

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism



Maria Drossinou Korea<sup>1</sup>, Panagiotis Alexopoulos<sup>2</sup>

<sup>1</sup>Department of Philology, University of Peloponnese, Kalamata, Greece

<sup>2</sup>Department of Primary Education, University of the Aegean, Rhodes, Greece

**ABSTRACT:** The paper presents school and instructional integration in secondary education with the methodology of observation for special educational needs [SENs] in autism. The hypothesis focuses on the literature teachers' ability to understand the difficulties faced by a junior high school teenager with autism spectrum disorder (ASD), as presented in the movie Ben X. For this purpose, the pedagogical tool [TISIPfSEN] is used, with a focus on the weekly timetable of lessons. The pedagogical approach is defined as a Targeted, Individually Structured, and Inclusive Intervention Program for Students with Special Educational Needs [SENs]. Based on the results, it seems that literacy teachers can understand the SENs of a student with ASD, such as Ben, through heterobservations with the Informal Pedagogical Assessment [IPA]. Furthermore, the philologist can set priorities for targeted instructional interventions, focusing on the time the student spends "sitting in front of" the computer while also looking forward to collaborating with his classmates.

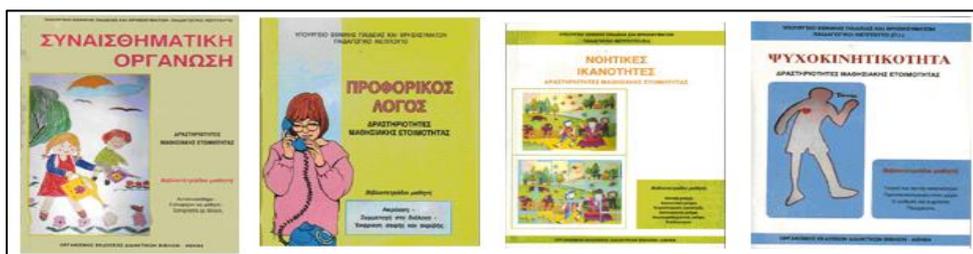
**KEYWORDS:** inclusive secondary education, autism, informal pedagogical assessment, observation, TISIPfSEN

### I. INTRODUCTION

The present research focuses on the literature teacher's ability to understand the behavior of a student with autism spectrum disorder [ASD] by collecting data from heterobservations of the student's home, family, and school backgrounds, according to the systematic review of the experiences and supports in inclusive secondary education [1] [2]. In order to decategorize people with Special Educational Needs [SEN] according to the Framework of Analytical Program Special Education (FAPSE) [3] [4], the demand for inclusive education is approached. School inclusion is also presented in the Greek Law 3699/2008 [5], where emphasis is given to Special Education and Training [SET] of persons with disabilities or special educational needs. According to Christakis [6] [7], targeted adaptations are a prerequisite, as are defined limits, which has to be individualized on a case-by-case basis. The interdisciplinary, targeted, individualized, and collaborative efforts of inclusive secondary education can limit the obstacles to educational integration of students with ASD [8] [3] [6] [7].

The necessity of the study is summarized by the unawareness of teachers involved in the inclusive secondary education of students with ASD. This was confirmed in a longitudinal study [8] from 2014 to 2022, which involved ten (10) parents of children and teenagers with disabilities, of whom half (5) were diagnosed with ASD. Parents reported that they had experienced discrimination from their children's school, which revealed the failure of teachers to understand special educational needs [SEN] and, in particular, the behaviors of children with ASD. The democratic, inclusive education of students with SEN and disabilities is a challenging task for the coexistence of all students in mainstream schools.

The purpose of this study is to promote inclusive secondary education for a student with ASD through the methodology of empirical observation with emphasis to the autistic behaviors. Therefore, the hypotheses investigate the way in which the literacy teacher can observe, record, and understand the specific learning difficulties and behaviors of a student with ASD in the weekly timetabled lesson plan.



1. The intervention's booklets: emotional organization, oral language, cognitive skills, and psychomotricity skills.

### II. CLARIFICATION OF TERMS AND THEORETICAL APPROACHES

#### A. Clarification of terminology

##### Autism Spectrum Disorders [ASD]

ASD is a neurodevelopmental disorder [10] that lasts a lifetime and is usually diagnosed in childhood. Its prevalence has been increasing globally over the past two decades. People with ASD have difficulty with social communication and interaction, both verbally and non-verbally, and exhibit repetitive behaviors or interests [11] [12] [13] [14]. According to Synodinou [15], the attempt to approach and conceptualize autism spectrum disorders started with the old phrenologists, who initially used terms such as "idiot" and "wild-child." Gradually, the distinction between mentally retarded, schizophrenic, and "idiot" children brought another category, not overlapping with the aforementioned, "autistic children". The word autism denotes a return to the self and an absence of communication. Also, the sensory features are used as diagnostic criteria for autism [16]. With the application of electronic computers analysis factors in the educational and psychological measurement [17] and with the DSM-5 [18] diagnostic classification system for mental illnesses, is describing the autism spectrum disorders [ASD], based on difficulties in social skills, communication, and social interaction. Furthermore, these people are characterized by repetitive and monotonous behaviors and interests.

The concept of the inclusion of students with SEN has been a concern since the 1970s and is related to the integration of students without special needs into mainstream schools [3]. This term captures the attempt to integrate students into the classroom and, by extension, into society. Inclusive secondary education depends on school, social, and economic factors that influence the spatial development of teaching interventions in the weekly timetable. The open question is which terms should be used to describe autism and there are perspectives from the autism community [19]. According to the pedagogical considerations that underpin TIS[IPfS][E]N, this paper considers the student's participation in the weekly timetable of lessons as well as his communication with his classmates [6] [3] [7]. As Efstathiou [20] points out, inclusion requires a revision of teachers' attitudes and perceptions regarding their role in educating students with special educational needs and the adoption of flexible curricula. In Greece, confusion often prevails in the attempt to attribute the terms "integration" and "inclusion" [20], with the term 'integration' versus 'inclusion' referring to an anachronistic, medically focused, and institutionalized understanding of disability [8].

##### Observation methodology - case study

The present study uses the methodology of empirical observation in special education in a case study of a student with ASD. According to Avramides and Kalyva [21], a case study is a research method that can be used on students with ASD to collect qualitative data. Empirical, systematic observation [22] [22] of SET is another tool that can assist other research methods, such as questionnaires and interviews, in the context of inclusive secondary education.

##### Informal Pedagogical Assessment (IPA) and School inclusion

The recording of the behavior in each case occurs through direct teaching, knowing the limitations as it is difficult to control attitudes and beliefs. The Informal Pedagogical Assessment [IPA] is obtained through heteroobservations of student skills in specific areas, marked by semesters of attendance on the linear continuum scale of inclusive interventions, starting from kindergarten within formal and required education [24]. Informal pedagogical assessment [IPA] is rooted in the methodology of observing special educational needs and provides important information about the specificities of ASD [6] [25]. With hetero observations, qualitative data were recorded in tables with Basic Skills Checklists, and inclusion priorities were formulated. With the first phase tool, empirical heteroobservations about the behavior of student Ben with ASD and the teacher's self-observations about the content of what he says and does about Ben are collected. The second tool phase of TISIPfSEN collects data about the protagonist of the movie "Ben X" from: 1) the neurodevelopmental domains of learning readiness, 2) the special educational needs according to the Special Education Curriculum Framework, 3) the general learning difficulties reflected in the weekly timetable for literature lessons, 4) the specific learning difficulties in understanding the lesson and 5) Observations on the behavior of ASDs.

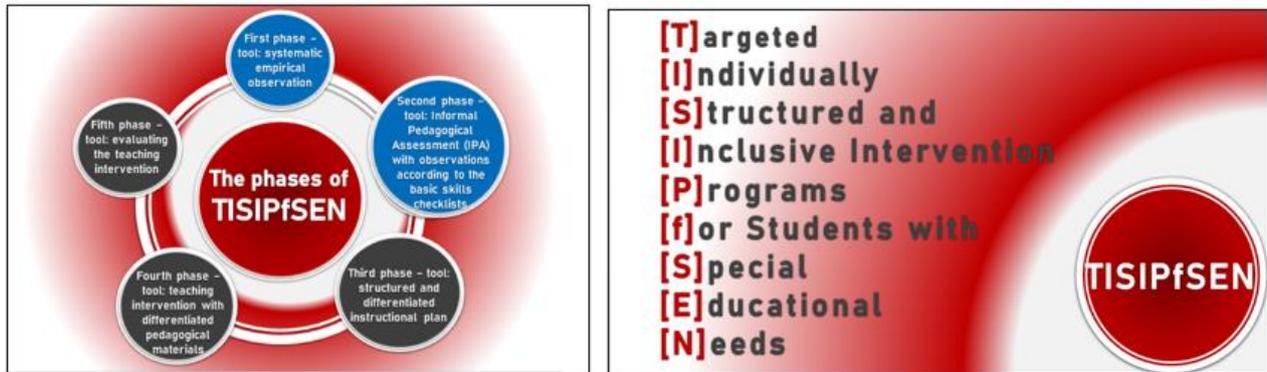
Christakis [6] defines Special Education as an integrated set of "*adaptations of the curriculum, instruction, support, and the creation of appropriate learning environments to appropriately and effectively address the difficulties and meet the special educational needs of the student.*" Inclusive education is defined by Special Education [SE], which underlies the pedagogical tool TISIPf[SE]N [26]. According to Christakis [6] [3], SE is composed of an integrated set of "adaptations of curriculum, instruction, support, and the creation of appropriate learning conditions in order to appropriately and effectively address the difficulties and meet the special educational needs of the student."

##### TISIPfSEN

In the methodology of inclusive secondary education, the pedagogical tool [TISIPfSEN] was used, which consists of five partial tools [phases] through which school integration is promoted [27]. According to the theoretical background of the TIS[IPfS]EN, [I] denotes the pedagogical principle of inclusive education [26]. This, following the consideration of pedagogical targeting [T] and the individuality [I] of the student, is the core of the differentiated, structured teaching intervention, adapted to the special educational needs [SENs] of the student Ben. TISIPfSEN has five tools [phases] through which school inclusion is promoted. The first tool includes systematic empirical observation, the second IPA with observations with basic skills checklists, and the third one has a

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

structured and differentiated instructional plan. Finally, the fourth phase focuses on the teaching intervention with differentiated pedagogical materials, while the fifth phase evaluates the teaching intervention. In this study, the emphasis is on the first and second phases of TISIPfSEN.



### 2. The TISIPfSEN: Emphasis on the first and the second phase (blue circles).

#### B. Theoretical approaches

Recognizing Ben's difficulties in school integration, he is withdrawn and has difficulty cooperating with his classmates who taunt him [28]. The individual pedagogical tools are used flexibly in the context of this study on inclusive secondary education [28]. Specifically, the first tool includes systematic empirical observation, the second tool includes the Informal Pedagogical Assessment [IPA] with heteroobservations using the Basic Skills Checklists with an emphasis on social skills, communication skills, thinking skills and academic skills, and the third tool includes the structured and differentiated teaching plan according to the TISIPfSEN [27] [26]. Finally, the fourth tool focuses on the implementation of the targeted and individual teaching intervention with differentiated pedagogical materials, while the fifth tool evaluates the teaching intervention.

The pedagogical tool TISIPfSEN focuses on student-centeredness and individuality, as the intervention is individualized and shaped based on the particular characteristics of each student [26]. Despite any efforts that may be made, few students with ASD are effectively integrated in special schools and even fewer in general schools. In Greek general secondary schools, it appears that students with ASD are not supported by structured and differentiated instruction, resulting in their marginalization and delinquency [28]. Recognizing Ben's difficulties with school integration—he is isolated and has difficulty cooperating with his classmates, who make fun of him—is inextricably linked to the interdisciplinary team [27].



### 3. Screenshot from the movie: Ben's classmates are making fun of him (left), Ben spends hours on his computer (right) [29].

#### C. Purpose, hypotheses and methodology

The study's necessity is summarized by the teachers' difficulties involved in the inclusion of students with special educational needs [30]. Therefore, the purpose of the study focuses on promoting the school inclusion of a student with autism through the methodology of observation of special educational needs. The hypotheses investigate how the teacher can observe and understand the special learning difficulties and behaviors resulting from the students with ASDs.

Informal Pedagogical Assessment is rooted in the methodology of observing special educational needs and provides important information about the specificities of ASD. With checklists of basic skills according to the hetero-observations collected, the qualitative data are recorded in certain protocols of SENs-tables and in this way, the teaching and inclusive priorities are formulated. The first phase tool collects empirical hetero-observations and self-observations. TISIPfSEN's second tool phase is used to collect data for the film's protagonist from: 1) the neurodevelopmental areas of learning readiness, 2) special educational needs according to the Framework of Analytical Program Special Education [FAPSE], 3) the general learning difficulties reflected in the literary subjects, 4) specific learning difficulties in understanding and 5) the observations on ASD's behaviors with emphasis on social skills, communication skills, thinking skills and academic skills.

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

### D. Data collection, analysis and thematical evaluation

With the first tool and particular protocols of SET, empirical hetero-observations are recorded and perceptions from the civilizations of Ben's family and school community are collected. The data are used to provide support through the continuum of intervention for his school inclusion with emphasis on social skills, communication skills, thinking skills, and academic skills. Ben is in the first semester of the first year (15<sup>th</sup> semester of compulsory formal education), is 13 years old and has had parallel support throughout his primary schooling. In his individual background, Ben X [29] is on the autism spectrum and follows daily routines. Ben is a different teenager. When he walks on the streets, he listens loud to techno music and is insecure and nervous. His entire life is his own, closed universe [31]. He passionately plays his favorite online game, "Archlord", trying to educate himself about the real world. Life in school is a daily hell.

In terms of school background, Ben is in the first term of Year 1 (the 15<sup>th</sup> term of formal education). He is 13 years old and has had parallel learning support throughout his primary schooling. At school, Ben finds it difficult to cooperate with his classmates who often taunt him. Since the age of five (5), he has had difficulties verbalizing his feelings and cooperating with others. His teachers have noted that he has a special interest in computer science.

In the family history recording, it is noted that Ben plays his favorite game on his personal computer at home for several hours and wears headphones outdoors to protect himself from sounds. Ben's father, refusing to accept the situation of autism, left home and divorced his family.

In the context of inclusive secondary education, the instructional intervention is defined as "Ben understands certain social story texts that refer to social skills, such as working with classmates".

The observation methods [21] use the student's booklet in the neurodevelopmental area of learning and emotional readiness and organization and the first-grade history subject in the particular teaching times according to the context of the Weekly Timetable with differentiated text comprehension.

### E. Observation methodology and informal pedagogical assessment [IPA]

Researchers Avramidis and Kalyva [21] point out that observation of students with special educational needs and/or disabilities needs to be carried out with sensitivity and discretion. The observation methodology uses the student's booklet and the teaching methodology for the neurodevelopmental domain of learning readiness, with an emphasis on emotional organization. Furthermore, it uses instructional interaction in the first-grade history lesson, in particular teaching times according the context of the Weekly Timetable, with a focus on understanding the text with the targeted, individually structured and differentiated modifications in the language.

With the second tool phase of TISIPfSEN, the literacy teacher uses the Basic Skills Checklists to record observations—data about the protagonist of the film Ben X—and captures them in five Excel sheets [27]. The first table records skills from the 1) neurodevelopmental domains of learning readiness in oral language, psychomotor skills, cognitive abilities, and emotional organization [32] [33]. The second table records 2) the special educational needs according to the FAPSE, with emphasis on social skills and adaptation to the environment. The third table lists 3) the general learning difficulties reflected in the literature lessons in the weekly timetable. The fourth table 4) identifies the specific learning difficulties in the comprehension of texts in the history lesson. The fifth table records 5) the hetero-observations on autism behaviors, with emphasis on social skills, communication skills, thinking skills, and academic skills.

Basic skills are tested through the IPA. According to the recording procedure, the heteroobservations are recorded in the excel sheet, where the baseline is marked according to the semester and grade of attendance and represented by a horizontal line. Ben is in the first semester of the first grade of high school and is in the 15<sup>th</sup> semester of compulsory formal education since the first semester of kindergarten.

The literacy teacher then marks the semester with a number, pedagogically checking the student's skills with ASD for each column in the table. When all columns are completed, the average of the deviations from the baseline is calculated. The average semester deviation is represented by a horizontal line at a certain semester below the baseline. Finally, the deviations in each column are visualized by the dashed line of learning difficulties in the history course. Evaluation of the data through informal pedagogical comparison prioritizes instructional priority in each Excel sheet.

	<b>Name</b>	Ben
	<b>Gender</b>	Boy
	<b>Age</b>	13
	<b>Class and semester of attendance</b>	1st Grade of Junior High School, 15sem
	<b>Book</b>	History Book
	<b>Intervention's text</b>	The palaces are large complexes...
	<b>Title</b>	Minoan civilization
	<b>Book's pages</b>	24-25
	<b>Neuro-developmental area</b>	Emotional organization
	<b>Target</b>	Cooperation with others

#### 4. The scenario of inclusive social skills instruction for the student with ASD: The intervention will be attempted in the history lesson (student's book cover)

### III.LIMITATIONS AND RESULTS

#### A. Research limitations

## **Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism**

The observations are inspired by the main character in the movie "Ben X." The study's research limitations result from the language course teacher meeting the ASD student through school integration without having the chance to know more from the discussions with the family and the therapists outside of school hours. In this study, the name 'Ben' is used in place of the original name of a junior high school student.

### **B. Results and definition of teaching priorities**

The empirical observations of school integration are marked by the recording of data in tables in terms of semesters of attendance, as defined by the Greek educational system. The kindergarten has a duration of 1 year (1-2 semesters), the primary school has a duration of 6 years (3–14 semesters), and the junior high school has a duration of 3 years (15–20 semesters).

#### **Informal pedagogical assessment of neurodevelopmental areas of learning readiness**

The literature teacher is using thematic analysis [34] in Special Education and Training [SET], the data—observations from the Informal pedagogical assessment of neurodevelopmental areas of learning readiness.

Ben's general average is 10.1, which corresponds to the second semester of fourth grade with a deviation of 5 semesters from the baseline (15th semester).

In particular, it is observed that in oral speech [27], Ben scores an average of 10.7. In listening, he is at the 5th grade level (12th semester), while in participating in dialogue and expressing himself clearly, he is at the 4th grade level (10th semester). That is, Ben has difficulty participating in conversations (especially with multiple partners) and expressing his thoughts clearly.

Ben's orientation is in the 5th grade (11th sem.). Also, pace and time are again assessed in the 4th grade, but in the 2nd semester (10th sem.). Furthermore, in lateralization, it is found in the first semester of the 5th grade (11th sem.). Sometimes, in general, the student makes strong movements and appears disoriented. The psychomotor domain is at 10.3, showing a deviation of 4.7 from the baseline (15th sem.).

In the domain of cognitive abilities, Ben is tested in auditory and visual memory in the first semester of the sixth grade (13th sem.). At times, he is distracted, and therefore, on the board, he is in the 10th semester. In the same semester, the area of reasoning is also assessed. He has more difficulty in logical reasoning, where he is in the 4th grade (9th sem.).

Finally, a greater deviation is observed in emotional organization, where Ben seems to be in the 10th semester of self-awareness while showing limited interest in the lesson (8th sem.). The greatest deviation (8th semester) from the average is in cooperation with others, as he has difficulty when he needs to interact, let alone cooperate with others.

The inclusion process is monitored through these observations, with an instructional priority that prioritizes Ben's emotional organization and cooperation with classmates for classroom inclusion.

#### **Informal pedagogical assessment from the observations of SENs by the FAPSE**

The literature teacher is using thematic analysis in Special Education and Training [SET], the data—observations from the Informal pedagogical assessment on special educational needs according to FAPSE. It emphasizes school readiness, basic academic skills, writing, reading, and comprehension, mathematics, social adjustment with social skills, leisure time management with creative skills, and vocational learning readiness.

Also, the data—observations from the Informal pedagogical assessment the overall average is 10.9, with a deviation of 4.1 from the baseline (15<sup>th</sup> semester). Therefore, in this table, Ben is in the 11<sup>th</sup> semester (1<sup>st</sup> semester, 5<sup>th</sup> grade).

In social skills and adaptation to the environment, autonomy in the environment is noted in the 5th semester (11th sem.), while social behavior is lower (10th sem.). Ben finds it difficult to return greetings and seems embarrassed when addressed.

Adaptation to the environment is controlled in (13th sem. - 6th grade), while in the area of creative activities, there is a difficulty in managing his free time (10th sem.) and he seems indifferent to the aesthetic arts (11th sem.). When he returns from school, he immediately runs to his computer to play his favourite game. Sometimes he may even go without food for many hours, which causes his mother's discomfort

The empirical heteroobservations conclude with pre-vocational readiness captured by pre-vocational skills in Computer Science and Programming, corresponding to the 6th grade, in the 13th semester.

The inclusion process is monitored through these observations and instructional priorities that prioritize basic academic skills for classroom inclusion, with an emphasis on reading and mathematics.

#### **Informal pedagogical assessment from the observations of learning from the school's weekly timetable of language courses**

Also, the literature teacher is using thematic analysis in Special Education and Training [SET]. The data—observations from the Informal pedagogical assessment on general learning difficulties as reflected in the language lessons taught by the philologist according to the weekly timetable.

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

	Monday	Tuesday	Wednesday	Thursday	Friday
1 <sup>st</sup>	Modern Greek	Mathematics	Literature	Modern Greek	Physics
2 <sup>nd</sup>	Ancient Greek	Odyssey	Ancient Greek	Geography	History
3 <sup>rd</sup>	History	Modern Greek	Biology	Mathematics	Religions
4 <sup>th</sup>	Religions	English	Mathematics	English	French
5 <sup>th</sup>	Technology	Economy	Music	Literature	Gymnastics
6 <sup>th</sup>	French	Gymnastics	Odyssey	IT	Mathematics
7 <sup>th</sup>	Arts	Arts	IT		

### 5. Ben's weekly school schedule in a Greek secondary school.

Overall, Ben is in the 10th semester (4th grade), as shown on the standard and compulsory inclusive baseline, with the overall average checked at 10.3, showing a 4.7 semester deviation from the baseline (15th semester).

The third table begins with observations on student language skills. Ben is experiencing difficulties in reading and speech production as he is in 4th grade (9th semester), while in reading comprehension and writing he is in 10th semester.

Then, in reading readiness skills and oral language, he is in the 5th grade (12th sem.). In psychomotor skills, he is in the 4th grade (10th sem.) and in cognitive skills, he is in the 6th grade (13th sem.). Furthermore, he has difficulty expressing and organizing his emotions, which is why he is in the 5th grade (11th sem.).

Ben has similar difficulties to those observed in reading and speech production (9th sem.).

Furthermore, delinquent behaviors are recorded in the 2nd semester of the 5th grade (11th sem.) when Ben sometimes may display aggression when he is resentful.

Through these empirical heteroobservations, the inclusion process is promoted with a teaching priority. The priority focuses on classroom inclusion and emphasizes skills such as numeracy and the calculation of time spent on the computer, with a focus on solving organizational problems.

### Informal pedagogical assessment from the observations into the reading of texts' organization into the school's weekly timetable

The literature teacher is using thematic analysis in Special Education and Training [SET], the data—observations from the Informal pedagogical assessment on specific learning disabilities skills such as perception, memory, graphical space, reading, numeracy, and reading behavior.

The overall average is checked in the 11th semester and matched with the 5th grade, with a 4-semester deviation from the baseline (15th semester).

The philologist's observations of perceptual skills in the student's visual, auditory, and audiovisual perception are found in the 6th grade (13th sem.), while his multisensory perceptual functions are checked in the 2nd sem. of the 5th grade (12th sem.).

Empirical heteroobservations for mnemonic skills in functional memory—sequence memory and Ben's long-term mnemonic memory—are found in the 5th grade (11th sem.). Short-term, however, is found in the 4th grade (10th sem.).

Furthermore, observations of basic reading skills in phonological awareness, pre-reading, and writing are found in the 4th grade (10th semester), while reading and written expression are checked in the 9th semester. Finally, skills in morphology, spelling, and semantics are found in the 3rd grade (8th semester).

Finally, observations on behavioral skills are checked in emotional support in the 5th grade (11th semester), while his reading self-image is checked in the 6th grade (13th sem.). In planning skills, there is a large discrepancy, as he is placed in 3rd grade (8th sem.). Ben has particular difficulty managing his time and daily schedule.

Through these pedagogical observations, the inclusion process is checked with a teaching priority. The priority focuses on basic reading skills for classroom inclusion and emphasizes morphological, spelling, and semantic skills.

### Informal pedagogical evaluation based on observations of ASD's behaviors

Finally, the literature teacher is using thematic analysis in Special Education and Training [SET]. The data—observations are collected from the informal pedagogical assessment on ASD's behaviors with an emphasis on social skills, communication skills, thinking skills and academic skills.

The overall average stands at 10.1 (2nd semester—4th semester), showing a 5 semester deviation from the baseline (15th semester).

Ben's observations for social skills are in the 8th semester in social interactions. It is observed that he finds it difficult to establish (7th semester) and maintain (8th semester) friendships [35].

In terms of communication skills, Ben's oral and body language skills are in the 11th semester, while verbal communication is recorded in the 10th semester. The student expresses himself in short sentences or responds in one-word sentences. Finally, the meaning of speech is found in the 12th semester.

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

In the thinking skills, it is observed that flexibility shows 5 semesters of deviation from the baseline and creativity only 3 semesters. Quite close to the baseline, imagination is found in the 14th semester of study.

Academic skills, in reading comprehension, are placed in the 9th semester, and writing skills, in painting, are recorded in the 10th semester of study. Finally, in programming, it is placed in the 8th semester of study.

Through these pedagogical empirical heteroobservations, the inclusion process is checked with a teaching priority. The priority focuses on social skills and emphasizes building friendships with other classmates.

METHODOLOGY OF OBSERVATION: STUDENT WITH SPECIAL LEARNING DIFFICULTIES - ASD

**TABLE (5). INFORMAL PEDAGOGICAL ASSESSMENT OF AUTISTIC DIFFICULTIES -2ND PHASE TISIPSEN**

**3) Levels (line) of Autistic Difficulties with Basic Skills Checklists with DSM,5 (2013)**

**Teaching priority: Social skills(1)-building friendships**

		(1) SOCIAL SKILLS				COMMUNICATION SKILLS (2)				THINKING SKILLS (3)			ACADEMIC SKILLS (4)		
		social interactions	builds friendships	maintaining friendships	understanding the rules	Oral language	Verbal communication	body language	Speech meaning	Flexibility	Imagination	creativity	reading- understanding	writing-painting	programming
20	20th semester														
19	19th semester														
18	18th semester														
17	17th semester														
16	16th semester														
15	15th semester	15	15	15	15	15	15	15	15	15	15	15	15	15	15
14	14th semester														
13	13th semester														
12	12th semester														
11	11th semester														
10	10th semester														
9	9th semester														
8	8th semester	0													
7	7th semester														
6	6th semester														
5	5th semester														
4	4th semester														
3	3rd semester														
		Average 8,5				Average 11				Average 12			Average 9		
		General Average 10,1													

**Table. Informal pedagogical assessment based on observations of ASD's behaviors.**

### Social skills

More specifically, Ben has an average score of 8.5 in social skills, which is his lowest average on this particular table. Indeed, as mentioned above, Ben has difficulty interacting with his classmates, creating and maintaining friendships, and understanding the rules. As already noted from his individual background, he often chooses to listen to loud music when in crowded environments. This attempt to isolate himself also follows him to school, where he even receives taunting from others.

### Communication skills

In terms of communication skills, Ben scores highest in the 11th semester (average 11). Ben can express himself without much difficulty, but he avoids talking and communicating with others. When he needs to communicate, he usually responds briefly and abruptly.

### Thinking skills

His Thinking skills are in the 12th semester (average 12). Ben has a lot of flexibility, imagination and creativity, which has been noted by his Computer Science teachers in the course where he seems to have a high interest.

### Academic skills

Finally, his academic skills are considerably lower, in the 9th semester (average 9). Ben has difficulty reading and often refuses to write when he is tired. When he reads, his voice is monotone and it seems as if he does not understand what he is reading. Additionally, when Ben gets the chance to answer a question during the lesson, he finds it difficult to focus his answer on what is being asked. Therefore, he either chooses not to answer or gives long answers that are not relevant to the question.

## CONCLUSIONS

The results of the present study revealed that the empirical observation and the informal pedagogical evaluation of autistic behaviors in the context of inclusive secondary education led to more realistic teaching intervention goals [6] [3] [7] for Ben in order for him to "learn to cooperate with his classmates and to control his time "in front" of the computer."

The quality of life in autism across the lifespan with a meta-analysis [13] concludes the first point highlights that the literacy teacher can accomplish the empirically systematic observation and record of autistic behaviors by pragmatically promoting inclusive education [20]. In particular, it was shown that the literature teacher, through teaching interaction, can collect, record, and understand data with an emphasis on social skills, communication skills, thinking skills and academic skills. These articulate the student's individuality on autistic behaviors and finally affect school inclusion according to the weekly timetable of lessons.

The second concluding point highlights that, through empirical observation, the literacy teacher can complete the IPA in a range of skills, including autistic behavior, with some Basic Skills Checklists. Furthermore, the literacy teacher can use curricular interventions in the timetable and interactions in the history lesson in the context of inclusive secondary education and continue in

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

using a participatory action research approach with students on the autistic spectrum to rearticulate autism and the lived experience [36].

Finally, in this way, the philologist can support the student with ASD comprehensively to develop learning readiness skills in emotional organization (1), social skills (2) according to the FAPSE, general learning skills (3) according to the classroom and semester timetable, skills in understanding the history lesson (4), and skills in controlling autistic behaviors (5).

In order to present the methodology of empirical observation and recording of autistic behaviors of a student with ASD "anonymously" by the teacher, the present study was limited to obtaining data for the case study from the movie Ben X. However, in our opinion, the work could be extended to pedagogical and teaching action research in secondary inclusive education and other literacy researchers who attempt to understand autistic behaviors and record the skills of their students with ASD that support in inclusive secondary education to a student with Autism.

### REFERENCES

- 1) Anderson, A., Stephenson, J., & Carter, M. (2017). A systematic literature review of the experiences and supports of students with autism spectrum disorder in post-secondary education. *Research in Autism Spectrum Disorders*, (39), pp. 33–53.
- 2) Rodgers, J., & Ofield, A. (2018). Understanding, recognising and treating co-occurring anxiety in autism. *Current Developmental Disorders Reports*, 5(1), pp. 58–64.
- 3) Christakis, K. (2013). Curriculum. In *Teaching Programs and Strategies for People with Special Educational Needs and Serious Learning Disabilities* (pp. 127-172). Athens: Diadrasis. [in Greek].
- 4) Presidential Decree 301. (1996). *Framework Analytical Program of Special Education (FAPSE)*. Athens: National Printing Office. [In greek].
- 5) Law 3699, 2018. (2018). "*Special education and training for people with disabilities or special educational needs*". Athens: Ministry of Education: State Printing, Gov 199/A/2. 10. 2014. [in Greek].
- 6) Christakis, K. (2011). *The education of children with difficulties, Introduction to special education*. Athens: Diadrasis [in Greek].
- 7) Christakis, K. (2000). Special Difficulties and Needs in Reading and Comprehension of Text. In *Special Difficulties and Needs in Primary School* (pp. 175-266). Athens: Atrapos, [in Greek].
- 8) Chevallier, C., Kohls, G., Troiani, V., Brodtkin, E., & Schultz, R. (2012). The social motivation theory of autism. *Trends in Cognitive Sciences*, 16(4), pp. 231–239.
- 9) Drossinou Korea, M. (2023). The diversity of autism in the family. Inclusion and best practices in school. *Special Education Themes* (100), pp. pp. 11 - 25. In greek.
- 10) Sasson, N., Faso, D., Nugent, J., Lovell, S., Kennedy, D., & Grossman, R. (2017). Neurotypical peers are less willing to interact with those with autism based on thin slice judgments. *Scientific Reports*, 7(40700). doi: 10.1038/srep40700
- 11) Calder, L., Hill, V., & Pellicano, E. (2013). 'Sometimes I want to play by myself': Understanding what friendship means to children with autism in mainstream primary schools. *Autism*, 17(3), pp. 296–316.
- 12) Francis, K., Karantanos, G., Al-Ozairi, A., & AlKhadhari, S. (2021). Prevention in autism spectrum disorder: A lifelong focused approach. *Brain Sciences*, 11(2), p. 151.
- 13) Van Heijst, B., & Geurts, H. (2015). Quality of life in autism across the lifespan: A meta-analysis. *Autism*, 19(2), pp. 158–167.
- 14) Müller, E. (2008). Social challenges and supports from the perspective of individuals with Asperger syndrome and other autism spectrum disabilities. *Autism*, 12, pp. 173–190.
- 15) Synodinou, K. (2007). *Childhood autism. The therapeutic approach*. (6<sup>th</sup> ed.). Athens: Kastaniotis. [in Greek].
- 16) Grapel, J., Cicchetti, D., & Volkmar, F. (2015). Sensory features as diagnostic criteria for autism: Sensory features in autism. *The Yale journal of biology and medicine*, 88(1), p. 69.
- 17) Kaiser, H. (2016). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20(1), pp. 141–151.
- 18) American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders fifth edition (DSM V)*. Washington- DC: American Psychiatric Publishing.
- 19) Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism*, 20(4), pp. 442–462.
- 20) Efstathiou, M. (2018). *Diagnosis, assessment, education of people with disabilities in Greece and the struggle for inclusive education (2<sup>nd</sup> ed.)*. Athens: Graphima. [in Greek]
- 21) Avramidis, H., & Kalyva, E. (2006). Observations. In *Research Methods in Special Education, Theory and Application* (pp. 219-271). Athens: Papazisi, [in Greek].
- 22) Ciccone, A. (2019). *L'observation Clinique*. Paris: Dunod.

## Informal Pedagogical Assessment in Inclusive Secondary Education for a Student with Autism

- 23) Lanou, A., Hough, L., & Powell, E. (2012). Case studies on using strengths and interests to address the needs of students with autism spectrum disorders. *Intervention in School and Clinic*, 47(3), pp. 175–182.
- 24) Drossinou Korea, M. (2017). *Special education and training (SET). The "through" special education proposal for the Training of children and young people with special needs*. Patras: Opportuna. [in Greek].
- 25) Frey, J. R. (2019). Assessment for Special Education: Diagnosis and Placement. *The ANNALS of the American Academy of Political and Social Science*, 683(1), pp. 149-161.
- 26) Drossinou-Korea, M., & Periferakis, T. (2018). Targeted, Individual, Structured, Inclusion programs of prevocational readiness for students with Special Education Needs (TISIPfSEns). *International Journal of Latest Research in Humanities and Social Science (IJLRHSS)*, 1(4), pp. 28-35.
- 27) Drossinou-Korea, M., Matousi, D., Panopoulos, N., & Paraskevopoulou, A. (2016). School inclusion programmes (SIPs). *Journal of Research in Special Educational Needs*, pp. 967-971.
- 28) Drossinou Korea, M. (2020). *Special Education Handbook and Training Narratives*. Patras: Opportuna, [in Greek].
- 29) Ben X. (2007). Belgium – Netherlands, Belgium – Netherlands, USA: [DVD], MMG Film.
- 30) Avramidis, E., & Kalyva, E. (2007). The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion. *European Journal of Special Needs Education*, 22(4), pp. 367-389. doi:10.1080/08856250701649989
- 31) Whitehouse, A., Durkin, K., Jaquet, E., & Ziatas, K. (2009). Friendship, loneliness and depression in adolescents with Asperger's Syndrome. *Journal of Adolescence*, 32(2), pp. 309–322.
- 32) Ministry of Education-Pedagogical Institute. (2009). *Learning Readiness Activities. Oral Speech, Psychomotricity, Mental abilities, Emotional Organization. Book for the teacher of Special Education and training and students*. (M. Drossinou, Ed.) Athens: Pedagogical Institute.
- 33) Ministry of State for Special Education and Inclusion. (2022). *Autism Good Practice Guidance for Schools*. Retrieved 01 8, 2023, from Ireland: Government of Ireland: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/219953/68580185-5620-4d61-aeb6-42490593e9e9.pdf#page=null>
- 34) Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), pp. 77–101.
- 35) O'Hagan, S., & Hebron, J. (2017). Perceptions of friendship among adolescents with autism spectrum conditions in a mainstream high school resource provision. *European Journal of Special Needs Education*, 32(3), pp. 314–328.
- 36) Vincent, J., Potts, M., Fletcher, D., Hodges, S., Howells, J., & Mitchell, A. (2017). 'I think autism is like running on Windows while everyone else is a Mac': Using a participatory action research approach with students on the autistic spectrum to rearticulate autism and the lived experience of university. *Educational Action Research*, 25(2), pp. 300–315.

### TABLE of ACRONYMS

- 1) Targeted, Individually Structured, and Inclusive Intervention Programs for Students with Special Educational Needs (TISIPfSEN).
- 2) Framework of Analytical Program Special Education (FAPSE).
- 3) Autism Spectrum Disorder (ASD).
- 4) Basic Skills Checklists (BSCLs).
- 5) Informal Pedagogical Assessment (IPA).
- 6) Special Educational Needs (SEns).



There is an Open Access article, distributed under the term of the Creative Commons Attribution–Non Commercial 4.0 International (CC BY-NC 4.0)

(<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.