving complex problems) Methods for Education |e130| >>> Promote time for small group work and/or individual work where pupils are encouraged to work on activities at their own pace and to gain a sense of autonomy Methods for Education |e130| >> Encourage students' critical thinking – analysing, synthetising and evaluating information that is gathered through observation, experience or reasoning Methods for Education |e130| >> Limit the amount of homework to small tasks Methods for Education |e130| >> Use feedback with information and recommendations for students Methods for Education |e130| >> Adjust teaching to students' individual needs and learning styles (in terms of readiness to learn, interest and individual learning profiles) Methods for Education |e130| >> Organise lessons around "big ideas" and interdisciplinary themes to help establish connections with everyday life and other subjects Teacher Support |e330| >> Set and communicate high expectations and encourage the active participation of all students Immediate family |e310| >> Involve parents in intervention programs, in helping their children to learn and enjoy math Teacher Support |e330| >> Encourage students to communicate their understanding of tasks and value and appreciate their ideas Methods for Education |e130| >> Encourage students to participate in their own learning through discussions, project work and practical exercises Methods for Education |e130| >> Lead the students to control their own learning, set clear goals for themselves and monitor their own progress in reaching them Methods for Education |e130| >> Ensure that, once new ideas have been mastered, they are used frequently, consolidated, and applied in future learning (e.g., once the four operations with fractions have been introduced, fractions should feature regularly) Products for Education |e130| >> Allow the use of calculators for checking the work or to reduce the cognitive load on students so they can attend to other mathematical concepts Products for Education |e130| >> Use the ICT to raise the motivation of the students (e.g., to exploit possibilities offered by calculators and computers)	**[1]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT INTERACTIONS AND RELATIONSHIPS

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Respect and warmth in relationships |d7100| Appreciation in relationships |d7101| Relating with persons in authority |d7400|	Teachers' support |e330| >> Make students feel they belong to a group, by recognizing each and every child Teachers' support |e330| >> Build positive interpersonal relationships and interactions with each and every child Teachers' support |e330| >> Take time to get to know each child and the parents (e.g. sharing the meaning behind the child's name) Methods for Education |e130| >> Help students identify their strengths and weaknesses Methods for Education |e130| >> Teach students to express their positive and negative emotions in a wide range of situations Methods for Education |e130| >> Encourage students to participate actively in the planning, implementation and evaluation of initiatives	**[2]**
	Tolerance in relationships |d7102| Criticism in relationships |d7103|	People in positions of authority |e330| >> Reflect the community's cultural diversity, identifying and celebrating special cultural aspects Methods for Education |e130| >> Educate children about equality of rights, acceptance of difference Methods for Education |e130| >> Teach students to demonstrate mindful attention and focused awareness Methods for Education |e130| >> Teach students to take the perspective and empathize with others Methods for Education |e130| >> Help students recognize and appreciate individual and group similarities and differences, diversity and social inclusion	**[2]**
	Social cues in relationships |d7104|	Methods for Education |e130| >> Help students recognize emotions, by identifying and labelling feelings	
	Differentiation of familiar persons|d7106|	People in positions of authority |e330| >> Invite parents to participate in the activities	
	Maintaining social space|d7204| Physical contact in relationships |d7105|	Methods for Education |e130| >> Teach students to manage their emotions and behavior, manage stress and control impulses	
	Regulating behaviors withing interactions|d7202| Interacting according to social rules|d7203|	Peers Support |e325| >> Reinforce desirable behavior, by using praise Methods for Education |e130| >> Develop effective communication to express oneself and positive exchanges with other, using verbal and non-verbal skills Methods for Education |e130| >> Teach constructive conflict resolution (achieving mutually satisfactory resolutions to conflict by addressing the needs of all concerned)	
	Forming relationships|d7200| Terminating relationships|d7201|	Teachers' support |e330| >> Demonstrate how to participate in games and activities to build friendships Products for Education |e130| >> Use assistive technology to enable children's participation in play Methods for Education |e130| >> Teach students to deal with negative relationships such as bullying or violence Methods for Education |e130| >> Help students deal with peer pressure, such as refusing to engage in unwanted, unsafe and unethical conduct	**[2]**
	Relating with equals |d7402|	Methods for education |e325| >> Organize work in groups or pairs and teach students to encourage each other and to appreciate each other's work Peers Support |e325| >> Prompt "buddies"	
	Relating with strangers |d730|	People in positions of authority |e330| >> Promote the use of spaces and surroundings of the community, such as green spaces, playgrounds, forest areas, etc.	

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT ECONOMIC TRANSACTIONS

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students Students with additional support needs	Basic economic transactions |d860| Complex economic transactions |d865|	Education and training Services |e5850| >> Integrate financial literacy into other subjects (for example, use financial literacy to reinforce reading or mathematics) Methods for Education |e130| >> Reinforce basic skills in mathematics and reading, since they are pre-requisites to understanding financial concepts, services and products Education and training Services |e5850| >> Define the contents and skills to be developed (for example, money, transactions, economic concepts) Methods for Education |e130| >> Teach the different forms and purposes of money and how to hand simple monetary transactions (such as payments, value of money, currencies) Methods for Education |e130| >> Help students recognize the difference between needs and wants Methods for Education |e130| >> Teach students to make spending decisions by comparing the value of goods Methods for Education |e130| >> Use problems connected with students' experiences to apply the financial skills (e.g., buying a ticket for transportation in a machine that only accepts coins – to promote skills on changing of banknotes to coins) Methods for Education |e130| >> Use task analysis – segmenting tasks as buying or calculating the change in small steps Products for Education |e130| >> Use the calculator to support and plan money exchanges Methods for Education |e130| >> Use images for corresponding the goods with the coins or banknotes the student has to use Methods for Education |e130| >> Use activities in the community to practice the use of money and to get familiar with financial concepts (e.g., bank, ATM) Methods for Education |e130| >> Reinforce positive attitudes towards learning, such as perseverance and openness to problem solving, as they relate to acquiring core skills and skills in financial decision making Immediate family |e310| >> Incentive parents' involvement in their children's financial education, for example, opening a bank account with their children and teaching them how to use it	**[3]**
	Economic self-sufficiency |d870|	Methods for Education |e130| >> Make students aware of the importance of planning and monitoring income and expenses Methods for Education |e130| >> Help students understand key financial concepts, such as the purpose of income tax or how pension systems function	**[3]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT WORK

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
People in employment and vulnerable groups Students with individual transition plans [W]	Acquiring, keeping and terminating a job |d845| Non-remunerative job |d855|	Methods for Education |e130| >> Develop peer learning on skills needed on the labour market (e.g., reflecting and defining what is important for a job interview) Education and training policies |e5852| >> Establish partnerships with entities of the community to enable real experiences of work Education and training policies |e5852| >> Develop guiding/orientation services in cooperation with social enterprises for labour market inclusion Methods for Education |e130| >> Create moments of reflection with the students to think on personal and professional short and long-term goals Methods for Education |e130| >> Promote students own knowledge on their strengths and needs of support Methods for Education |e130| >> Support the development of individual curriculum vitae and/or visual portfolios (with tangible examples of the skills and difficulties of the student) Products for Education |e130| >> Use of sheets to list what the students already knows to do, the difficulties and the interests in terms of employment Methods for Education |e130| >> Implement self-instruction to develop a self-determined plan of transition (involve the student on defining a goal, a plan of action and on monitoring actions toward the goal) Education and training policies |e5852| >> Cooperate with relevant stakeholders to identify digital skills needs and to apply assistive technology for better employability Processes for Education |e130| >> Make proactive career plans: find role models from the same demographic who have high-achieving careers; present career opportunities that might be outside the learners' lived experiences; look for mentors from local community to support at-risk learners Family Support |e310| >> Engage with parents in setting higher aspirations and career goals; challenge eventual circumscription and compromise in career choices	**[4]** **[5]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT WRITING

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Acquiring skills to use writing implements |d1450|	Methods for Education |e130| >> Discuss didactic choices when using implements for writing, especially when using new technology	**[20]**
		Education and training services|e5850| >> Implement ICT as a planned part of a comprehensive teaching environment with clear goals Education and training services |e5850| >> Teacher training and development improvements associated with ICT in education are to be viewed as part of a broader improvement in the educational environment and not just as a single technology	**[21]**
	Acquiring skills to write symbols, characters and alphabet letters |d1451|	Methods for Education |e130| >> Use a multisensory focus in teaching sounds, involving knowledge about the letters name, visualisation and the sounds they represent and attention to small differences that are visually similar	**[22]**
		Methods for Education |e130| >> Use a balanced AAC system with access to an alphabet, alongside comprehensive literacy instruction	**[23]**
	Acquiring skills to write words and phrases |d1452|	Methods for Education |e130| >> Make informed choices and consider a variety of factors when planning the teaching of writing strategies	**[24]**
		Methods for Education |e130| >> Enhance students' phonological awareness, print awareness, and early reading abilities. Teach the letters of the alphabet and make an explicit link between letters and sounds	**[25]**
	Writing |d170|	Methods for Education |e130| >> Use feedback that contains information about what the student already knows, what needs to be developed and what the student can do to further advance to support all dimensions of students' writing development (positive changes in a students' writing)	**[26]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT MOBILITY

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students Students with physical disabilities	Maintaining body position |d415|	Products for Education |e130| >> To help students maintain an optimal seated position, custom contoured seating systems for wheelchairs or school chairs	**[17]**
		Products for Education |e130| >> To help students maintain an optimal seated position, use hip straps, foot boxes to keep hips bent at 90° angle	**[17]**
		Products for Education |e130| >> If necessary, use various easels, slant boards to place on the lap tray or table to accommodate writing material, keyboards, switches, etc.	**[17]**
	Lifting and carrying objects |d430|	Products for Education |e130| >> Use plates with raised rims for easier scooping, utensils with built-up handles, cups with weighted bottoms, handles or cut-out rims	**[17]**
	Walking |d450|	Products for Education |e130| >> Adapt or change the classroom furniture so it is suitable	**[45]**
		Methods for Education |e130| >> Make the classroom as uncluttered as possible (e.g. chairs pushed under desks and bags stowed away)	**[45]**
		Products for Education |e130| >> Consult about students' functional difficulties and their need for technological assistance for mobility, such as splints, walkers, crutches or a wheelchair	**[17]**
		Products for Education |e130| >> Check for options for physical education classes and outdoor play, such as adapted tricycles, scooters, battery-powered cars, etc.	**[17]**
		Methods for Education |e130| >> Ensure that field trip environments are fully accessible	**[17]**
	Using transportations |d470|	Special education and training services |e5855| >> Include a transportation element in the individual education plan for each child with a disability	**[27]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT SOCIAL AND CIVIC LIFE

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Recreation and leisure |d920|	Processes for Education |e130| >> Capture opportunities by observing the students, allowing time and space for their play and activities, and providing material for student-initiated activities that benefit social interactions Methods for Education |e130| >> Take students' needs and interests as a starting point	**[28]** **[29]**
	Religion and spirituality |d930|	Methods for Education |e130| >> Use multimodal storytelling	**[30]**
	Human Rights |d940|	Education and training policies |e5852| >> Include human rights as part of the teaching Products for Education |e130| >> Use reference toolkits about human rights education	**[31]**
	Political life and citizenship |d950|	Education and training policies |e5852| >> Include citizenship education as part of the teaching (citizens' rights and responsibilities) Education and training policies |e5852| >> Promote learning by doing (through the engagement in creative activities, school trips, contacting with students of other countries)	**[32]** **[33]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT DAILY ROUTINE

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Carrying out daily routine |d230|	Teacher support |e330| >> Avoid conductor style and use dialogue or individual style or group style (only if that really works with this particular group) in managing daily routines, also give options to choose from	**[34, 35, 36, 43, 47]**
		Methods for education |e130| >> Use flexible instruction (use self-talk; give one-to-one instruction, check understanding and fade out assistances (scaffolding);	**[34, 35, 36]**
		Methods for education |e130| >> Use instructional plan sheets and peer instruction (allocate roles, that are reciprocal and guide students giving each other feedback);	**[35, 36, 45, 47]**
		Products for Education |e130| >> Use AT (Assistive Technologies) and ICT (Information and Communication Technology) to provide structure and variety (task lists, picture schedule and calendar, picture based instructions, task specific visual organizing and mapping tools, timer; smartphones, tablets and smartwatches can be used for schedules, reminders or checklists)	**[41, 45]**
		Education and training services |e5850| >> Try to build coherent interdisciplinary services – try to build knowledge on different ways to receive assistance and on the barriers, that a pupil faces in their daily lives; try to collaborate and seek ways to share expertise with other institutions and professionals;	
		Teacher Support |e330| >> Care for close work with parents and learners, speak to them regularly and try to understand their daily lives	**[34, 35, 41, 42, 45, 46, 48, 346]**
	Managing one's own activity level |d2303|	Methods of Education |e130| >> Hear student's voice: give options to choose from in planning (e.g. take personal factors and health related factors into account); promote the knowledge about students' daily routines (e.g. have different ways of accessing information; train monitoring-skills of self-management)	**[34, 47]**
		Teacher Support |e330| >> Foster active participation: recognition, active role, high and adequate expectations, celebration of achievements	
		Education and training services |e5850| >> Promote full participation in extracurricular and out-of-school activities	**[34, 45, 46]**
		Processes of Education | e130 | >> Sequence school-days and lessons: establish routines and rituals (be aware of pupils' different schedules; plan phases of concentration, physical activation and relaxation; give additional time for tasks and various accepted ways to behave when a task is terminated early; implement stress reducing habits schoolwide)	**[35, 45, 46, 47, 48]**

Factors related to the child, group or context (who?)	d-e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Handling responsibilities |d2400|	Methods of Education |e130| >> Develop a growth mindset and use targeted goals (encourage learners to set multiple goals; make clear how a goal is achieved)	**[35, 46, 47]**
		Processes of Education |e130| >> Focus assessment and feedback: make clear for everyone, what pupils know and are capable of doing; plan assessment together with pupils; conduct assessments on key points of a project not just at the end, to acknowledge more achievements; use feedback to directly identify barriers	**[34, 35, 46, 47]**
		Methods of Education |e130| >> Develop incentive- and disincentive-structure (reconsider structurally: which effect does compliance have in different tasks and times of the day; praise and acknowledge achievements; set and agree upon clear class rules and borders)	
		Methods of Education |e130| >> Use peer tutoring (form heterogenous ability pairs; give clear instruction on the task and individual steps; allocate roles, that are reciprocal and guide students giving each other feedback form teams, that compete against each other)	**[34, 35, 45]**
		Teacher support |e330| >> Develop a growth mindset for yourself and take responsibility for all learners: show understanding of the fundamental needs that they all have in common; recognize when learners need support and arrange this sensitively together with the learner, without using potentially limiting labels	**[35, 36, 45]**
		Methods of Education |e130| >> Build collective responsibility in the whole school and with theme-centered teams	
		Family Support |e310| >> Enhance family involvement by sharing responsibilities with parents and pupils	**[34, 35, 36, 42, 43, 46]**
	Handling stress/ crisis |d2401/ d2402|	Methods of Education |e130| >> Develop an acceptable and accommodable environment (check environments on physical and emotional safety and health-promoting practices; set clear rules and routines of following up an infringement; rethink materials and tasks of assessment to avoid cultural bias; in serious crisis, consider temporary re-grouping)	**[36, 41, 43, 45, 46]**
		Peer support |e325| >> Implement collaborative problem solving (when one student is excluded physically, socially or from the instructions of a task, ask students to solve these problems together; lead students through the steps to Identify the issue, generate all possible solutions, screen solutions for feasibility, choose a solution to implement and evaluate the solution; encourage pupils to initiate the problem-solving process; set and agree upon clear class rules and borders	**[35, 36]**
		Teachers' support |e330| >> Take shared responsibility for all learners (build collective responsibility in the whole school)	**[34, 35]**
		Special education and training services |e5853| Paraprofessionals Support |e355| >> Cooperate with healthcare institutions and parents (gather and share knowledge on crisis-intervention; ask parents about special needs of their children in times of crisis)	**[34, 35, 45, 48]**

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Adapting activity level |d2504| *Regulating joy and frustration*	Education and training services |e5850| >> Address poor academic achievement early but be aware of side-effects (avoid class retention, but at the same time be aware, that being supported in a subject can cause pressure and stress; focus on automatization of key skills) Teacher Support |e330| >> Develop a growth mindset and address attributions directly: train learners to re-frame successes or failures based on effort and ability; focus on learning-goals instead of performance-targets to focus on task-oriented learning motivation instead of performance motivation which is ego-oriented, can cause stress and fosters rivalry Methods of Education |e130| >> Assess with individual focus – use concept maps on different occasions to show development in understanding; try to foster self-evaluation; use repeated testing as learning-stimuli, not only as evaluation Education and training policies |e5852| >> Try to make school life more participatory: enhance sense of belonging and feeling of security in the school environment; recognize and celebrate achievements; give responsibility for own learning, active role in learning process) Methods of Education |e130| >> Provide clear rules, contingent praise, routines for infringement, incentive-structure and flexibility (give clear, unambiguous rules; give continuous positive feedback when pupils abide by the rules; provide support through encouragement by teachers and peers when self-control is overstrained) Processes for Education |e130| >> Encourage collaborative problem solving: when one student is excluded physically, socially or from the instructions of a task, ask students to solve these problems together; lead students through the steps: identify the issue, generate all possible solutions, screen solutions for feasibility, choose a solution to implement, evaluate the solution; encourage pupils to initiate the problem-solving process; set and agree upon clear class rules and borders	**[36, 46, 47]** **[46, 47]** **[34, 35, 36, 46, 47]** **[34, 35, 45]** **[35, 36, 45, 47]** **[35, 36, 47]**
	Undertaking a single task |d210| Undertaking multiple tasks |d220| Focusing attention |d160| *Solving tasks without distraction*	Education and Training Policies |e5852| >> Hear student-voice in curriculum and homework (plan a relevant curriculum with students with core and cross curricular competencies, that not only focuses on reading, writing and arithmetic; give tasks to choose from; avoid overwhelming homework) Methods of Education |e130| >> Implement self-management and motivating practices (use systematic reinforcement; train self-reinforcement and self-monitoring) Products of Education |e130| >> Use signal-cards for self-guidance Methods of Education |e130| >> Plan learning-activities, that avoid distraction and focus on automatisms (e.g., relieve working memory by using reductive-organising, memory-aids, listening-strategies, breaks; avoid interferences) Teachers' support |e330| Peer support |e325| >> Focus on care and encouragement Products for Education |e130| >> Use AT (Assistive Technologies) and ICT (Information and Communication Technology) to provide structure and variety (task list, picture based instructions, task specific visual organizing and mapping tools, timers, signal-cards for self-guidance; smartphones, tablets and smartwatches can be used for schedules, reminders or checklists)	**[34, 45, 47]** **[47]** **[47]** **[45, 47]** **[35, 36, 47]** **[41, 45, 47]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT SELF-CARE

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students	Selfcare in washing oneself|d510| Caring for body parts |d5120|	Methods of Education |e130| >> Live culture and rituals together – give orientation in and importance to toileting; develop rituals for self-care in multiple activities; establish routines for orientation	**[48, 49]**
	Toileting |d530| Dressing |d540|	Methods of Education |e130| >> Enable self-determination and autonomy in context of caring (establish a "dialogical attitude" in choosing the caregiver, determining the timing/ duration, the care materials; include health-care related decision making	**[34, 49]**
	Looking after one's health – pain |d570|	Teacher / Paraprofessionals Support |e330| >> Develop adequate levels of assistance on the way from "external care" to "self-care", through gradual activation and development of the independence of those affected	**[34, 49]**
		Teacher/ Paraprofessionals Support |e330| >> Consider pain of pupils with severe disabilities (give time for relationships: good and lasting relationships can give security and recognition; understanding one's environment and experiencing it as controllable can help)	**[49]**
		Special education and training services |e5853| Family Support |e310| >> Cooperate with family – address alcohol- and tobacco-use directly; respect and acknowledge parents and relatives as important contact persons and experts of the daily life; promote the transferring of competences into everyday life	
		Special education and training services |e5853| >> Transfer competences and knowledge from different professionals to different key reference persons plan support goals and coordinate sub-goals in interdisciplinary cooperation	**[34, 35, 41, 42, 45, 46, 48, 49]**
			[34, 35, 41, 42, 45, 46, 48, 49]
	Selfcare in Eating |d550| Drinking |d560|	Methods of Education |e130| >> Live culture and rituals together (e.g., enable pupils to gain different olfactory and gustatory experiences by preparing food together; create orientation with a fixed place, a table saying, prayer or song; enable community-experience in table fellowship that meets needs of people with severe disabilities) Methods of Education |e130| >> Implement perceiving with all senses and acquiring competencies to encourage independence (make eating and drinking a healthy diet as joyful as possible;	**[48, 49]**
		Teacher Support |e330| >> Possibilities for participation and independence can be fostered by guiding the hands and arms while eating and drinking and by including all behaviors that the assisted person conducts in the process into a meaningful activity)	**[48]**
		Special education and training services |e5853| Family Support |e310| >> Cooperate with family – respect and acknowledge parents and relates as important contact persons and experts regarding the food and drinking behavior and preferences of the children; try transferring competences into everyday life	**[48]**
		Special education and training services |e5853| >> Plan support goals and coordinate sub-goals in interdisciplinary cooperation; transfer competences and knowledge from different professionals to different key reference persons)	**[34, 35, 41, 42, 45, 46, 48, 49]**

Matrix 2.0 – Pedagogical situations about Communication

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
Students with disabilities (specially students with hearing impairment and students with communication difficulties)	Communicating with – receiving – nonverbal messages |d315|	Methods for Education |e130| >> Use listening and pronunciation exercises to broaden the vocabulary	**[35]**
	Communicating with – receiving – spoken messages |d310, d320|	Methods for Education |e130| >> Keep eye-contact with students	**[35]**
	Communicating with – receiving – written messages |d325|	Methods for Education |e130| >> Use face-to-face instruction	**[35]**
	Producing nonverbal messages |d335|	Products for Education |e130| >> Use pictograms	**[35]**
	Non-speech vocal expression |d331|	Methods for Education |e130| >> Use partner work	**[35]**
		Products for Education |e130| >> Prepare sound-absorbing rooms	**[35]**
		Methods for Education |e130| >> Choose a good place in the room to co-operate not only with teachers but with the other students	**[35]**
		Methods for Education |e130| >> Introduce training of elaborated speaking for all students	**[35]**
		Methods for Education |e130| >> Use peripatetic supervision	**[36]**
		Methods for Education |e130| >> Name a mentor for each student with disabilities	**[36]**
		Products for Education |e130| >> Use microphone systems at school	**[37]**
		Methods for Education |e130| >> Use diverse communication strategies and adaptations (e.g. optimum material conditions for lip reading)	**[42]**
		Methods for Education |e130| >> Use educational reinforcement measures, curricular adaptation and complementary support along with sign language	**[42]**
		Methods for Education |e130| >> Provide structured opportunities for students to communicate in class	**[45]**
		Methods for Education |e130| >> Speak clearly and concisely to students. Use simple, straightforward language	
		Products for Education |e130| >> When possible/appropriate, use visual aids to make yourself clear and/or consider alternative communication methods	**[45]**
		Methods for Education |e130| >> Proceed from the known to the unknown. Focus on things the students understand	**[45]**
		Products for Education |e130| >> Use technical support when appropriate (e.g. lighting, acoustics and interior design like long curtains (barrier to echo) and chairs with wheels (easier to turn to the speaking person in order to lip-read) and technical equipment like microphones, hearing aids, FM devices and smart boards)	**[45]** **[47]**
All students	Singing |d332|	Method for Education |e130| >> Use music also for language and science instruction	**[35]**

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
Students with disabilities (specially students with hearing impairment and students with communication difficulties)	Speaking |d330, d340|	Methods for Education |e130|	**[34]**
		>> Provide students with opportunities for collaboration and co-operative learning, with flexible peer groups to develop communication skills	
	Conversation |d350|	Education and training services |e5850|	
		>> Through co-operative teaching, provide instruction to increase learning time, reduce behaviour problems, give students an opportunity to participate and teachers to learn from each other	**[35]**
	Discussion |d355|	Methods for Education |e130|	
		>> Describe communication rules and regulations briefly and precisely	
		Methods for Education |e130|	
		>> Allow students sufficient time to ask and answer questions	**[35]**
		Methods for Education |e130|	
		>> When appropriate, ask simple, short questions that require short answers or just a nod or shake of the head	**[45]**
		Methods for Education |e130|	
		Peers |e325|	
		>> Model and encourage all your students to model good communication practice – e.g. to speak clearly, to listen carefully, not to interrupt	**[45]**
		Methods for Education |e130|	
		>> Organise group discussions – students with communication difficulties will benefit from interacting with fluent communicators in your class	**[45]**
			[45]
All students	Writing messages |d345|	Methods for Education |e130|	**[37]**
		>> Promote the excursion into poetic writing as a preparation for dissertations and summaries	
Students with disabilities (specially students with hearing impairment and students with communication difficulties)	Using communication devices and techniques |d360|	Products for Education |e130|	**[35, 36]**
		>> Use PCs and special reading machines, communication equipment and/ or robotics	
		Special education and training policies |e5855|	
		>> Promote more time for tests and/or make test procedure accommodations when necessary, for example, allow students with severe oral communications to take written examination	**[36]**
		Peer Support |e325|	
		>> Ask classmates to support the students with additional communication needs	
		Products for Education |e130|	**[36]**
		>> Make use of gamification (in games, learners need to engage in reciprocal conversations, give commands to other players, share information with them and make requests)	
		Products for Education |e130|	**[38]**
		>> Use ICT for inclusion, which includes mainstream technology commercially available to anyone, such as laptops, tablets and peripherals, whiteboards and mobile phones, and AT that compensate for a learner's particular difficulties or limitations in gaining access to ICT. AT may also include medical (e.g. mobility devices, aids to support hearing) and learning aids (such as screen readers, alternative keyboards, augmentative and alternative communication devices and other specialised applications of technology)	**[41]**
		Products for Education |e130|	
		>> Use AT to facilitate students' access to curriculum and to facilitate inclusive practice such as: individual attention, spell-checker, text-to-speech, training specific skills and planning tools	
		Products for Education |e130|	
		>> Make use of the available audio-visual media (e.g. Warning tones can easily be replaced by, a brief flashing of the screen or visual cues, while automatic subtitling of videos on the major streaming platforms is now of sufficient quality)	**[42]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT ACQUIRING LANGUAGE

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
Students with disabilities (specially students with hearing impairment, students with communication difficulties and students with another mother tongue)	Acquiring single words or meaningful symbols |d1330|	Methods for Education |e130| >> Use co-operative learning to improve reading vocabulary, reading comprehension and language expression	**[35]**
		Products for Education |e130| >> Use translation technologies	**[35]**
	Combining words into phrases |d1331|	Methods for Education |e130| >> Improve the visual literacies of second language educators, making learning more visual through static, dynamic and interactive visuals	**[36]**
	Acquiring syntax |d1332|	Methods for Education |e130| >> Use a plurality of teaching approaches	**[36]**
	Acquiring additional language |d134|	Education and training services |e5850| >> Dialogue with parents – to understand and get proximity with linguist and/cultural diversity	**[36]**
		Education and training services |e5850| >> Accept and promote teaching teams- bilingual teaching is a positive factor of integration	**[36]**
		Methods for Education |e130| >> Use sign language as a reference to enable students to memorize word meanings better, to understand certain syntactic structures, to become aware of the different levels of the language, and to grasp the variations of the meaning of the word depending on the context.	**[36]**
		Education and training services |e5850| >> Provide additional teaching hours for students with another mother tongue	**[37]**
		Methods for Education |e130| >> Provide comprehensive information to families of pupils with SEN and an immigrant background (e.g. using different types of material)	**[38]**
		Methods for Education |e130| >> Use positive approaches to engage students and their parents, focusing on successes	
		Methods for Education |e130| >> Celebrate socio-cultural, cognitive and language diversity of families and students	**[42]**
		Products for Education |e130| >> Have textbooks or learning materials promoting inclusion of ethnic minorities	**[42]**
		Methods for Education |e130| >> Provide early language stimulation of students with an immigrant background: encourage children to speak the language of the host country as well as their mother tongue; help children to reach a good language level; talk to them a lot and let them speak themselves; listen and have an open attitude; support interaction with adults and peers; have dialogues	**[42]**
		Education and training services |e5850| >> Promote the intervention of mother tongue teachers or assistants, bilingual teachers, or special needs teachers in the classroom, alongside the class teacher	**[42]**
		Methods for Education |e130| >> Set up "bridge" classes to support language acquisition for a fixed period	**[42]**
		Methods for Education |e130| >> Provide teaching support for main subjects	**[42]**

MATRIX 2.0 – PEDAGOGICAL SITUATIONS ABOUT LEARNING AND ACQUIRING KNOWLEDGE

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students Students with low vision	Watching |d110|	Methods for Education |e130| >> When reading a story, give students with low vision the opportunity to hold the book so they can see the pictures in front of their eyes	**[12]**
		Methods for Education |e130| >> Make sure there is sufficient lighting in the room so that children with low vision can see as well as possible	**[12]**
		Methods for Education |e130| >> When appropriate, provide students with reading stands, to make it easy to see regular print	**[12]**
		Methods for Education |e130| >> Write in big, bold, clear letters	**[12]**
		Methods for Education |e130| >> Allow students with low vision to seat near the front of the classroom, near the board	**[12]**
		Methods for Education |e130| >> Present information in adaptable formats (e.g. amplify font size)	**[19]**
	Listening |d115|	Methods for Education |e130| >> Speak clearly and concisely to students. Use simple, straightforward language	**[12]**
		Methods for Education |e130| >> Keep the background noise to a minimum	**[12]**
		Methods for Education |e130| >> Get the attention of the students before speaking	**[12]**
		Methods for Education |e130| >> Face students at all time when speaking and maintain eye contact	**[12]**
		Methods for Education |e130| >> Use different means of communication when appropriate (e.g. gestures, body language, facial expression)	**[12]**
		Methods for Education |e130| >> Present information in adaptable formats (e.g. amplify sound)	**[17]**
	Other purposeful sensing |d120|	Methods for Education |e130| >> Use tactile aids in the classroom (e.g. plants, objects, textiles)	**[12]**
		Methods for Education |e130| >> Present information in different sensorial modes	**[19]**
		Methods for Education |e130| >> Display information in visual and non-visual alternatives	**[19]**
	Learning through actions with objects |d131|	Methods for Education |e130| >> Allow the students to learn through experience, through touching, seeing, hearing and doing	**[12]**
		Methods for Education |e130| >> Reinforce learning, providing multiple opportunities for students to practise new skills	**[12]**
		Methods for Education |e130| >> Use materials that are challenging for students	**[19]**
	Rehearsing |d135|	Methods for Education |e130| >> Let students practice similar tasks until every student has understood the subject matter	**[18]**

Factors related to the child, group or context (who?)	d–e relation		
	Activities and Participation/ Environmental Factors (what?)	**Environmental Factors (how and where?)**	**Studies/ frequency**
All students Students with low vision	Acquiring concepts |d137|	Methods for Education |e130| >> Move from the known to the unknown (build on students' existing knowledge and experience)	**[12]**
	Acquiring information |d138|	Methods for Education |e130| >> Segment learning, introduce new topics gradually	**[12]**
		Methods for Education |e130| >> Make learning sequential	**[12]**
		Methods for Education |e130| >> Make the objectives clear	**[12]**
		Methods for Education |e130| >> Use strategies to actively involve students in the learning process	**[12]**
		Methods for Education |e130| >> Use a variety of quality teaching aids and learning materials to illustrate concepts and processes	**[12]**
		Methods for Education |e130| >> Provide many opportunities for students to attempt the task and receive feedback	**[12]**
	Thinking |d163|	Methods for Education |e130| >> Ask students to explain their thinking	**[18]**
		Methods for Education |e130| >> Encourage students' critical thinking – analysing, synthetising and evaluating information that is gathered through observation, experience or reasoning	**[1]**
		Methods for Education |e130| >> Teach metacognitive strategies	**[48]**
		Methods for Education |e130| >> Model your own thinking to demonstrate metacognitive strategies	**[48]**
	Solving problems |d175|	Methods for Education |e130| >> Organize students to work in small groups to achieve a joint solution to a problem	**[18]**
		Methods for Education |e130| >> Encourage students to work together to solve problems	**[18]**
		Methods for Education |e130| >> Encourage students to solve problems in more than one way	**[18]**
		Methods for Education |e130| >> Ask students to provide written explanations of how they solve problems	**[18]**
	Making decisions |d177|	Methods for Education |e130| >> Involve students' and their family's voices in decision-making affecting their lives (specially concerning their assessment, planning their learning, providing them support, curriculum and evaluating learning outcomes)	**[1]**
		Methods for Education |e130| >> Provide students with relevant information in appropriate formats to enable their participation in decision-making	**[1]**

FINAL REMARKS

In this report – that is the main result of the work package 1 of the Erasmus Project I AM – we intended to contribute to the identification of trends, principles and contents that guide good practices on inclusive assessment and supports implementation in school context.

From the analysis of policies of 6 European countries (Austria, Belgium, Norway, Sweden, Germany and Portugal) and of their commonly used frameworks and tools, we outlined good practices tendencies regarding the purpose, the targets, the methods, the contexts, and the professionals (i.e., the "why" and the "for what", the "what", the "how", the where and the who questions) involved in the inclusive assessment and supports implementation.

An overview of reviews was also presented in order to systematize good practices revealed in the literature concerning inclusive-oriented assessment and intervention programs. That enabled us not only to complement the good practices tendencies identified from the policies analysis, but also, to identify most relevant interactions of students' Activities and Participation (d codes) and influent Environmental Factors (e codes). From the examination of 19 reviews we identified the most relevant d-e relations approached in the studies. That served to base the further mapping of more specific d-e relations from the examination of the primary studies included in the reviews.

From the examination and mapping on the ICF-CY of the supports presented in 102 studies (primary studies that follow the defined criteria) and 49 documents of reference authorities, we presented a matrix covering around 77 school-related d categories (i.e., categories of Activities and Participation) to which we systematized 430 evidence-based environmental supports framed into 8 school-based e categories (i.e., environmental factors). This Matrix that entails a version 1.0 and a version 2.0 intends to be a resource to drive the action of educational teams in problem-solving processes related with different pedagogical situations.

Co-funded by the Erasmus+ Programme of the European Union

REFERENCES

REFERENCES (MATRIX 1.0)

[1] Denton, C.A., J.M. Fletcher, J.L. Anthony, and D.J. Francis. 2006. An evaluation of intensive intervention for students with persistent reading difficulties. Journal of Learning Disabilities 39, no. 5: 447–66.

[2] Allor, J. H., Mathes, P. G., Roberts, J. K., Cheatham, J. P., & Champlin, T. M. (2010). Comprehensive reading instruction for students with intellectual disabilities: Findings from the first three years of a longitudinal study. *Psychology in the Schools, 47*(5), 445–466. https://doi.org/10.1002/pits.20482.

[3] Andreassen, R., & Bråten, I. (2011). Implementation and effects of explicit reading comprehension instruction in fifth-grade classrooms. *Learning and Instruction, 21*(4), 520–537. https://doi.org/10.1016/j. learninstruc.2010.08.003.

[4] Bui, Y. N., Schumaker, J. B., & Deshler, D. D. (2006). The effects of a strategic writing program for students with and without learning disabilities in inclusive fifth-grade classes. *Learning Disabilities Research & Practice, 21*, 244 –260.

[5] Calhoon, M. B. (2005). Effects of a peer-mediated phonological skill and reading comprehension program on reading skill acquisition for middle school students with reading disabilities. *Journal of Learning Disabilities, 38*(5), 424–433.

[6] Lee, Y. (2014). Promise for enhancing children's reading attitudes through peer reading: A mixed method approach. *The Journal of Educational Research, 107*(6), 482–492. https://doi.org/10.1080 /00220671.2013.836469.

[7] Lubliner, S., & Smetana, L. (2005). The effects of comprehensive vocabulary instruction on title I students' metacognitive word-learning skills and reading comprehension. *Journal of Literacy Research, 37*, 163–200. https://doi.org/10.1207/s15548430jlr3702_3

[8] Mason, L.H., Davison, M.D., Hammer, C.S. et al. (2013). Knowledge, writing, and language outcomes for a reading comprehension and writing intervention. *Reading & Writing, 26*(7), 1133–1158. https://doi. org/10.1007/s11145-012-9409-0.

[9] Mavropoulou, S., and G. D. Sideridis. 2014. "Knowledge of Autism and Attitudes of Children Towards Their Partially Integrated Peers with Autism Spectrum Disorders." *Journal of Autism and Developmental Disorders 44* (8): 1867–1885. doi:10.1007/s10803-014-2059-0.

[10] Menting, B., Koot, H., & van Lier, P. (2015). Peer acceptance and the development of emotional and behavioural problems: Results from a preventive intervention study. *International Journal of Behavioral Development, 39*(6), 530–540. 10.1177/016502541458853.

[11] Rosario Ortiz González del, M., A.I. Espinel, and R.G. Rosquete. 2002. Remedial interventions for children with reading disabilities: speech perception – an effective component in phonological training? *Journal of Learning Disabilities 35*, no. 4: 334–42.

[12] Spörer, N., & Brunstein, J. C. (2009). Fostering the reading comprehension of secondary school students through peer-assisted learning: Effects on strategy knowledge, strategy use, and task performance. *Contemporary Educational Psychology, 34*(4), 289–297.

[13] L. A. Guli, L.A., Semrud-Clikeman, M., Lerner, M. D., and Britton, N. (2013). Social Competence Intervention Program (SCIP): A pilot study of a creative drama program for youth with social difficulties. *The Arts in Psychotherapy, 40*, 1, 37–44.

[14] Graham-Day, K., Gardner, R. I.,II, & Hsin, Y. (2010). Increasing on-task behaviors of high school students with attention deficit hyperactivity disorder: Is it enough? *Education & Treatment of Children, 33*(2), 205-221. doi:10.1353/etc.0.0096

[15] Riesen, T., McDonnell, J., Johnson, J. W., Polychronis, S., & Jameson, M. (2003). A comparison of constant time delay and simultaneous prompting within embedded instruction in general education classes with students with moderate to severe disabilities. Journal of Behavioral Education, 12, 241-259. doi:10.1023/A:1026076406656

[16] Laushey KM, Heflin LJ, Shippen M, et al. (2009) Concept mastery routines to teach social skills to elementary children with high functioning autism. Journal of Autism and Developmental Disorders 39: 1435–1448.

[17] Tekin-Iftar E, Olcay-Gul S. Increasing instructional efficiency when using simultaneous prompting procedure in teaching academic skills to students with autism spectrum disorders. Int Electr J Element Educ. 2016;9:451–472.

[18] Spörer, N., Brunstein, J.C., & Kieschke, U. (2009). Improving students' reading comprehension skills: Effects of strategy instruction and reciprocal teaching. Learning and Instruction, 19(3), 272–286. https://doi. org/10.1016/j.learninstruc.2008.05.003.

[19] Mason, R., Kamps, D., Turcotte, A., Cox, S., Feldmiller, S., & Miller, T. (2014). Peer mediation to increase communication and interaction at recess for students with autism spectrum disorders. Research in Autism Spectrum Disorders, 8(3), 334-344. http://dx.doi.org/10.1016/j.rasd.2013.12.014.

[20] Reis, S. M., Eckert, R. D., McCoach, D. B., Jacobs, J. K., & Coyne, M. (2008). Using enrichment reading practices to increase reading fluency, comprehension, and attitudes. The Journal of Educational Research, 101(5), 299–315. https://doi.org/10.3200/JOER.101.5.299-315.

[21] Jimenez, B.A., Browder, D. M., Spooner, F., & DiBiase, W. (2012). Inclusive inquiry science using peer-mediated embedded instruction for students with moderate intellectual disabilities. Exceptional Children, 78(3), 301-317.doi: 10.1177/001440291207800303

[22] Koegel RL, Kim S and Koegel LK (2014) Training paraprofessionals to improve socialization in students with ASD. Journal of Autism and Developmental Disorders 44: 2197– 2208.

[23] Pariseau, M. E., Fabiano, G. A., Massetti, G. M., Hart, K. C., & Pelham, W. E., Jr. (2010). Extended time on academic assignments: Does increased time lead to improved performance for children with attention-Deficit/Hyperactivity disorder? School Psychology Quarterly, 25(4), 236-248. doi:10.1037/a0022045

[24] Agran, M., Wehmeyer, M. L., Cavin, M., & Palmer, S. (2008). Promoting student active classroom participation skills through instruction to promote self-regulated learning and self-determination. Career Development for Exceptional Individuals, 31, 106-114. doi:10.1177/0885728808317656

[25] Brock, M. E., Biggs, E. E., Carter, E. W., Cattey, G. N., & Raley, K. S. (2016). Implementation and generalization of peer support arrangements for students with severe disabilities in inclusive classrooms. The Journal of Special Education, 49, 221-232. doi:10.1177/0022466915594368

[26] Aaron, P.G., Joshi, R.M, Gooden, R., & Bentum, K.E. (2008). Diagnosis and treatment of reading disabilities based on the component model of reading: An alternative to the discrepancy model of LD. Journal of Learning Disabilities, 41, 67–84. https://doi.org/10.1177/0022219407310838

[27] Barlow, A., Humphrey, N., Lendrum, A., Wigels-worth, M., & Squires, G. (2015). Evaluation of the implementation and impact of an integrated prevention model on the academic progress of students with disabilities. *Research in Developmental Disabilities, 36*, 505–525.

[28] Carter, E. W., Sisco, L. G., Melekoglu, M. A., & Kurkowski, C. (2007). Peer supports as an alternative to individually assigned paraprofessionals in inclusive high school classrooms. *Research and Practice for Persons with Severe Disabilities, 32*, 213-227. doi:10.2511/rpsd.32.4.213

[29] Chung, Y. C., & Carter, E. W. (2013). Promoting peer interactions in inclusive classrooms for students who use speech-generating devices. Research and Practice for Persons with Severe Disabilities, 38, 94-109. doi:10.2511/027494813807714492

[30] Desbiens, N., & Royer, E. (2003). Peer groups and behaviour problems. Emotional and Behavioural Difficulties, 8 (2), 120-139. 10.1080/13632750300507012.

[31] Feldman, E. and Matos, R. (2013). Training paraprofessionals to facilitate social interactions between children with autism and their typically developing peers. *Journal of Positive Behavior Interventions 15*: 169–179.

[32] Germer, K. A., Kaplan, L. M., Giroux, L. N., Markham, E. H., Ferris, G. J., Oakes, W. P., & Lane, K. L. (2011). A function--based intervention to increase a second-grade student's on-task behavior in a general education classroom. *Beyond Behavior, 20*(3), 19-30.

[33] Guthrie, J.T., McRae, A., Coddington, C.S., Lutz Klauda, S., Wigfield, A., & Barbosa, P. (2009). Impacts of comprehensive reading instruction on diverse outcomes of low- and high--achieving readers. Journal of Learning Disabilities, 42(3), 195–214. https://doi.org/10.1177/0022219408331039.

[34] Hartzell, R., Liaupsin, C., Gann, C., & Clem, S. (2015). Increasing social engagement in an inclusive environment. Education and Training in Autism and Developmental Disabilities, 50, 264 –277.

[35] Kasari C, Dean M, Kretzmann M, et al. Children with autism spectrum disorder and social skills groups at school: a randomized trial comparing intervention approach and peer composition. J Child Psychol Psychiatr. 2016;57(2):171–179.

[36] King-Sears, M. E., T. M. Johnson, S. Berkeley, M. P. Weiss, E. E. Peters-Burton, A. S. Evmenova, A. Menditto, and J. C. Hush. 2015. "An Exploratory Study of Universal Design for Teaching Chemistry to Students with and without Disabilities." Learning Disability Quarterly 38 (20): 84–96.

[37] Kretzmann, M., Shih, W., & Kasari, C. (2015). Improving peer engagement of children with autism on the school playground: A randomized controlled trial. Behavior Therapy, 46(1), 20-28. http://dx.doi.org/10.1016/j.beth.2014.03.006.

[38] Licciardello CC, Harchik AE and Luiselli JK (2008) Social skills intervention for children with autism during interactive play at a public elementary school. Education & Treatment of Children 31: 27–37.

[39] Lovett, M. W., Lacerenza, L., De Palma, M., & Frijters, J. C. (2012). Evaluating the efficacy of remediation for struggling readers in high school. Journal of Learning Disabilities, 45(2), 151–169. https://doi.org/10.1177 /0022219410371678.

[40] Mason R, Kamps D, Turcotte A, et al. (2014) Peer mediation to increase communication and interaction at recess for students with autism spectrum disorders. Research in Autism Spectrum Disorders 8: 334–344.

[41] McCurdy, E. E., & Cole, C. L. (2014). Use of a peer support intervention for promoting academic engagement of students with autism in general education settings. Journal of Autism and Developmental Disorders, 44(4), 883–893. https://doi.org/10.1007/ s10803-013-1941-5

[42] Pang, W. C., & Zhang, K. C. (2011). Reading intervention for secondary students with hyperactive behaviours in hong kong. Emotional & Behavioural Difficulties, 16(1), 69-85.

[43] Reeves, L. M., Umbreit, J., Ferro, J. B., & Liaupsin, C. J. (2013). Function-based intervention to support the inclusion of students with autism. Education and Training in Autism and Developmental Disabilities, 48, 379 –391.

[44] Schmidt, C., & Stichter, J. P. (2012). The use of peer-mediated interventions to promote the generalization of social competence for adolescents with high-functioning autism and Asperger's syndrome. Exceptionality, 20(2), 94–113.

[45] Simmons, D., Hairrell, A., Edmonds, M., Vaughn, S., Larsen, R., Willson, V., et al. (2010). A comparison of multiple-strategy methods: Effects on fourth-grade students' general and content-specific reading comprehension and vocabulary development. Journal of Research on Educational Effectiveness, 3(2), 121–36; 156.

[46] Sokal, L., and J. Katz. 2015. "Effects of the Three-Block Model of Universal Design for Learning on Early and Late Middle School Students' Engagement." Middle Grades Research Journal 10 (2): 65–82.

[47] Thiemann KS and Goldstein H (2001) Social stories, written text cues, and video feedback: effects on social communication of children with autism. Journal of Applied Behavior Analysis 34: 425–446.

[48] Waller, R. J., Albertini, C. L., & Waller, K. S. (2011). Self-monitoring of performance to promote accurate work completion: A functional based intervention for a 4th grade student presenting challenging behavior. Advances in School Mental Health Promotion, 4(1), 52-60. doi:10.1080/17547 30X.2011.9715623

[49] Agran, M., Blanchard, C., Wehmeyer, M., & Hughes, C. (2001). Teaching students to self-regulate their behavior: The differential effects of student- vs. teacher-delivered reinforcement. Research in Developmental Disabilities, 22, 319-332. doi:10.1016/S0891-4222(01)00075-0

[50] Agran, M., Blanchard, C., Wehmeyer, M., & Hughes, C. (2002). Increasing the problem-solving skills of students with developmental disabilities participating in general education. Remedial and Special Education, 23, 279-288. doi:10.1177/07419325020230050301

[51] Allday, R. A., Hinkson-Lee, K., Hudson, T., Neilsen-Gatti, S., Kleinke, A., & Russel, C. S. (2012). Training general educators to increase behavior-specific praise: Effects on students with EBD. Behavioral Disorders, 37(2), 87-98.

[52] Asaro-Saddler K, Saddler B. Planning instruction and self-regulation training: effects on writers with autism spectrum disorders. Except Child. 2010; 77(1):107–124.

[53] Boudreau J and Harvey MT (2013) Increasing recreational initiations for children who have ASD using video self-modeling. Education & Treatment of Children 36: 49–60.

[54] Elbro, C. & Buch-Iversen, I. (2013). Activation of background knowledge for inference making: Effects on reading comprehension. Scientific Studies of Reading, 17(6), 435–452. https://doi.org/10.1080 /10888438.2013.774005.

[55] Fang, Z., & Wei, Y. (2010). Improving middle school students' science literacy through reading infusion. Journal of Educational Research, 103(4), 262–12; 273.

[56] Gureasko-Moore, S., DuPaul, G. J., & White, G. P. (2006). The effects of self-management in general education classrooms on the organizational skills of adolescents with ADHD. Behavior Modification, 30(2), 159-183. doi:10.1177/0145445503259387

[57] Hoff, K. E., & Ervin, R. A. (2013). Extending self-management strategies: The use of a classwide approach. Psychology in the Schools, 50(2), 151-164. doi:10.1002/pits.21666

[58] Hughes, C., Bernstein, R. T., Kaplan, L. M., Reilly, C. M., Brigham, N. L., Cosgriff, J. C., & Boykin, M. P. (2013). Increasing conversational interactions between verbal high school students with autism and their peers without disabilities. *Focus on Autism and Other Developmental Disabilities*, *28*, 241-254. doi:10.1177/1088357613487019

[59] Jameson, J. M., McDonnell, J., Polychronis, S., & Riesen, T. (2008). Embedded, constant time delay instruction by peers without disabilities in general education classrooms. Intellectual and Developmental Disabilities, 46, 346- 363. doi:10.1352/2008.46:346-363

[60] Jameson, J. M., Walker, R., Utley, K., & Maughan, R. (2012). A comparison of embedded total task instruction in teaching behavioral chains to massed one-on-one instruction for students with intellectual disabilities: Accessing general education settings and core academic content. *Behavior Modification*, *36*, 320 –340.

[61] Jones N, Weber KP, McLaughlin TF. No teacher left behind: educating students with ASD and ADHD in the inclusion classroom. J Spec Educ Apprent. 2013;2:1–22.

[62] Kern, L., Delaney, B., Clarke, S., Dunlap, G., & Childs, K. (2001). Improving the classroom behavior of students with emotional and behavioral disorders using individualized curricular modifications. Journal of Emotional and Behavioral Disorders, 9(4), 239-247. doi:10.1177/106342660100900404

[63] Lambert, M. C., Cartledge, G., Heward, W. L., & Lo, Y. (2006). Effects of Response Cards on disruptive behavior and academic responding during math lessons by fourth-grade urban students. Journal of Positive Behavior Interventions, 8(2), 88-99.

[64] Miller, C. A., Darch, C. B., Flores, M. M., Shippen, M. E., & Hinton, V. (2011). Main idea identification with students with mild intellectual disabilities and specific learning disabilities: A comparison of explicit and basal instructional approaches. Journal of Direct Instruction, 11, 15–29.

[65] Rafferty, L. A., Arroyo, J., Ginnane, S., & Wilczynski, K. (2011). Self-monitoring during spelling practice: Effects on spelling accuracy and on-task behavior of three students diagnosed with attention deficit hyperactivity disorder. Behavior Analysis in Practice, 4(1), 37-45.

[66] Sreckovic, M. A., K. Hume, and H. Able. 2017. "Examining the Efficacy of Peer Network Interventions on the Social Interactions of High School Students with Autism Spectrum Disorder." Journal of Autism and Developmental Disorders 47 (8): 2556–2574. doi:10.1007/ s10803-017-3171-8.

[67] Trottier, N., Kamp, L., & Mirenda, P. (2011). Effects of peer--mediated Instructions to teach use of speech-generating devices to students with autism in social game routines. Informa Healthcare, 27(1), 26–39.

[68] van den Berg, Y. H. M., & Stoltz, S. (2018). Enhancing social inclusion of children with externalizing problems through classroom seating arrangements: A randomized controlled trial. Journal of Emotional and Behavioral Disorders, 26(1), 31–41. 10.1177/1063426617740561

[69] Alfassi, M. (2009). The efficacy of a dialogic learning environment in fostering literacy. Reading Psychology, 30(6), 539–25; 563

[70] Campbell, J. 2007. "Middle School Students' Response to the Self-introduction of a Student with Autism: Effects of Perceived Similarity, Prior Awareness, and Educational Message." Remedial and Special Education 28 (3): 163–173. doi:10.1177/07419325070280030501

[71] Campbell, J. M., Ferguson, J. E., Herzinger, C. V., Jackson, J. N., and Marino, C. (2005). Peers' attitudes toward autism differ across sociometric groups: an exploratory investigation. *J. Dev. Phys. Disabil.* 17, 281–298. doi: 10.1007/ s10882-005-4386-8

[72] De Boer, A., Pijl, S. J., Minnaert, A., and Post, W. (2014). Evaluating the effectiveness of an intervention program to influence attitudes of students towards peers with disabilities. *J. Autism Dev. Disord.* 44, 572–583

[73] Fuchs, D., Fuchs, L. S., Mathes, P. G., & Martinez, E. A. (2002). Preliminary evidence on the social standing of students with learning disabilities in PALS and no-PALS classrooms. Learning Disabilities Research & Practice, 17(4), 205-215

[74] Kapalka, G. M. (2005). Avoiding repetitions reduces ADHD children's management problems in the classroom. *Emotional & Behavioural Difficulties, 10*(4), 269-279

[75] Marom, M., Cohen, D., and Naon, D. (2007). Changing disability-related attitudes and self-efficacy of Israeli children via the Partners to Inclusion Programme. *Int. J. Disabil. Dev. Educ.* 54, 113–127

[76] Shogren, K. A., Palmer, S. B., Wehmeyer, M. L., Williams--Diehm, K., & Little, T. D. (2012). Effect of intervention with the self-determined learning model of instruction on access and goal attainment. *Remedial and Special Education, 33*, 320 –330

[77] Simmons, D., Fogarty, M., Oslund, E. L., Simmons, L., Hairell, A., Davis, J., Anderson, L., Clemens, N, Vaughn, S., Roberts, G., Stillman, S., & Fall, A. (2014). Integrating content knowledge--building and student- regulated comprehension practices in secondary English arts classes. Journal of Research on Educational Effectiveness, 7(4), 309–330

[78] Carter, E. W., Asmus, J., Moss, C. K., Biggs, E. E., Bolt, D. M., Born, T. L., & Weir, K. (2016). Randomized evaluation of peer support arrangements to support the inclusion of high school students with severe disabilities. *Exceptional Children*, *82*, 209-233. doi:10.1177/0014402915598780

[79] Gresham, F. M., Van, M. B., & Cook, C. R. (2006). Social skills training for teaching replacement behaviors: Remediating acquisition deficits in at-risk students. *Behavioral Disorders*, *31*(4), 363-377.

[80] Gureasko-Moore, S., DuPaul, G. J., & White, G. P. (2007). Self-management of classroom preparedness and homework: Effects on school functioning of adolescents with attention deficit hyperactivity disorder. *School Psychology Review*, *36*(4), 647-664.

[81] Hoff, K. E., Ervin, R. A., & Friman, P. C. (2005). Refining functional behavioral assessment: Analyzing the separate and combined effects of hypothesized controlling variables during ongoing classroom routines. *School Psychology Review*, *34*(1), 45-57.

[82] Hughes, C., Copeland, S. R., Agran, M., Wehmeyer, M. L., Rodi, M. S., & Presley, J. A. (2002). Using self-monitoring to improve performance in general education high school classes. *Education and Training in Mental Retardation and Developmental Disabilities*, *37*, 262-272

[83] Iskander, J. M., & Rosales, R. (2013). An evaluation of the components of a social stories™ intervention package. *Research in Autism Spectrum Disorders*, *7*(1), 1-8. doi:10.1016/j.rasd.2012.06.004

[84] Kasari C, Rotheram-Fuller E, Locke J, et al. Making the connection: randomized controlled trial of social skills at school for children with autism spectrum disorders. J Child Psychol Psych. 2012;53(4): 431–439.

[85] Kilgus, S. P., Fallon, L. M., & Feinberg, A. B. (2016). Function--based modification of Check-In/Check-Out to influence escape-maintained behavior. Journal of Applied School Psychology, 32(1), 24-45.

[86] Klavina, A., and Block, M. E. (2008). The effect of peer tutoring on interaction behaviors in inclusive physical education. *Adapted Phys. Act. Quart.* 25, 132–158. doi: 10.1123/apaq.25.2.132

[87] Koegel, R., Kim, S., Koegel, L., & Schwartzman, B. (2013). Improving socialization for high school students with ASD by using their preferred interests. Journal of Autism and Developmental Disorders, 43, 2121–2134.

[88] Lien-Thorne, S., & Kamps, D. (2005). Replication study of the First Step to Success Early Intervention Program. *Behavioral Disorders*, *31*(1), 18-32.

[89] Mason, R., et al. (2013). Peer mediation to increase communication and interaction at recess for students with autism spectrum disorders. Research in Autism Spectrum Disorders. doi:10.1016/ j.rasd.2013.12.014.

[90] McDonnell, J., Johnson, J. W., Polychronis, S., & Riesen, T. (2002). Effects of embedded instruction on students with moderate disabilities enrolled in general education classes. *Education and Training in Mental Retardation and Developmental Disabilities*, *37*, 363-377.

[91] McKeown, M. G., Beck, I. L., & Blake, R. G. K. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. Reading Research Quarterly, 44(3), 218–253.

[92] Miller, L. M., Dufrene, B. A., Sterling, H. E., Olmi, D. J., & Bachmayer, E. (2015). The effects of Check-In/Check-Out on problem behavior and academic engagement in elementary school students. *Journal of Positive Behavior Interventions*, *17*(1), 28–38.

[93] Moore, D. W., Anderson, A., & Kumar, K. (2005). Instructional adaptation in the management of escape-maintained behavior in a Classroom. *Journal of Positive Behavior Interventions*, *7*(4), 216–223.

[94] Restori, A. F., Gresham, F. M., Chang, T., Lee, H. B., & Laija--Rodriquez, W. (2007). Functional assessment-based interventions for children at-risk for emotional and behavioral disorders. *The California School Psychologist*, *12*, 9- 30.

[95] Rock, M. L. (2005). Use of strategic self-monitoring to enhance academic engagement, productivity, and accuracy of students with and without exceptionalities. *Journal of Positive Behavior Interventions*, *7*(1), 3-17.

[96] Schünemann, N., Spörer, N., Brunstein, J.C. (2013). Integrating self-regulation in whole-class reciprocal teaching: A moderator–mediator analysis of incremental effects on fifth graders' reading comprehension. Contemporary Educational Psychology, 38(4), 289–305. https://doi.org/10.1016/j.cedpsych.2013.06.002.

[97] Souvignier, E. & Mokhlesgerami, J. (2006). Using self--regulation as a framework for implementing strategy-instruction to foster reading comprehension. Learning & Instruction, 16(1), 57–71. https://doi.org/10.1016/j.learninstruc.2005.12.006.

[98] Stahr, B., Cushing, D., Lane, K., & Fox, J. (2006). Efficacy of a function-based intervention in decreasing off-task behavior exhibited by a student with ADHD. *Journal of Positive Behavior Interventions*, *8*(4), 201-211. doi:10.1177/10983007060080040301

[99] Swaim, K. F., and S. B. Morgan. 2001. "Children's Attitudes and Behavioural Intentions Toward a Peer with Autistic Behaviors: Does a Brief Educational Intervention Have an Effect?" Journal of Autism and Developmental Disorders 31 (2): 195–205. doi:10.1023/A:1010703316365.

[100] Thiemann KS and Goldstein H (2004) Effects of peer training and written text cueing on social communication of school-age children with pervasive developmental disorder.

[101] Trussell, R. P., Lewis, T. J., & Raynor, C. (2016). The impact of universal teacher practices and function-based behavior interventions on the rates of problem behaviors among at-risk students. *Education and Treatment of Children*, *39*(3), 261-282.

[102] Wu, C., Lo, Y., Feng, H., & Lo, Y. (2010). Social skills training for Taiwanese students at risk for emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, *18*(3), 162-177.

REFERENCES (MATRIX 2.0)

[1] European Agency for Special Needs and Inclusive Education, 2011. Key Principles for Promoting Quality in Inclusive Education – Recommendations for Practice. (V. Donnelly, ed.). Odense, Denmark

https://www.european-agency.org/file/11239/download?token=WPNEhxar

[2] European Agency for Special Needs and Inclusive Education, 2001. Inclusive Education and Effective Classroom Practice 2001. (C.J.W. Meijer, ed.). Odense, Denmark

https://www.european-agency.org/file/10948/download?token=yLZ00Day

[3] European Agency for Special Needs and Inclusive Education, 2001. Inclusive Education and Classroom Practice in Secondary Education 2004. (C.J.W. Meijer, ed.). Odense, Denmark

https://www.european-agency.org/file/10949/download?token=3P7KLi29

[4] European Agency for Special Needs and Inclusive Education, 2022. Inclusive Digital Education. (H. Weber, A. Elsner, D. Wolf, M. Rohs and M. Turner-Cmuchal, eds.). Odense, Denmark

https://www.european-agency.org/file/20477/download?token=Urk66Vtx

[5] Sweden's National Agency for Special Needs Education and Schools, 2016. The HODA Project - Assistive Listening and Communication Devices at School (English Translation). (H. Bergkvist, L. Coniavitis Gellerstedt). Stockholm Sweden.

https://webbutiken.spsm.se/globalassets/publikationer/filer/assistive-listening-and-communication-devices-at-school2.pdf/

[6] European Agency for Special Needs and Inclusive Education, 2014: Vocational Education and Training (VET) – Summary of Country Information (Editor: A. Granados). Odensee, Denmark.

https://www.european-agency.org/sites/default/files/VET%20Summary%20of%20Country%20information%202014.pdf

[7] European Agency for Development in Special Needs Education, 2013. Information and Communication Technology for Inclusion – Developments and Opportunities for European Countries. (A. Watkins, ed.). Odense, Denmark

https://www.european-agency.org/file/15735/download?token=60BABaUY

[8] European Agency for Development in Special Needs Education (2013) Information and Communication Technology for Inclusion – Research Literature Review. (T. Waller and A. Watkins, eds.). Odense, Denmark

https://www.european-agency.org/sites/default/files/ict4i-research-literature-review_ICT4I-Research-Literature-Review.pdf

[9] European Agency for Special Needs and Inclusive Education, 2009. Multicultural Diversity and Special Needs Education. (A. Grünberger, M. Kyriazopoulou and V. Soriano, eds.). Odense, Denmark

https://www.european-agency.org/file/10977/download?token=JAvCWq9U

[10] UNESCO, Network of Education Policy Centers, European Agency for Special Needs and Inclusive Education, 2021. Global Education Monitoring Report 2021 – Central and Eastern Europe, the Caucasus and Central Asia – Inclusion and education: All means all. Paris: UNESCO

https://www.european-agency.org/file/20197/download?token=03fzJCch

[11] Education Trade Union Committee for Education (ETUCE), 2021. Catalogue of Good Practices on Inclusive Schools

https://www.csee-etuce.org/images/Publications/Catalogue_Inclusive_Schools-web.pdf

[12] Sightsavers, 2018. Inclusive education for children with disabilities: teacher training pack.

https://www.sightsavers.org/wp-content/uploads/2019/03/Sightsavers-inclusive-education-for-children-with-disabilities-Teacher-training-pack.pdf

[13] European Agency for Special Needs and Inclusive Education, 2019

https://www.european-agency.org/file/19687/download?token=sui8HZ6H

[14] Schmid, Christoph (2021). Handlungsmöglichkeiten in den Bereichen Lernen und Wissensanwendung sowie Aufgaben und Anforderungen: Generalisierte Lernstörungen und Aufmerksamkeitsdefizit-/Hyperaktivitätsstörung. In A. Kunz, R. Luder & C. Müller Bösch (Hrsg.) (2021). Inklusive Pädagogik und Didaktik. Vollst. überarb. Neuaufl. Bern: hep Verlag, 218-261.

[15] Damag, A. (2016). *Essen – Trinken – Verdauen: Förderung, Pflege und Therapie bei Menschen mit schwerer Behinderung, Erkrankung und im Alter*(1. Auflage.). Bern: Hogrefe.

[16] Schlichting, H. (2013). *Pflege bei Menschen mit schwerer Behinderung: Ein Praxisbuch*. Düsseldorf: Verl. Selbstbestimmtes Leben.

[17] Special Needs Technology Assessment Resource Support Team, Meeting the Needs of Students with Physical Disabilities

[18] Le Donné, N., P. Fraser and G. Bousquet (2016), «Teaching Strategies for Instructional Quality: Insights from the TALIS-PISA Link Data», OECD Education Working Papers, No. 148, OECD Publishing, Paris, https://doi.org/10.1787/5jln1hlsr0lr-en.

[19] https://www.dge.mec.pt/sites/default/files/EEspecial/manual_de_apoio_a_pratica.pdf

[20]Att skriva med och utan digitala verktyg Marie Nordmark, Högskolan Dalarna https://larportalen.skolverket.se/#/modul/9-lasa-skriva-rakna/Grundskola/036a_tidig-skrivundervisning/del_07/

[21] Morgan, Konrad, Morgan, Maddy, Johansson, Lotta & Ruud Erik (2016). A systematic mapping of the effects of ICT on learning outcomes. Knowledge center for education: Oslo.

[22] Bokstavskunskap (Alphabetic knowledge) Inger Fridolfsson

https://legilexi.org/inspirationsbibliotek/avkodning/bokstavskunskap/

[23] Symbol-based AAC Learners need access to the alphabet

https://www.assistiveware.com/learn-aac/using-symbols-and-text-for-communication

[24] Reading comprehension and reading strategy instruction

https://www.skolfi.se/other-languages/english/research-summaries/reading-comprehension-and-reading-strategy-instruction/

[25] Phonological Awareness Training plus Letter Knowledge Training

What works clearinghouse https://ies.ed.gov/ncee/wwc/Intervention/275

[26] Feedback in writing instruction – systematic review

https://www.skolfi.se/other-languages/english/research-summaries/feedback-in-writing-instruction/

[27] Transportation to school for children with disabilities: Closing the gap

https://www.globalpartnership.org/blog/transportation-school-children-disabilities-closing-gap

[28] https://www.skolfi.se/forskningssammanstallningar/systematiska

[29] forskningssammanstallningar/meningsfull-fritid-utveckling-och-larande-i-fritidshem/

https://doi.org/10.1016/j.linged.2018.08.005

[30] Asta Cekaite, Polly Björk-Willén (2018). Enchantment in storytelling: Co-operation and participation in children's aesthetic experience. *Linguistics and Education*. 48, 52-60

[31] The Convention on the Rights of the Child

[32] Guidelines for citizenship education in teacher education – Linking research and practice https://ec.europa.eu/programmes/erasmus-plus/project-result-content/3e13a96e-97d3-4c1f-b011-89eb125403f4/GUIDELINES%20FOR%20TEACHER%20EDUCATION%20Linking%20research%20and%20practice.pdf

[33] *TEACHER PROFESSIONAL LEARNING FOR INCLUSION Literature Review* https://ec.europa.eu/programmes/erasmus-plus/project-result-content/3e13a96e-97d-3-4c1f-b011-89eb125403f4/GUIDELINES%20FOR%20TEACHER%20EDUCATION%20Linking%20research%20and%20practice.pdf

[34] European Agency for Special Needs and Inclusive Education, 2011. Key Principles for Promoting Quality in Inclusive Education – Recommendations for Practice. (V. Donnelly, ed.). Odense, Denmark

https://www.european-agency.org/file/11239/download?token=WPNEhxar

[35] European Agency for Special Needs and Inclusive Education, 2001. Inclusive Education and Effective Classroom Practice 2001. (C.J.W. Meijer, ed.). Odense, Denmark

https://www.european-agency.org/file/10948/download?token=yLZ00Day

[36] European Agency for Special Needs and Inclusive Education, 2001. Inclusive Education and Classroom Practice in Secondary Education 2004. (C.J.W. Meijer, ed.). Odense, Denmark

https://www.european-agency.org/file/10949/download?token=3P7KLi29

[37] European Agency for Special Needs and Inclusive Education, 2022. Inclusive Digital Education. (H. Weber, A. Elsner, D. Wolf, M. Rohs and M. Turner-Cmuchal, eds.). Odense, Denmark

https://www.european-agency.org/file/20477/download?token=Urk66Vtx

[38] Sweden's National Agency for Special Needs Education and Schools, 2016. The HODA Project – Assistive Listening and Communication Devices at School (English Translation). (H. Bergkvist, L. Coniavitis Gellerstedt). Stockholm Sweden.

https://webbutiken.spsm.se/globalassets/publikationer/filer/assistive-listening-and-communication-devices-at-school2.pdf/

[39] European Agency for Special Needs and Inclusive Education, 2014: Vocational Education and Training (VET) – Summary of Country Information (Editor: A. Granados). Odensee, Denmark.

https://www.european-agency.org/sites/default/files/VET%20Summary%20of%20Country%20information%202014.pdf

[40] European Agency for Development in Special Needs Education, 2013. Information and Communication Technology for Inclusion – Developments and Opportunities for European Countries. (A. Watkins, ed.). Odense, Denmark

https://www.european-agency.org/file/15735/download?token=60BABaUY

[41] European Agency for Development in Special Needs Education (2013) Information and Communication Technology for Inclusion – Research Literature Review. (T. Waller and A. Watkins, eds.). Odense, Denmark

https://www.european-agency.org/sites/default/files/ict4i-research-literature-review_ICT4I-Research-Literature-Review.pdf

[42] European Agency for Special Needs and Inclusive Education, 2009. Multicultural Diversity and Special Needs Education. (A. Grünberger, M. Kyriazopoulou and V. Soriano, eds.). Odense, Denmark

https://www.european-agency.org/file/10977/download?token=JAvCWq9U

[43] UNESCO, Network of Education Policy Centers, European Agency for Special Needs and Inclusive Education, 2021. Global Education Monitoring Report 2021 – Central and Eastern Europe, the Caucasus and Central Asia – Inclusion and education: All means all. Paris: UNESCO

https://www.european-agency.org/file/20197/download?token=03fzJCch

[44] Education Trade Union Committee for Education (ETUCE), 2021. Catalogue of Good Practices on Inclusive Schools

https://www.csee-etuce.org/images/Publications/Catalogue_Inclusive_Schools-web.pdf

[45] Sightsavers, 2018. Inclusive education for children with disabilities: teacher training pack.

https://www.sightsavers.org/wp-content/uploads/2019/03/Sightsavers-inclusive-education-for-children-with-disabilities-Teacher-training-pack.pdf

[46] Raising the Achievement of all Learners in Inclusive Education – Lessons from European Policy and Practice. (2017). Editors: Kefallinou, Anthoula. Donnelly, Verity J. Odense, Denmark.

[47] Takala, Marjatta. Sume, Helena (2018): Hearing-impaired pupils in mainstream education in Finland: teacher's experiences of inclusion and support. In: European Journal of Special Needs Education, 33:1, p. 134-147. Online: https://www.tandfonline.com/doi/full/10.1080/08856257.2017.1306965.

[48] Education Endowment Foundation: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit

[49] Pflege bei Menschen mit schweren und mehrfachen Behinderungen:

Schlichting, H. (2013). Pflege bei Menschen mit schwerer Behinderung: Ein Praxisbuch. Düsseldorf: Verl. Selbstbestimmtes Leben.

ANNEX 1

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
1.Reichrath, Witte & Winkens (2009) "Interventions in general education for students with disabilities: a systematic review"	Systematic review over interventions used in general education for students with disabilities	To investigate what interventions are used in general education and what is known about their effectiveness so that educational institutions can exchange best practices and students with disabilities have better opportunities for successful participation in general education.	Interventions (n=20) that are regulations, models, programmes, measures, actions, aiming at preventing students, children and youth with disabilities from unnecessarily dropping out of general education/the general educational setting (primary, secondary and post-secondary education).	The effect was measured in different outcome measures being: General academic achievement, academic success, reading fluency, amount of correctly read words, decoding, reading fluency, learning motivation, cognitive performance, school climate, number of referrals to special education, phonological and comprehension skills, spelling outcomes, recalling, writing skills, the ability for problem-solving, motivation, task involvement, logical thinking, career skills and social skills.	Performance-based measures – e.g., correctly read words (CRW) per minute and errors per minute	Reading interventions: "(1) preview: brainstorm about a topic before reading; (2) click and clunk: identification of parts of a passage/words that are hard to understand; (3) get the gist: identification of the most important information in a passage; and (4) wrap up: asking and answering questions that demonstrate understanding". Other strategies included "paraphrasing: expressing main idea and details in their own words; self-questioning, that is developing questions concerning reading passages and reading to find answers; visual imagery, that is visualization of scenes in detail; and word identification, which is decoding unfamiliar words by using context clues and word analysis"	All studies showed positive effects on students' reading abilities.

TABLE 1. SYNTHESIS OF THE SELECTED REVIEWS

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
2.Leeuw, Boer & Minnaert (2020) "The proof of the intervention is in the implementation"	Systematic review about implementation fidelity of classroom-based interventions facilitating social participation of students with social-emotional problems or behavioural difficulties	To provide an overview of classroom-based interventions, implemented by teachers and to report the available implementation fidelity data of the included interventions.	Interventions (n=7) to facilitate social participation of students with SEBD in the regular classroom (regular primary classroom/ inclusive classroom/ inclusive school/inclusive education)	Interventions' effects were measured on: Social acceptance, interactions with typically developing peers, and students' social perception	Sociometric status and peer acceptance; perceived competence scale of children (self-perception); Peer likability from the Children's social behaviour questionnaire; Peer nomination; Observation of social interaction.	Rules visible placed in the classroom, classroom buddy seating arrangements and clear structures regarding activities and prompts provided by the teacher, working in small groups and giving to the target student a leadership role (to change the reputation of that student).	The effectivity of interventions was mixed, ranging from no to large effects.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
3.Hagiwara et al. (2019) "International Trends in Inclusive Education Intervention Research: A Literature Review"	Literature review of research on supports implemented to enhance student-level outcomes in inclusive K-12 settings	To conduct a more in-depth review of the literature focusing on empirical evaluations of the implementation of interventions to promote access to and progress in general education contexts. What categories of supports have been investigated with regard to their impact on student access to general education curriculum and settings, as well as on student learning?	Studies (n=98) reporting the impact of a defined practice, intervention, or environmental arrangement on student-level outcomes in an inclusive, K-12 setting.	Most of the studies targeted: academic content knowledge, skills, and outcomes by implementing strategies to support student learning. Other studies investigated the efficacy or effectiveness of an intervention to improve social outcomes, including social skills and social interaction with peers without disabilities. Small group of the studies aimed to increase student task/academic engagement in an inclusive setting by introducing behavior support strategies	Academic progress and outcomes test or curriculum-based assessment. Observational recordings to monitor students' social interactions or task/ academic engagement. Student perceptions of change based on interventions in inclusive settings. protocol examining the number of best friends that students reported as the dependent variable in the study.	support measures are organized within three categories : (i) curricular adaptations ; (ii) instructional supports; (iii) participation supports. Some of the specific strategies drawn up within that categories were peer-mediated embedded instruction which functioned to engage students in small group learning (participation support) while providing students with opportunities to work on inquiry science lessons (instructional support) in an inclusive setting. Other instructional supports included mnemonic strategies, constant time delay, simultaneous prompting, enhanced anchor instruction and disability awareness curriculum. Participation supports included strategies as: graphic/cognitive organizer, guided notes, behavior specific praise, task analysis, choice of consequence and picture response cards	Across all studies, teachers, students, parents, peers, paraprofessionals rated the interventions as appositive (acceptable, appropriate, or not intrusive, satisfaction with the process and outcomes; favorable and effective).

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
4.Lindner & Schwab (2020) "Differentiation and individualisation in inclusive education: a systematic review and narrative synthesis"	Systematic literature review on differentiated and individualised teaching practices	To investigate the progress of differentiated and individualised teaching practices in inclusive classroom settings considering collaboration and teamwork, instructional practices, organisational practices and social/emotional/behavioural practices	Empirical research studies (n=17) conducted in inclusive educational setting at the primary or secondary level (The definition of inclusive setting is up to the authors of the articles whether they consider the investigated setting as inclusive). Sample: The specification of the desired sample is broadly defined.	Differentiated and individualised approaches. Student-oriented outcomes were not analyzed on this systematic review	Systematic observations, interviews, quantitative survey, sociograms, document analysis	Grouping: as a method to support every student's learning in the classroom Modifications on assessment : additional time, ignoring specific types of mistakes, oral instead of written exams, a different learning environment such as a separate room, enlarged test pages, a variation of the length of tests, and the use of dictionaries or other support materials. trend in assessment modification in inclusive settings is the use of peer- and self-assessment strategies rather than teacher grading systems. Modified and tailored content, curriculum and task-related decisions. Extent modification: extent modification means that students get a certain amount of tasks, exercises and homework according to their competencies and abilities. Instruction modification: flexible and reflective adaptability of methods from the teacher learning environment modification One of the most mentioned types of this adaption was teaching specific students in adjoining classrooms; Material modifications: adjustment of teaching materials to meet the needs of the students. The selection of adequate materials, resources as well as assistive devices, therefore, align with students' individual learning goals and support their individual academic development. Process modification: It consists of the creation and range of various learning activities from which students can choose. Time-frame modifications: Teachers may 'choose to provide more time, allow for breaks, not use timed assignments, remind students of the time requirements and passage of time and/or focus on timing by other means' Individual Motivation and feedback: clarification of behavioural expectations and feedback on the behaviour of students Personnel Support: Some authors report one-on-one support; others from one to group support. Furthermore, the support of several professionals for one class was reported	Results were not focused on the analysis.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
5.Kuntz & Carter (2019) "Review of Interventions Supporting Secondary Students with Intellectual Disability in General Education Classes"	Systematic review on interventions within general education contexts for students with intellectual disability	To provide a comprehensive map of the literature addressing interventions delivered within general education classes to middle and high school students with intellectual disability.	Empirical studies (n=40) focusing Interventions in inclusive education settings towards students with intellectual development disorder	The intervention outcomes measured: -social skills (e.g., initiating conversation), - academic skills (e.g., science vocabulary), -behavioral skills (e.g., following directions). - self-management skills (e.g., self-monitoring), - other domains (e.g., multiple domains measured across students). Although nearly all interventions over of the peer support and peer-mediated communication interventions included some measure of social interactions, only a subset addressed behavioral skills and none addressed academic skills. In contract, studies addressing systematic instruction and self-management incorporated a much more diverse set of outcome measures (e.g., classroom survival skills, worksheet completion, self-monitoring steps, math terms, civics terms, vocabulary definitions).		Systematic instruction : -antecedent and consequence arrangements (e.g., task direction, corrective feedback). - time delay procedures as well as simultaneous prompting - task analytic instruction in teaching discrete responses to academic related skills and brief behavior chains resulting in the mastery of selected skills. Peer support involved: - peers in providing academic and/or social support directly from a peer support plan and under the guidance of a paraprofessional or special educator to the student throughout an ongoing period of time Self-management strategies, generally involved researchers teaching students with intellectual and developmental disabilities to self-manage their own behaviors; Peer-mediated communication interventions – involved using communication books as a tool for students to engage in conversations with their peers. Books consisted of conversation prompts and questions using words and pictures as cues for the students and their conversation partners during downtime in their classes. They were episodically arranged for students and a peer(s) to engage in social conversations for a brief period of time (e.g., 10-15 min). Educational placement changes -moved students from special education to general education classes.	Positive results are reported in the examined studies.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
6.Rademaker, Boer, Kupers & Minnaert (2020). Applying the Contact Theory in Inclusive Education: A Systematic Review on the Impact of Contact and Information on the Social Participation of Students With Disabilities	Systematic review on interventions applying contact theory in inclusive education	To elucidate to what extent the intervention components contact and information are related to both the attitudes of typically developing peers and the social participation of students with disabilities.	Studies (n=55) investigating the association between an intervention utilizing contact with and/or information about (students with) disabilities (intervention) and one or more outcome measures related to attitudes toward (the inclusion of students with) disabilities and/or the social participation of students with disabilities (outcome) in a primary regular or inclusive education setting (population).	The outcomes concentrated on either general attitudes or one or more of the three attitude components: cognitive attitude, affective attitude and behavioral intentions. The outcomes concentrated on one or more of the four themes: of social participations: acceptance by classmates, contact/interactions, friendships/ relationships, and social self-perception		Contact – Structured play groups; Presenter with cerebral palsy and Q&A session with person with a disability; Collaborative work in integrated sessions; Structured contact via peer aids in physical education class for full lesson; Computer-assisted cooperative learning with math assignments Information - Videos, stories, and group discussions about physical disabilities; Storybook reading and group discussions with focus on individual characteristics; Storybook reading and group discussions with focus on disability vs. typically developing characters; Video with extra information about autism; Storybook reading, group discussions, and experiential activities; Experiential activities to simulate physical, visual, auditory and learning disability; Paralympic sports activities (experiential learning), reflection, and life story of two paralympians	General positive impact on promoting social participation

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
7.Sanches-Ferreira et al. (2021). A Systematic Review of Behavioral Interventions for Elementary School Children with Social, Emotional and Behavioral Difficulties: Contributions from Single-Case Research Studies	Systematic review over experimental single-subject research design.	To determine the common elements of individual-level behaviour interventions for disruptive behaviours of children with social, emotional, and behavioural difficulties	Interventions (n=27) over school-aged children who receive their primary and elementary education in general classrooms and display SEBDs.	Disruptive, challenging, or problem behaviours were the primary dependent variable in the studies Academic factors, such as engagement, achievement, competence, and productivity, were the main secondary dependent variables of the studies Social skills was also included as a secondary variable and the teachers' skills with regards to implementing specific intervention strategies was included as a dependent variable	Observational methods, functional Assessment Checklist Intervention Rating Scale, impairment Rating Scale the Social Skills Rating System, Systematic Screening for Behavior Disorders. Parents also participated in the evaluation of students' behaviours	Antecedent-based strategies were used as follows: (a) antecedent adjustments (i.e. public posting/ reminding of classroom rules) (b) provision of instruction in, modelling of, or role-play of appropriate behaviours. Antecedent-based strategies also included setting behavioural goals with participants and self-monitoring. Strategies such as the reduction in task duration and the provision of opportunities to ask for or take breaks were also used. Consequence-based strategies included different types of positive reinforcement and feedback on students' performance, such as praise for appropriate behaviours; rewards through a token system or opportunities to participate in preferred activities; or a less systematic reward system. Corrective statements or prompts were also used in the studies. Extinction procedures were also mentioned, such as ignoring disruptive behaviours. The implementation of interventions on students' disruptive behaviour in the classroom was combined with teacher training aimed at improving their ability to implement behavioural and pedagogical strategies such as behaviour-specific praise and universal teacher practices	Overall, the reviewed studies reported favourable results. Both function- and non-function-based methods were found to effectively reduce the occurrence of problem behaviours.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
8.Capp (2017). The effectiveness of universal design for learning: a meta-analysis of literature between 2013 and 2016	Meta-analysis conducted on empirical research, containing pre- and post-testing of UDL implementation	To examine UDL as a teaching framework for improving the learning process for all students	empirical research studies (n=18), examining the impact of UDL in all educational levels from early childhood to university/ college were included	Generally defined as: - Curriculum achievements; - self-determination and self-advocacy skills; - academic engagement, - social engagement , - classroom interaction		Teachers used visuals to support the acquisition of science content The use of technology (Content Acquisition Podcasts) within the teaching of history content led to improved educational outcomes in relation to knowledge of historical content for all students. identified an improvement in the learning process for all students when using principle one of UDL (video games and alternative print-based texts) in the teaching of science	Improvements reported in the learning process for all students when supported using the principles, guidelines, and checkpoints underpinning the UDL framework.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
10.Watkins et al (2015). A Review of Peer-Mediated Social Interaction Interventions for Students with Autism in Inclusive Settings	Systematic analysis of studies that focused on the use of PMI to increase social interaction skills of individuals with ASD in inclusive environments	To examine the use of peer-mediated interventions (PMI) to improve the social interaction skills of students with autism spectrum disorder (ASD) in inclusive settings.	Interventions (n=14) conducted in inclusive settings in which participants with ASD shared the context and activities with typically developing peers	-social interactions (initiations, responses and continuations); communicative acts; social engagement, context related comments, scripted phrases, gaining attention; turn-taking exchanges		Initiations included elementary school age peers initiating interaction during games and activities at recess and high school age peers initiating conversation with participants Prompting and reinforcing strategies ranged from peers offering a verbal or gestural prompt in order to elicit the participants' use of scripted social phrases and offering praise for each correctly used phrase to peers verbally prompting a participant Proximity strategies ranged from placing participants and peers together at a shared cafeteria table during lunch periods to placing participants in social clubs with students sharing similar interests. To train peers to implement initiation and prompting and reinforcing strategies with participants with ASD, facilitators or teachers used strategies including verbal explanation, modeling, role-playing, feedback, visual aids. Direct instruction across several sessions on how to interact with participants with ASD was also reported, as well as incorporating participants' preferred or perseverative interests into age-appropriate social clubs. Visual supports, facilitator prompting procedures, self-monitoring strategies and tangible reinforcement for demonstrating targeted social behaviors.	Results suggest that PMI is a promising treatment for increasing social interaction in children, adolescents, and young adults with ASD in inclusive settings, with positive generalization, maintenance, and social validity outcomes.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
9.Aldabas (2020). Effectiveness of peer-mediated interventions (PMIs) on children with autism spectrum disorder (ASD): a systematic review	Systematic review over studies using a single-subject design	To systematically review evidence on the effectiveness of peer-mediated interventions (PMIs) on children with ASD.	Studies (n=16) that: used a single-subject design, focusing: peer tutoring and autism, peer instruction and autism, peer support and autism, children with autism and classrooms, social intervention and social interaction and autism.	Changes were reported in terms of: - social behaviour among target participants . - social interaction (percentage , frequency and total duration of time of social interaction; number of turn taking interactions) - intervals of engagement with peers, - rate of response by target participants to peer initiations, frequencies of targeted communication skills and sequential utterances per conversation episode (MCIs), rates of initiations to request actions or objects, compliment peers and request information.	Observations in classroom, Questionnaire; teacher input, individualized social goals, anecdotal reports, Focus group discussion, Assessment by author from videotapes, Likert questionnaire	Per training in using low technology augmentative communication; promotion of social activies structured lunchtime clubs that were based on the perseverative interests of adolescents with ASD ; Joint activity schedule; Direct instruction and peer training (training in using augmentative communication system and social interaction skills instruction); Peer imitation training, Peer-mediated instruction – Different activities (i.e. games). Intervention consisted of teachers instructing small groups, selecting leader, prompts to promote imitation and praise of imitative acts	The positive results from baseline to treatment were reported, suggesting that PMI is an effective intervention for improving the social skills of children with ASD.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
12.Morris et al. (2021) Classroom-based peer interventions targeting autism ignorance, prejudice and/or discrimination: a systematic PRISMA review	Systematic review of school-based interventions targeting the stigmatization of children with autism	Provide a comprehensive overview of the merit of school-based interventions to de-stigmatize autism	Interventions (27) targeting peer stigmatization of children with autism	Interventions assessed: peer' knowledge, attitudes, behavioral intentions and behaviors towards autism.	The outcome measures used were: shared activities questionnaire, adjective checklist, qualitative interviews/ focus groups, direct observations of behaviour, knowledge questionnaire and Chedoke-McMaster Attitudes Towards Children with Handicaps.	Interventions were descriptive, explanatory, directive or consisting on informing on autism facts. Interventions used: vignettes, powerpoints or videos portraying autistic children, manualized programmes (e.g. "Circle of Friends), peer networks, peer mediated interventions, mediation programs, etc.	The authors found pervasive methodological flaws, concerning control groups, control conditions, controlling of cofounding variables or selection bias. The authors conclude that there is insufficient data to establish the merit of interventions targeting stigmatization of autistic school children. However, manualized programs that combine different types of information and using various mediums seem the most promising.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
11. Lory et al. (2020) A Meta-analysis of Challenging Behavior Interventions for Students with Developmental Disabilities in Inclusive School Settings	Meta-analysis of interventions targeting the reduction of challenging behavior	To quantify the magnitude of effect of interventions targeting the reduction of challenging behavior in students with developmental disabilities in inclusive educational settings and to determine if participant and intervention characteristics moderate intervention effects.	Interventions (15) targeting challenging behavior, conducted in school-settings with at least one child with one or more disabilities	Interventions were analyzed concerning: intervention agent, peer involvement, replacement behavior; decreasing challenging behaviors	No information.	Use of intervention agents (e.g. teacher); Inclusion of peers in the intervention; Teaching or reinforcing replacement behavior; Use of visual prompt as part of the intervention procedure; Inclusion of participant preference	Interventions generated a strong overall effect, suggesting that interventions in inclusive settings can lead to significant decreases in challenging behavior in children with developmental disabilities. Interventions that used natural intervention agents were the ones with the stronger effects. Interventions that used peers had more positive effects in comparison to interventions that did not involve peers. Interventions presenting replacement behavior had a lower magnitude of effects. The use of visual prompt did not moderate the interventions' effects. Interventions that incorporated participant preference demonstrated a stronger intervention effect.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
14.Anderson et al. (2004) Middle and High School Students with Learning Disabilities: Practical Academic Interventions for General Education Teachers – A Review of the Literature	Narrative synthesis of research with middle and high school students with learning disabilities	Identify interventions for middle and high school students with learning disabilities that used a specific instructional strategy that could be generalized across various subject areas	Interventions (17) for middle and high school students with learning disabilities	Mnemonic instruction: - acquisition of facts; - conceptual understanding of information; - prewriting, planning, composing and revising writing. Graphic organizers: - mainstream content acquisition; - concept acquisition; - content knowledge. Guided notes: - retaining information; - accuracy of notes; - academic performance. Classwide peer tutoring: - conceptual understanding of mathematical concepts; - reading comprehension. Coached elaboration: - explanation of information. Inquiry teaching: - activities instruction; - science and mathematics concepts.	Mnemonic instruction - recalling of a list; - remembering information; - paragraph writing. Graphic organizers: - number of questions students answered correctly; - concept acquisition tests; - multiple choice tests. Guided notes: - quizzes; - student preference; - test scores. Classwide peer tutoring: - weekly tests. Coached elaboration: - production of correct explanations of information. Inquiry teaching: - students stated enjoying and learning more from activities instruction; - understanding of specific science and mathematics concepts.	- Use of mnemonic instruction to help students remember and retain information - Help organize concepts into visual representations - Help students get standard sets of notes - Help students gain academic and social behavior for academic achievement - Help students make links between current and new knowledge - Help students master concepts from various academic subject areas	Results show positive effects on the following practices: mnemonic instruction, graphic organizers, guided notes, classwide peer tutoring, coached elaboration and inquiry teaching

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
13.Okkinga et al. (2018) Effectiveness of Reading-Strategy Interventions in Whole Classrooms: a Meta-Analysis	Meta-analysis on the effectiveness of reading-strategy interventions	Determine interventions' effects on reading comprehension and strategic ability and the moderating effects of intervention, study and student characteristics	Interventions (52) on reading comprehension and strategic ability	5 outcomes were evaluated: reading comprehension standardized, reading comprehension researcher-developed, strategic ability, strategy knowledge, and self-reported strategy-use	Reading comprehension was evaluated with standardized and researcher developed tests for the 5 outcomes	Reading strategies before (predicting, activating prior knowledge, setting reading goals), during (questioning, paraphrasing, summarizing, inferencing, underlining important information, use of graphic organizers, use text structure, use mental imagery, explicit monitoring strategies) and after reading a text (summarizing and memorizing)	Results point to a small effect of interventions on reading comprehension and a medium effect for strategic ability. Stronger effects were found in interventions with "setting reading goals" and in interventions were the trainer was the researcher

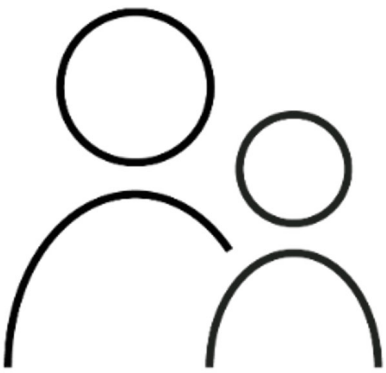
Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
16.Cordier et al. (2018) Peer Inclusion in Interventions for Children with ADHD: A Systematic Review and Meta-Analysis	Systematic review on peer-interventions for children with attention--deficit hyperactivity disorder	Assess the effectiveness of peer inclusion in interventions to improve the social functioning of students with attention--deficit hyperactivity disorder	Peer inclusion intervention studies (17) focusing on the social functioning of children with attention-deficit hyperactivity disorder	Social skills outcomes: Peer relational skills, social interaction, peer interaction, friendship nominations, positive messages	Used outcome measures for social skills were: SSRS, Peer Relational Skills Scale, BASC, DANVA2, Observed social interaction, SIRF, Peer sociometric interviews, IPR, WFIRS-P, CAI-M, LNS-M, SPS, Sociometric ratings, Peer Nomination, Behavioural Role-Play, In-vivo behavioural observations, interaction observations, Messages from peers, Adolescent Interpersonal Competence Questionnaire, Intimate Friendship Scale, Working Alliance Inventory, Conners 3 and Connors CBRS	Social Skills Training , behavioural treatment, behavioural and Social Skills Training, and multimodal behavioural/psychosocial treatment Involvement of peers, parents and teachers Peer component (presentation of social skills, rehearsal of behaviors, conversational techniques), parent component (parent sessions, parent ratings of social skills, child socialization homework, parents home challenges), teacher component (teacher ratings of antisocial, prosocial, and aggressive behaviour), skills (conversation, techniques, playing together, giving compliments and criticisms, group cohesion, etc.)	Most studies had an unclear or high risk bias concerning randomization, blinding and confounders control. Results show improvements in participants' social functioning in peer-inclusive groups

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
15.Garrote et al. (2017) Facilitating the social participation of pupils with special educational needs in mainstream schools: A review of school-based interventions	Systematic review of interventions promoting social participation of students with special educational needs	Identify effective interventions in inclusive mainstream preschool and elementary classrooms to promote social participation of students with special educational needs	Studies (35) aiming to develop the social participation of children with special educational needs in mainstream preschools or primary classrooms. Studies included three types of interventions: interaction strategies to students with special educational needs and peers; group activities; and training of paraprofessionals	Interventions evaluated the frequency, duration and quality of social interactions. Interventions evaluated: interactions, acceptance and perceived acceptance.	Calculation of average rate of interactions	Teaching interaction strategies: interaction strategies to students with special educational needs and peers, awareness, interaction strategies, and social problem solving to peers. Group activities: Cooperative learning, Structured play and friendship activities, Circle of Friends, Peer tutoring, Multi-component intervention, Interest clubs, Therapeutic group counselling	Almost all studies showed positive effects on social interactions between children with special educational needs and their peers. Social participation of students with special educational needs seem to be associated with teaching interaction strategies, group activities in academic contexts, support groups and training paraprofessionals

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
18.Leifler et al. (2020) Does the learning environment 'make the grade'? A systematic review of accommodations for children on the autism spectrum in mainstream school	Systematic review of accommodations for children on the autism in mainstream schools	Synthesize studies on accommodations in the learning environment for children with autism, focusing on the effects on functioning, educational outcomes and well-being	Studies (14) using accommodations in the learning environment for children with autism in mainstream classrooms	General outcomes defined in terms of educational participation and functioning in school	Measures: - educational outcomes: academic tasks, number of words in writing sample, holistic quality of writing, academic target skills; - functioning in school: transitions, social interaction, on-task behaviors, talk-outs, social network salience, social engagement, solitary play, social initiation	Accommodations in the: - psychosocial environment (for example, classwide peer tutoring, peer-mediated interventions, lunch time clubs, paraprofessional training, etc.) - pedagogical learning environment (for example, through the use of a package of behavioural procedures, reward systems, video modelling, cooperative learning groups, etc.).	The authors considered the results to be inconsistent. The reviewed studies showed accomodations in the psychosocial and pedagogical environment but none in the physical environment. The authors consider that pedagogical interventions can have positive effects on school performance. Also, specific forms of peer interventions, behavioural strategies, assistive technologies and paraprofessional training seemed to have the potential to improve functioning in school.

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
17.Gaastra et al. (2016) The Effects of Classroom Interventions on Off-Task and Disruptive Classroom Behavior in Children with Symptoms of Attention-Deficit/Hyperactivity Disorder: A Meta- Analytic Review	Meta-analytic review of classroom interventions for students with Attention- Deficit/Hyperactivity Disorder	To determine the effectiveness of classroom interventions that can be used by teachers to decrease off-task and disruptive behavior in children with symptoms of Attention-Deficit/Hyperactivity Disorder and to identify potential moderators classroom setting, type of measure, students' age, gender, intelligence, and medication use). To examine if the interventions affected the academic and behavioral outcomes of peers	Studies – (24) within-subjects design and (76) single--subject design targeting off-task and disruptive behavior of students with Attention- Deficit/Hyperactivity Disorder	The outcome measures were: teacher ratings or direct observations of on-task and appropriate behavior.	Interventions effects were evaluated through teacher ratings, direct observations or both.	Classwide peer tutoring Stability balls Formal classroom (teacher--directed activities) Music at background Self-management, peer--monitoring within a group contingency Teacher-administered classwide reinforcement Classwide self-management procedures Recess Types of classroom interventions (antecedent- based, consequence-based, self-regulation, combined interventions)	Classroom interventions reduced off-task and disruptive behavior in children with symptoms of Attention- Deficit/Hyperactivity Disorder. Larger effects were found on consequence-based and self-regulation interventions and in general education classrooms. These interventions seem to benefit the students' peers concerning behavioral and academic outcomes

Author	Study Design	Goal	Sample	Characteristics of the inclusive education assessment and inclusive support measures			Results
				Measured outcomes	Assessment measures	Support responses	
19.Sutton et al. (2018) A systematic review of school-based interventions targeting social communication behaviors for students with autism	Literature review of school--based studies focused on social communication of students with autism	Review intervention studies in mainstream schools targeting social communication behaviors for children with autism	Studies (22) focused on peer interactions for students with autism, in mainstream class programs	Outcomes: verbal initiations, initiations, responses, contingent responses, social initiations, social responses, responding to a peers question, reciprocal social engagement, students interactions, communicative acts directed to a peer, unprompted verbal initiations, initiating comments, etc.	Frequency and duration of targeted behaviours	Child-specific interventions Peer-mediated interventions Ecological interventions Comprehensive interventions Collateral skills interventions	Results suggest that school-based interventions usually delivered by researchers and teaching assistants can increase the frequency and duration of initiating and responding behaviors in students with autism.



I AM

INCLUSIVE ASSESSMENT MAP

Co-funded by the
Erasmus+ Programme
of the European Union