

THE SCHOOL AND ITS PROTAGONISTS: THE TEACHERS

V Seminar "INVALSI data: a tool
for teaching and scientific research"

Edited by
Patrizia Falzetti

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Index

| | |
|---|--------|
| Introduction by <i>Patrizia Falzetti</i> | pag. 7 |
| 1. An exploratory study on the connection between INVALSI assessment and Mathematics teaching-learning processes at the Primary School level by <i>Eleonora Faggiano, Annarita Monaco, Ottavio G. Rizzo, Valentina Vaccaro</i> | » 9 |
| 2. Mathematics Teachers Specialised Knowledge and GESTINV Database by <i>George Santi, Federica Ferretti, Francesca Martignone</i> | » 24 |
| 3. MEL: Model for Literacy Education. Teacher education and professional development in literacy teaching by <i>Tiziana Mascia</i> | » 41 |
| 4. Use of INVALSI data for formative assessment activities in English teaching by <i>Cecilia Fissore, Marina Marchisio</i> | » 61 |
| The authors | » 85 |

Introduction

by Patrizia Falzetti

The educational system is directly related with the issue of the quality of life with its processes regarding the person, the citizen, and the worker.

INVALSI is part of the Evaluation National System and has got a crucial role not only because it systematically and regularly makes standardized tests on students' skills and abilities but also because it helps school-principals and teachers to improve their knowledge about evaluation and self-evaluation tasks.

Teachers are essential in the learning process: at first, they are facilitators, thanks to their emphatic abilities, expert in building successful and fruitful relationships and in creating a context of cooperation, in order to promote a harmonious development of each student and a peaceful learning environment.

This book collects some papers submitted during the V edition of the Seminar "INVALSI data: a tool for teaching and scientific research" and it talks about the training of teachers.

Authors of the first chapter will tell us about an interdisciplinary research project aimed at identifying teachers' training needs in the Italian context and at suggesting some guidelines to improve teaching practices.

The second chapter is addressed to prospective primary school teachers. Here, authors will present a research about the gap between Maths INVALSI tests and teaching/learning practices in Italian schools.

In chapter three, authors will propose the MEL Model (Modello per l'Educazione alla Literacy, that is Model for Literacy Education), useful for teachers and all stakeholders training about reading literacy to gain all necessary knowledge to support students and help them to become expert readers.

Finally, the research of chapter four will focus on the material design provided for an English training addressed to upper secondary schools.

Papers collected in this book are a limited and non-exhaustive example of the utility of INVALSI data. Year by year, the catalogue of the open-access series “INVALSI PER LA RICERCA” has been greatly enriched as further confirmation of a worthwhile mutual dialogue between academics and school actors. As Statistical Service we hope this partnership could last and may generate many other research works.

4. Use of INVALSI data for formative assessment activities in English teaching

by Cecilia Fissore, Marina Marchisio

The INVALSI English test was first introduced in 2018 to measure students' ability to understand written texts or spoken texts, according to the Common European Framework of Reference for Languages. Despite the Italian National Guidelines for secondary education state B2 as the English exit level to be reached at the end of upper secondary school, according to the INVALSI report of 2019, about 65% of Italian students do not reach this level in the listening test and 48% do not reach it in the reading test. To improve these results and to overcome students' difficulties in acquiring these skills, teachers can adopt formative assessment strategies. Formative assessment is a continuous process that sees students as active protagonists and that motivates them to progress in their learning. Technologies, such as an Automatic Assessment System, can offer valid support for formative assessment strategies. The aim of this research is the design of material for a training course for secondary school English teachers; the research focuses on adapting INVALSI questions designed for standardized assessment to questions for formative assessment, for developing language skills and preparing for the INVALSI tests. Some examples will be shown, highlighting the strategies adopted.

La prova INVALSI di Inglese, introdotta per la prima volta nel 2018, ha lo scopo di misurare le competenze degli studenti nell'ascolto e nella lettura, secondo il Quadro Comune Europeo di Riferimento per le lingue. Nonostante in Italia le Indicazioni Nazionali indichino il B2 come livello di uscita in inglese da raggiungere al termine della scuola secondaria di secondo grado, secondo il rapporto INVALSI del 2019, circa il 65% degli studenti italiani non raggiunge questo livello nella prova di ascolto e il 48% non lo raggiunge nella prova di lettura. Per migliorare questi risultati e superare le difficoltà degli studenti nell'acquisire queste competenze, gli insegnanti possono

adottare delle strategie di valutazione formativa. La valutazione formativa è un processo continuo che vede gli studenti come protagonisti attivi e che li motiva ad avanzare nel loro apprendimento. Le tecnologie, come ad esempio un sistema di valutazione automatica, possono offrire un valido supporto per strategie di valutazione formativa. Lo scopo di questa ricerca è la progettazione di materiale per un corso di formazione per insegnanti di Inglese della scuola secondaria. La ricerca si concentra sull'adattamento delle domande INVALSI progettate per la valutazione standardizzata a domande per la valutazione formativa, per lo sviluppo delle competenze linguistiche e per la preparazione ai test INVALSI. Verranno mostrati alcuni esempi, evidenziando le strategie adottate.

1. Introduction

School has a primary role in assuring a proper language education and the development of skills, which will allow students to successfully enter foreign universities or the job market.

In 2018, the INVALSI English test was introduced to measure some essential skills that students must possess, appropriate for their age. The tests measure the ability to understand written texts or spoken texts, according to the CEFR – Common European Framework of Reference for languages (Council of Europe, 2018). The CEFR was developed by the Council of Europe between 1989 and 1996, as part of the Language Learning for European Citizenship project, and it has been adopted by almost all countries to assess skills in a foreign language. It is a descriptive system used to evaluate the skills achieved by those who study a European foreign language and to indicate the level of language teaching in four areas (reading, listening, speaking, and writing). The CEFR establishes six progressive levels of knowledge of the language, from A1 (breakthrough level) to C2 (mastery level), and each level of the CEFR is characterized by a text describing the degree of language proficiency achieved. INVALSI has adopted the levels established in the CEFR to evaluate the preparation of students. The scales adopted range from Pre-A1 (preschool level) to B2 and the areas of competence evaluated are reading and listening, because the areas of conversation and writing are not suitable for evaluation through standardized tests.

It is important to underline that the level descriptors do not refer to morphosyntactic structures, tenses, lexical elements, etc. but they refer to the textual complexity and the operations that the reader or the listener knows how to execute. Depending on the level, the difficulty of the texts increases in terms of

topics, length, typology, degree of complexity of linguistic structures, vocabulary, reading strategies, and listening speed. Another very important feature of the INVALSI question text is the authenticity, for a communicative approach to language learning. “Authenticity” is a frequently invoked and, at the same time, strongly debated notion in English Language Teaching. The interest in this notion has increased with the development of a large corpora of naturally occurring English and the way the internet has provided easy access to varied language material. The term “authenticity” is related to notions of realness or trueness to origin (Buendgens-Kosten, 2014). In the late 1970s, H.G. Widdowson, one of the fathers of the communicative approach, introduced a distinction between authenticity as it applies to texts viewed in isolation (which he called “genuineness”), and texts in a pedagogical context: “Genuineness is characteristic of the text itself and is an absolute quality. Authenticity is a characteristic of the relationship between the passage and the reader and it has to do with appropriate response” (Widdowson, 1978). According to this definition, a text is genuine if it is a real/realistic example of discourse designed to meet a communicative purpose (unlike an artificial text for teaching language). Authenticity is present if a text is used in ways that correspond to normal communicative activities. According to Widdowson, genuineness is relevant, but the main purpose must be to match genuineness with authenticity.

The National Guidelines defined by MIUR (2010) are also closely linked to the CEFR. In fact, the Italian National Guidelines for secondary education state B2 as the English exit level to be reached at the end of upper secondary school in all institutes and study fields (except for Vocational Schools where the required level is level B1+). During high school, students should acquire:

- skills in understanding oral and written texts relating to topics of both personal and scholastic interest (literary, artistic, musical, scientific, social, economic fields);
- skills in the production of oral and written texts to report facts, describe situations, argue and support opinions;
- skills of interaction in the foreign language in an appropriate manner both to the interlocutors and to the context;
- skills of analysis and interpretation of aspects related to the culture of the countries whose language is spoken.

The National Guidelines (MIUR, 2010) also underline how it is necessary to provide for a horizontal transversality (among the various languages that students study) and a vertical continuity in the process of learning and teaching languages. To do this, students need to develop competences in different school grades using coherent approaches and methods, in order to foster the transfer of the same strategies in vertical continuity.

According to the INVALSI Report of 2019, in the listening test, the percentage of grade 13 students who do not reach level B2 is approximately 50% in the two macro-areas of Northern Italy, 64% in the Center, 79% in the South and 84% in the South and Islands. In the reading test the results are better, but the trend is the same as that observed for the listening test. At grade 13 students who do not reach level B2 are 35% in the two macro-areas of Northern Italy, 48% in the Center, 59% in the South and 66% in the South and Islands. This situation may preclude opportunities for future employment.

INVALSI standardized tests inevitably do not measure all aspects of student learning, such as environmental and social variables, interpersonal skills, and oral or written communication skills. In fact, their aim is not to evaluate students (or their teachers) but to offer an objective and external self-evaluation tool for each School. The results of the tests indicate the level of competence reached by a student, but they certainly cannot explain the reason for a positive or negative result. Only students' teachers can try to understand this aspect. A standardized assessment cannot comprehensively evaluate students or even guide and monitor their learning process (INVALSI, 2021b). This type of evaluation takes place through formative assessment: a continuous process that sees students as active protagonists and that motivates them to advance in their learning. Formative assessment is one of the most important methods for developing students' self-determination, self-efficacy, autonomy, and self-esteem. It can help students to increase their motivation to study, to acknowledge their strengths and weaknesses, to be aware of the level reached, to proceed step by step, following the feedback received, which must always be numerous and immediate.

In 2020, in order to help schools deal with the difficulties deriving from the suspension of face-to-face lessons due to the Covid-19 pandemic, the INVALSI Institute itself has created materials and training tools aimed at teachers and schools as a bridge between formative and summative assessment. Thanks to the fact that in recent years the INVALSI tests have been computer-based and thanks to the many data collected, the INVALSI materials are based on empirical data.

Technologies, such as an Automatic Assessment System (AAS), can offer valid support for language teaching and learning and one of the teaching practices in which technology can play a fundamental role is the formative assessment (Barana *et al.*, 2019; Barana *et al.*, 2020; Barana *et al.*, 2020; Barana *et al.*, 2019). The Delta Research Group of the University of Turin has developed and tested a model for automatic formative assessment and immediate and interactive feedback with an AAS (Barana *et al.*, 2018). The training activities conducted by the Research Group (Barana *et al.*, 2017)

showed the effectiveness of an automatic formative assessment, but at the same time highlighted the importance of training teachers and students in the use of technologies.

The object of this research is the design of material for a training course for secondary school English teachers. The teacher training course focuses on adapting INVALSI questions designed for standardized assessment to questions for formative assessment for developing language skills and preparing for the INVALSI tests. During the training course, teachers will have to create questions with automatic formative assessment, reflecting on how to adapt the requests to the different needs of the students and on how to create guided learning paths.

2. Formative assessment and feedback

The definition of formative assessment that we adopt is that of Black and Wiliam (2009), well known in the literature: “Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited”. Assessments become formative when the information is used to adapt teaching and learning to meet student needs. When teachers know how students are progressing and where they are having trouble, they can use this information to make necessary instructional adjustments, such as reteaching, trying alternative instructional approaches, or offering more opportunities for practice. These activities can lead to improved student success (Boston, 2002). The authors conceptualize formative assessment through the following five key strategies:

- clarifying and sharing learning intentions and criteria for success;
- engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding;
- providing feedback that moves learners forward;
- activating students as instructional resources;
- activating students as the owners of their own learning.

According to Black and Wiliam (1998), efforts to strengthen formative assessment produce significant learning gains. Feedback given as part of formative assessment helps learners become aware of any gaps that exist between their desired goal and their current knowledge, understanding, or skill and guides them through actions necessary to obtain the goal. Feedback,

one of the strategies for an effective formative assessment, takes on a very important role to reduce the discrepancy between current and desired understanding. Effective feedback must answer three main questions: “Where am I going?”, “How am I going?”, “Where to next?”. Effective feedback should indicate what the learning goals are, what progress is being made toward the goal, and what activities need to be undertaken to make better progress (Hattie and Timperley, 2007). The importance of feedback is also highlighted in the literature on language assessment. Pallotti (2005) argues that giving students feedback on mistakes is much more important than correcting them. Feedback must be understood as an informative response in which the teacher informs students about the outcome of their choices, assisting them in the moment of analysis and systematization. Balboni (2011) focuses his attention on a student-centered perspective in which, through continuous feedback, students can be monitored to verify the achievement of set objectives.

The development of new technologies, and in particular the use of an AAS, can support student learning, also including the possibility of giving feedback. An AAS is often used for summative assessment because it offers the opportunity to automatically evaluate, collect and analyze students’ responses. However, it can also offer support for a formative assessment, to give immediate, personalized feedback, to guide students in an exercise or to propose adaptive exercises. Moreover, teachers in the classroom deal with a large number and variety of students. They can have concrete support in offering all students personalized feedback and teaching from educational technology.

The Delta Research Group of the University of Turin has developed and tested a model for automatic formative assessment with the AAS Möbius Assessment¹.

The characteristics of the model are:

- availability. The tests are always available to students, who can take them at their own pace, with no time limits and number of attempts;
- algorithm-based questions and answers. The questions can have distinct random values on each attempt made by the student, and the answers are evaluated using code. This can be achieved through the implementation of Mathematical software algorithms on which the AAS is based;
- open answers: the use of textual response areas where the AAS searches the keywords in students’ answers;
- immediate feedback. The results are quickly calculated and shown to students while they are still focused on the task. Tests with no more than five questions are used in order to increase the immediacy of the feedback;

¹ <https://www.digitaled.com/products/assessment>.

- interactive feedback. Immediately after answering a question, the system can show if the answer is correct and propose to the student a step-by-step guided resolution. The interactive process shows one possible way to answer the question.

Contextualization: the assignments should be developed within a real-world context which engages students more and helps them to better understand the contents.

This model was born for STEM disciplines but has also proved useful for other disciplines, for example for language learning (Barana *et al.*, 2019; Marengo *et al.*, 2019). According to this model, the AAS allows the creation of adaptive questions that give students another chance when they give an incorrect response and that can be adapted to provide more information. Adaptive questions also allow the student to try a simpler version of the question, guide them through the exercise one step at a time, and present whatever other approach the instructor feels is appropriate. This type of questions with interactive and immediate feedback is very suitable for automatic formative assessment (Barana *et al.*, 2020; Corino *et al.*, 2020). The importance of immediate and interactive feedback is essential for both students and teachers. Through continuous and formative feedback, the student can focus not on the result, but on the progress made, on the mistakes made, and on the actions to be taken to improve. At the same time, teachers can progressively monitor students' learning levels and obtain valuable feedback.

3. Research object and hypothesis

The object of this research is the design of material for a training course for secondary school English teachers, focused on the creation of questions for automatic formative assessment starting from INVALSI questions for standardized assessment.

In fact, to create questions for formative assessment teachers and trainers can use multiple sources: textbooks (which all students and teachers have), internet, open online resources, or paid resources. A very precious resource that is often not considered is GESTINV (INVALSI, 2021a), the INVALSI test archive. Gestinv is an interactive archive available to teachers, students, schools and families, which collects and organizes the INVALSI test materials. The questions in the archive are made available to teachers and students to allow a better understanding of the structure of the tests and the competences examined and to offer a greater understanding of the function of the different questions. The archive of English tests, available only from 2020, still needs to

be enriched and strengthened. Nevertheless, the advantage of using the Gestiv archive is that for each question it is possible to know its properties (the areas investigated, the degree, the response given by the students, etc.) and to create test materials for the core competencies examined by National Guidelines.

The research question is: how to use INVALSI data to design automatic formative assessment activities to facilitate the learning of the English language?

4. Data and method

The documents used for the research, available on the INVALSI website, were: “The CEFR for the languages of the Council of Europe (Council of Europe, 2018) for a description of the language skills required of secondary school students and how they are assessed”.

Descriptors of the levels of English for lower and upper secondary school (described in the CEFR). The reference scale identifies three levels of linguistic competence, each in turn divided into two levels, for a total of six levels: elementary A1/A2, intermediate B1/B2, advanced C1/C2. For each of the six levels there are descriptors for linguistic-communicative skills, for listening and reading comprehension and for written and oral production.

The “English tests: reading and listening comprehension” (Calanchini, Monti and Cavicchiolo, 2018) in order to study how the reading and listening tests are structured, what the constructs investigated and the objectives of the tests are, the description of the tests in relation to the levels of competence defined by the National Guidelines and the CEFR, and the articulation of the results of the INVALSI tests in levels.

- The “INVALSI English test at the end of the second cycle of instruction” (INVALSI, 2018) to study the purposes of the tests in relation to the National Guidelines, the characteristics of the test contents, and the types of questions used in the INVALSI English tests for secondary school;
- the INVALSI 2019 test report (INVALSI, 2019) to analyze the sample results of the INVALSI tests. The Report presented in 2019 is the first report in which the results of grade 13 are also reported;
- examples of INVALSI English questions for lower and upper secondary school (INVALSI, 2021a) in Gestiv and in the Test Area of the INVALSI website²;
- training videos on the INVALSIopen YouTube channel³.

² www.invalsi.it.

³ <https://www.youtube.com/c/invalsiopen/featured>.

The methodology adopted to design the training material and activities was the following:

- study of the CEFR and the expected skills for the English language at the end of the first and second cycle of education;
- analysis of how the INVALSI English test is structured for grade 8 and 13 and of the type of questions of the various tasks;
- analysis of the “INVALSI 2019 test report” and of the results in English in listening and reading to understand the levels reached by Italian students;
- study of examples of questions and design and implementation with the AAS of questions for formative assessment starting from the INVALSI examples;
- reflection on the strategies to be used to make formative assessment effective.

5. Results

The INVALSI questions fit very well with our automatic formative assessment model because the contexts of the texts and audio files used in the tests are real and relevant to the social and professional life of the students. Some themes are nature, science, technology, free time, media, sport, travel, art, music, etc. The tests use the analysis of authentic materials (texts and audio files) to expose students to natural language, the same one they will face in real situations outside of school. In this way, students acquire a real linguistic competence in reading and listening.

Each task is preceded by specific instructions in English, both for reading comprehension and for listening comprehension, and in all tasks the first question is the example. The example has the function of clarifying the type of questions to students, guiding them in the non-linguistic topic of the text and making them understand what type of response is required (INVALSI, 2018).

The goal of the reading comprehension test is to test all the different reading methods, in order to verify whether the student is a competent reader in all the possible types of reading that can occur in an authentic situation. The types of reading/listening that the student must adopt can be:

- Reading/Listening for gist: fast and selective type of reading/listening, to understand the main idea;
- Reading/Listening for specific information and important details: fast and selective type of reading/listening, to understand specific information or important details;

- Reading/Listening for main ideas and supporting details: careful and intensive type of reading/listening, to understand the main ideas and supporting details;
- careful and intensive type of reading/listening to deduce the meaning of a proposition or a word from the context.

To better focus the student's attention on one type of construct at a time, each task requires the adoption of a single type of reading, and the reading style to be adopted for every task is made explicit by the example. The same rule applies to the listening comprehension test. There are two main styles of listening comprehension:

- selective listening: when we need to catch specific information or important details, or if we want to get the gist of a spoken text;
- careful listening: when we need to understand the main ideas of a spoken text.

The aim of the INVALSI listening comprehension test is to test all the different listening modes, in order to verify whether the student is a competent listener for all possible authentic communication purposes (Calanchini, Monti and Cavicchiolo, 2018). The listening test is often more complex for students (and others) because the text is not available to listeners: they must know how to orient themselves in listening and recognizing the words. Listening is an active receptive skill: the listener must perform many operations simultaneously in real time; there are strategies to be activated and listening styles to be adopted in order to successfully carry out the listening processes.

The Reading test and the Listening test consist of five tasks, two at level B1 and three at level B2. In the Reading test, each task contains an authentic text and comprehension questions. Texts can be narrative, descriptive, argumentative, expository, regulatory, continuous and non-continuous (taken from newspapers and magazines, the Internet, books, manuals, brochures and leaflets, advertisements). In the Listening test, each task consists of an audio of maximum 4 minutes and comprehension questions. The audio can be a monologue, a dialogue between 2 or maximum 3 people, or a sequence of small monologues by different speakers. Audios are authentic recordings, for example interviews, lectures, conversations, television programs, podcasts, etc. Audio files can include speakers of different genders and ages with a wide range of accents, and the linguistic register can be informal as well as formal. The audio file is always played twice (INVALSI, 2018).

The types of questions for the reading test and for the listening test are:

- multiple choice questions (with four answer options in which the student must select only one option) to complete questions or sentences;

- multiple matching questions in which the student must match a part of the text with a title or a summary phrase or an image. The combination can be between a first part and a second part of a sentence, or it can be a combination of sentences, titles, descriptions, figures;
- short open answer questions in which students must provide an answer of up to four words (or numbers);
- true/false/not given questions. In this case the questions are statements that students, based on what they read, must select as true, false, or not present in the text. This typology is present only in the reading comprehension test.

By studying the materials on the INVALSI website and on Gestiv and the training videos held by INVALSI experts, 30 questions of different types (15 for the reading test and 15 for the listening test) were designed and implemented with the AAS. INVALSI questions, intended for standardized assessment, were transformed into formative assessment questions for the development of language skills. During the design of the questions, the possible strategies that were adopted to make the question formative were analyzed. During the training course, teachers will have to create questions with automatic formative assessment, reflecting on how to adapt the requests to the different needs of the students and on how to create guided learning paths. Some of these materials will serve as an example for teachers during the training course. It will also be interesting to observe and analyze the strategies that teachers will use to adapt the questions for formative assessment. In particular, it will be inspiring to compare the different strategies adopted by the teachers starting from the same question, as well as to compare them with those used by us.

6. Example of designing a question to develop reading skills

The first example is a question for the B1 level reading comprehension test. In the CEFR, the indicator for the overall reading comprehension states that student “Can read straightforward factual texts on subjects related to his/her field and interests with a satisfactory level of comprehension”. The CEFR self-assessment grid at level B1 states “I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters”. The INVALSI example, shown in Figure 1, is titled “A couch surfing experience”. This task was also presented by INVALSI experts, in webinars and training videos on the INVALSIopen YouTube channel.

Read the text about the experience of a girl staying overnight at strangers' homes while travelling.
Decide whether the statements (1-8) are true (T) or false (F), then write the first four words of the sentence which supports your decision in the space provided.
The first one (0) has been done for you.

A couch surfing experience

Penny Sadler of Adventures Of a Carryon

One of my best vacation memories is my first and only couch surfing experience in a small town in northern Italy.

This trip came at a time in my life when I was under quite a lot of stress and really needed to get away. Only Italy would do. That's another story. I didn't think I could get a host for more than a day or two at a time and was trying to sort out how I could afford to pay for accommodations and airfare. Then, miraculously, Angelo offered to host me for an entire week. With accommodations taken care of, I booked my airfare immediately. Angelo was an experienced couch surfing host and made me comfortable immediately. He picked me up at the train station, showed me around his town, which wasn't too big but big enough to be interesting, and he knew a lot about the history so he was a really great tour guide. He worked during the day but we would meet in the evening for dinner or go out for a gelato and a walk, a typical Italian pastime. I met his friends, took the train and explored a new city every day, and just generally had this incredibly relaxing stress-free week, which was exactly what I needed. Exploring an area of Italy that I had never experienced before was the perfect way to forget myself completely. Many people have asked me if I felt nervous about staying with a stranger. The answer is no, because a friend of mine had already stayed with Angelo so I knew that I'd be safe with him. But he also had many good references on his couch surfing profile and knowing what I know now I probably would've stayed with him anyway. Couchsurfing is a great way to immerse yourself in a culture or just to get to know an area more intimately, as if you live there. I'm still in touch with Angelo today and saw him just last year for a few days. I feel that I have made a lifelong friend in Italy.

0 Penny had never been couch surfing before.

Q1 She needed to relax and forget her troubles.

Q2 Angelo agreed to provide a place for a couple of days.

Q3 They first met outside Angelo's home.

Q4 Angelo was with her all the time.

Q5 Penny visited more than one Italian town.

Q6 Sometimes Penny was worried because she didn't know Angelo.

Q7 Using cheap lodging helps one experience the true life of a place.

Q8 Penny and Angelo haven't met since.

| | True [T] or False [F] | First four words |
|----|-----------------------|----------------------|
| 0 | True | One of my best |
| Q1 | <input type="text"/> | <input type="text"/> |
| Q2 | <input type="text"/> | <input type="text"/> |
| Q3 | <input type="text"/> | <input type="text"/> |
| Q4 | <input type="text"/> | <input type="text"/> |
| Q5 | <input type="text"/> | <input type="text"/> |
| Q6 | <input type="text"/> | <input type="text"/> |
| Q7 | <input type="text"/> | <input type="text"/> |
| Q8 | <input type="text"/> | <input type="text"/> |

Fig. 1 – INVALSI reading comprehension question (level B1)

Source: INVALSIopen (www.invalsiopen.it)

| | True or False | First four words |
|--|--|----------------------|
| Penny had never been couch surfing before. | True | One of my best |
| She needed to relax and forget her troubles. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Angelo agreed to provide a place for a couple of days. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| They first met outside Angelo's home. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Angelo was with her all the time. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Penny visited more than one Italian town. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Sometimes Penny was worried because she didn't know Angelo. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Using cheap lodging helps one experience the true life of a place. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |
| Penny and Angelo haven't met since. | <input type="radio"/> True <input type="radio"/> False | <input type="text"/> |

Sezione Tentativo 1 di 3

Verifica

Fig. 2 – First part of the INVALSI reading comprehension question with the verify button

In Figure 3, a possible behavior by students was simulated. For example, students might initially try to answer the questions and click the verify button to check if they answered right. In this case they have immediate feedback, while they are focused on the activity, on the correctness of the answers and on which parts, if any, were wrong (true/false or justification). Then they can try to correct themselves, still having two attempts to verify. In this way, students can actively think about the answers entered and have more attempts available. The possibility of having more attempts available through a guided and interactive path is crucial for students' self-confidence and can help to overcome the errors due to the incorrect insertion of the written answer. At the end of this first part, the students get final feedback on the correctness of their answers and, in case of an error, on what the correct answers were.

| | True or False | First four words |
|--|--|------------------------------------|
| Penny had never been couch surfing before. | True | One of my best |
| She needed to relax and forget her troubles. | <input checked="" type="radio"/> True <input type="radio"/> False | This trip came at |
| Angelo agreed to provide a place for a couple of days. | <input checked="" type="radio"/> True <input type="radio"/> False * | Then, miraculously, Angelo offered |
| They first met outside Angelo's home. | <input type="radio"/> True <input checked="" type="radio"/> False | Angelo was an * |
| Angelo was with her all the time. | <input type="radio"/> True <input checked="" type="radio"/> False | He worked during the day * |
| Penny visited more than one Italian town. | <input checked="" type="radio"/> True <input type="radio"/> False | * * |
| Sometimes Penny was worried because she didn't know Angelo. | <input type="radio"/> True <input type="radio"/> False * | * * |
| Using cheap lodging helps one experience the true life of a place. | <input type="radio"/> True <input checked="" type="radio"/> False * | * * |
| Penny and Angelo haven't met since. | <input type="radio"/> True <input type="radio"/> False * | * * |

Sezione Tentativo 2 di 3

Verifica

Fig. 3 – Example of immediate feedback with the verify button

The evaluation method used for this question is the “true/false/justification” method. As the instructions explain, the student must read the proposed text and the nine statements (eight plus an example). Then in the table, for each statement the student must indicate whether it is true or false (by inserting the letter T for true and F for false). For both choices, students must provide a justification by identifying the sentence in the text that contains such justification. Students are not asked to provide the words that carry the justification, but the first four words of the sentence containing it. The text is 375 words long and has a linear and clear structure. In this case, after completing the question, students can get final feedback and know if the answers given are right or wrong. However, if students have made some mistakes, they do not receive feedback on how to improve, they can only eventually try to answer the question again. Depending on how many questions we ask the student in the test, the feedback will be more or less immediate.

What is couchsurfing?

Sea trip between different nationalities of one or more days.

Free online hospitality service to ask or offer a room or sofa in your home to other people for one or more days.

Particular type of international travel agency.

Online service to exchange your home with other people for a holiday of one or more days.

Sezione Tentativo 1 di 1

Verifica

In the first part of the text:

The protagonist of the story is called:

The protagonist has a couchsurfing experience:

He decides to have this experience:

She is hosted by for:

Sezione Tentativo 1 di 3

Verifica

In the second part of the text:

She explains that Angelo is very and is an excellent

Penny met Angelo's .

She has visited ,

The vacation was very

Sezione Tentativo 1 di 3

Verifica

In the last part of the text:

Penny nervous about being with a stranger because:

a friend of hers had been to Angelo's

she had already been to Angelo's

Angelo had good references

she had met Angelo before her by telephone

According to Penny, couchsurfing is a good way to visit a place

Penny and Angelo:

now they live together

they have seen each other recently

they have become friends

have never seen each other again

Sezione Tentativo 1 di 3

Verifica

Fig. 4 – INVALSI question of reading comprehension transformed into a question for formative assessment

In the second part of the text:

She explains that Angelo is very

Risposta corretta: hospitable and is an excellent

Risposta corretta: tour guide .

Penny met Angelo's

Risposta corretta: friends .

She has visited

Risposta corretta: many cities ,

Risposta corretta: by train

The vacation was very

Risposta corretta: relaxing

Fig. 5 – Second example of immediate feedback with the verify button

Several strategies were applied to transform the question into a formative assessment question. In the first part of the question, shown in Figure 2, the same INVALSI question is reported. After reporting instructions and text (divided into three parts), the answer mode was slightly modified to facilitate students, by writing the affirmations directly into the table and inserting a true/false multiple choice answer area. In this case, the students have three attempts to answer the question. At the end of the question, there is a “verifica” button (which means verify in Italian) that the student can click at any time (for a maximum of three times) to verify the correctness of the answers given.

After this first part, students are offered a guided path divided into four parts (Figure 4), each of them characterized by the check button at the end:

- the first part concerns the meaning of “couchsurfing”, the theme of the story;
- the following parts of the question guide students to understand the parts into which the text is divided (the first, the second and the last part).

Through different types of answer areas (open answer, multiple choice and fill in the blanks with drop-down menu) students go through the text step by step (in a reformulated way), in order to understand all aspects of the text and the statements of the initial part.

At the end of each part of the question, the students get feedback, as in Figure 3 and Figure 5, on the answers given correctly, on the mistakes made and on how to fix them. The path is guided in such a way that students cannot see the other parts of the question until they complete the question and get the feedback. Moreover, the interactive feedback with multiple attempts en-

courages students to test themselves and immediately rethink their reasoning and correct themselves. All students' response attempts, final responses and grades are automatically collected within the AAS. Thanks to this, teachers can view the students' answers and all attempts to answer, thus becoming aware of the most frequent errors and any difficulties encountered, and being able to observe if and how the students managed to overcome their difficulties independently.

In this case, the strategy applied to make the formative question was to divide the text into three parts and make the students concentrate on one part at a time. In this way, students can reflect on what they had already learned from the first reading and what they had not been able to understand. The cognitive effort to understand a long text is certainly greater, and this is why the initial request is divided into three sub-requests. Another difficulty for the students is that the statements given in the opening question are not taken directly from the text, but they are reformulations of the text. So, in addition to understanding the text, students must understand the meaning of the statements. Other possible strategies for formative assessment could be: working only on more complex terms and morphosyntactic structures that students may not have understood; provide a text similar to the initial one with errors and tell the student to identify them; provide the restated initial text and leave blank spaces for students to fill in, etc. The only difficulty in automatically evaluating students' open-ended questions is that the AAS interprets the answers as strings. So correct answers that differ in spaces, missing accents, etc. are evaluated incorrectly. At the same time, in an open-ended question, the teacher must think of all the possible correct answers that the students could enter, so as not to penalize them. However, it is always possible to correct the student's assessment later.

7. Example of designing a question to develop listening skills

The second example is a question for the B2 level listening comprehension test. In the CEFR, the indicator for the overall listening comprehension states that student "Can understand the main ideas of propositionally and linguistically complex speech on both concrete and abstract topics delivered in standard speech, including technical discussions in his/her field of specialization. Can follow extended speech and complex lines of argument provided the topic is reasonably familiar, and the direction of the talk is signposted by explicit markers". The CEFR self-assessment grid at level B2 states "I can understand extended speech and lectures and follow even complex lines

of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programs. I can understand the majority of films in standard dialect”.

BBC News at Midday

Listen to a number of BBC speakers reading both national and international news items. First you will have 1 minute to study the task below, then you will hear the recording twice. While listening, match the speakers (1-6) with their statements (A-H). There is one extra statement that you should not use. The first one (0) has been done for you. After the second listening, you will have 1 minute to check your answers.

▶ 0:00 / 8:29 ———— 🔊 ⋮

| 0 | Example | H |
|----|----------|--------------------------|
| Q1 | Speaker1 | <input type="checkbox"/> |
| Q2 | Speaker2 | <input type="checkbox"/> |
| Q3 | Speaker3 | <input type="checkbox"/> |
| Q4 | Speaker4 | <input type="checkbox"/> |
| Q5 | Speaker5 | <input type="checkbox"/> |
| Q6 | Speaker6 | <input type="checkbox"/> |

| | |
|---|--|
| A | The cost of living has reached a new height this year after a long increase |
| B | Higher-priced train tickets are justified with improvements to the network |
| C | Innovative vehicles will be available for those people most in need in the near future |
| D | Toxic fumes from cars and power plants have caused a health crisis in an Asian country |
| E | Experts claim 2017 will be record-breaking for its extremely high temperatures |
| F | UK economic depression has led to lower pay for civil servants |
| G | A soccer team has recently engaged a new chief executive |
| H | Unclear economic strategies on a type of fuel have affected car sales |

Fig. 6 – INVALSI listening comprehension question (level B2) implemented in the AAS

Source: INVALSIopen (www.invalsiopen.it)

The INVALSI task, shown in Figure 6, is titled “BBC News at Midday”. INVALSI experts on the INVALSIopen channel also presented this question. The type of evaluation chosen for this question is multiple matching. After reading the instructions, the students have one minute to read the items of the question (shown in the second table) and then listen to the audio twice consecutively. To answer the question, students must associate short-spoken texts by different speakers with short summaries present in the items. Among

the items there is a distractor that students should not use. It is important to note that the statements are not transcripts of the audio file but are rephrased. In this way, the listening exercise is a comprehension exercise and not a recognition exercise. The authentic text proposes a series of news read by BBC speakers, of which the student must grasp the main message.

Also in this case, in the transformation of the task into a question for formative assessment, the first part of the question was kept unchanged. The answer modality has been modified using a matching answer area, in which students must associate the listened statement to each speaker (Figure 7). The audio is integrated directly into the question and lasts 8 minutes and 29 seconds. The audio available from the INVALSI site is characterized by the reading of the instructions, a minute of silence to give students time to read the items and the audio of the task repeated twice. In this way, by carrying out the exercise independently, students are guided in carrying out the activity. However, compared to an INVALSI test, students can interact with the audio file by clicking the buttons: pause, go forwards or backwards, repeat listening and stop. Furthermore, compared to the INVALSI task, students have three attempts to answer the question correctly. At the bottom of the first request there is in fact the verify button that students can click at any time to get immediate feedback on the correctness of their answers. Having the possibility to interact with the audio, students can listen to the items where they were wrong and self-correct. The ability to self-correct, improve, and rework their thoughts is very important for students' self-esteem, self-awareness and self-confidence.

Figure 7 shows an example of student response and feedback (wrong answer) after clicking the verify button. Students can try to answer the question again and have two more attempts to check the accuracy of the answers. If the answer is correct, they immediately go to the next part. In any case, at the end of this first part of the question all students have feedback on what the correct answer is. As in the previous example, also in this case students may opt for a guided listening; for example, by dividing the file into several parts and proposing a guided procedure. This process allows students to focus on one speaker at a time and better understand the audio.

In this example, we have implemented another type of strategy to deepen the understanding of the text. In the second part of the question (Fig. 8), seven statements are proposed referring to the audio file and taken directly from the original text. Listening to the audio again, students find the original words in the statements and can reflect again on their meaning. After that, they must associate each statement with the correct reformulated statement, with the same meaning. Again, the students have three attempts to answer the question.

BBC News at Midday

Listen to a number of BBC speakers reading both national and international news items. First you will have 1 minute to study the task below, then you will hear the recording twice. While listening, match the speakers (1-6) with their statements (A-H). There is one extra statement that you should not use. The first one (0) has been done for you. After the second listening, you will have 1 minute to check your answers.

▶ 0:10 / 8:29 ——— 🔊 ⋮

| | | | |
|---|---|---|---|
| <input type="text" value="3"/> Speaker6 | <input type="text" value="6"/> Speaker2 | <input type="text" value="5"/> Speaker1 | <input type="text" value="4"/> Speaker5 |
| <input type="text" value="1"/> No speaker | <input type="text" value="7"/> Speaker4 | <input type="text" value="2"/> Speaker3 | |

- UK economic depression has led to lower pay for civil servants
- The cost of living has reached a new height this year after a long increase
- Higher-priced train tickets are justified with improvements to the network
- A soccer team has recently engaged a new chief executive
- Experts claim 2017 will be record-breaking for its extremely high temperatures
- Innovative vehicles will be available for those people most in need in the near future
- Toxic fumes from cars and power plants have caused a health crisis in an Asian country

✖
 ✖ **Sezione** Tentativo 2 di 3
 Verifica

Fig. 7 – INVALSI listening comprehension question transformed into a question for formative assessment (First part)

At the end of this part, it is possible, for example, to add an open-ended question, where students can write a brief summary of the audio file, or a short news in the style of the BBC speakers. This AAS also allows to submit a file within the question to evaluate it. This feature can be used to ask students to produce and submit audio files, in order to work on speaking as well.

It is essential that students practice these kinds of listening questions. In fact, today's students are used to dealing with multimedia tools from an early age and throughout their life. Through an internet connection and a mobile device, they easily access videos in foreign languages for different interests and purposes (films, TV series, music, documentaries, television programs, news, etc.). Their use at school, and in general for educational purposes, is also very important and widely supported because it allows teachers and stu-

dents to easily find authentic materials and make students more passionate about the subject of interest and foreign languages. However, this type of content can impair the ability to listen without pictures (pure listening) and students can become distracted listeners when listening to audio-only files. It is also important to make students become accustomed to the ambiguity of oral language (depending on pronunciation, speaking speed, etc.). They should be aware that they may not be able to understand someone speaking a foreign language, and they should thus be trained in careful listening.

After listening to the audio file again, associate the original wordings taken from the audio file with the rewordings.

The government has defended the biggest increase in rail fares for five years. Minister said record amounts have been spent on electrifying lines and making more seats.

Rise in the main rate of inflation, which is now at its highest level for nearly six years.

2017 will be among the three warmest years on record.

West Ham has appointed a new manager to turn things around.

Self-driving cars will give elderly and disabled a new sense of freedom.

Air pollution reached nearly 200 times the safe level in Delhi because of a combination of emissions from vehicles and power stations.

Sales of diesel cars fell by almost a third in October. Confusion about the government policies on diesel.

- 2017 will be one of the record hot years in history.
- Rise in train ticket prices due to high costs of railway modernization.
- Increase in the cost of living in the last six years has now reached a peak.
- A football club has chosen a new team director to get better results.
- Drivers with disabilities will be helped by new car technology.
- Uncertain national plan on fuel tax has caused a drop in vehicle sales.
- Different pollution sources have dangerously affected air quality in India.

Sezione Tentativo 1 di 3

Fig. 8 – INVALSI listening comprehension question transformed into a question for formative assessment (Second part)

8. Conclusion

The INVALSI English tests for secondary school are designed to test language comprehension skills (listening and reading). According to the INVALSI report of 2019 (INVALSI, 2019), 65% of Italian students do not reach level B2 in the listening test and 48% do not reach it in the reading test.

To improve these results and to overcome students' difficulties in acquiring these skills, it is important that teachers adopt formative assessment strategies. The importance of immediate and interactive feedback, in the proposed methodology, is essential for both students and teachers. Through continuous and formative feedback, the student can focus not on the result, but on the progress made, on the mistakes made and on the actions to be taken to improve. At the same time, teachers can progressively monitor students' learning levels and get valuable feedback. For example, they can understand which aspects of the language are more complex for students and propose adaptive activities according to their level.

In this paper, the design of material for a secondary school English teacher training course was presented. Examples were shown where questions designed for standardized assessment are adapted to questions for formative assessment for language skills development and preparation for INVALSI tests. The strategies used were also highlighted, such as: to provide the student with more attempts to answer the multiple matching questions in order to reflect on the errors; to provide, in the event of an error, a sub-question to understand the error made; to divide the audio to listen to or the text to be read in several parts to facilitate students' reasoning and understand where they encounter more difficulties; to insert sub-questions to work on terminology and more complex verbal constructs; to insert sub-questions to guide them in the exercise, alternate closed-ended questions with open-ended questions to allow them to explain what they understood.

During the training course, this activity will be proposed to teachers in order to reflect on the characteristics of summative and formative assessment, to develop formative assessment skills and create materials to be used in their teaching. This type of training activity can be further developed by collaborating with the teachers in carrying out the activities in the classroom with students, in order to support them and to directly receive students' feedback on the proposed activity.

The pandemic emergency we are experiencing and the consequent online teaching following the closure of schools has made us reflect even more on how important it is to train teachers on the use of new technologies and on new teaching methods characterized by their use. Furthermore, it is very important that students learn how to use technologies also for educational purposes. It is therefore of great importance to increase the training of teachers on the use of an AAS for formative assessment and to train students to use this tool as well.

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