

## Gamification and Formative Feedback in Digital Learning Environments: Implications for Intercultural Competence in Italian Culture

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**ABSTRACT:** This article presents a narrative literature review on how gamified learning and formative assessment can be combined in the digital teaching of foreign languages and culture, with particular focus on Italian culture. It draws on constructivist learning theory and self-determination theory to discuss previous studies on gamification, feedback, motivation, and intercultural learning. The reviewed literature suggests that gamification may support motivation, participation, and student engagement, especially when game elements are connected to meaningful learning activities. Formative assessment can support this process through clear criteria, regular feedback, and opportunities for reflection and improvement. In teaching Italian culture, digital missions based on authentic cultural practices may help students move beyond memorizing facts and develop intercultural awareness. Finally, the article discusses practical suggestions for curriculum designers, including learning analytics, peer review, and feedback cycles, while acknowledging the limitations of the narrative review approach.

**Keywords:** Gamification, Formative assessment, Digital learning, Italian culture, Intercultural competence.

### 1. INTRODUCTION

Technology today is increasingly expected to do more than deliver knowledge. There is an increasing demand for it to actively involve learners, support interaction, and help students understand the cultural meanings behind what they learn [1, 2]. This is especially important in foreign-language education. Language teaching is no longer limited to vocabulary, grammar, and the development of basic skills. It also includes the ability to understand cultural references, social practices, values, and ways of communication [3, 4]. For this reason, the

teaching of Italian culture through the Italian language in digital environments is a useful area of study, since it brings together language learning, culture, pedagogy, and technology [5-7].

Due to the potential to make learning more active and motivational, the notion of gamification has received

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increasing attention in education [8]. Missions, levels, badges, challenges, and progress bars, as well as collaborative tasks, can trigger more consistent participation by students, particularly in an online or blended format where motivation may wane more easily [9]. Based on available literature, gamified learning can make the process more pleasant and engaging, which is important in the case of foreign-language learning where students need to practice a lot and feel confident to use it. Nonetheless, specifically teaching culture through language using gamification is yet to be sufficiently researched [10-12]. In digital environments, the teaching of Italian culture needs to be more than just a set of isolated facts. It needs to be connected with real practices, as well as meanings and forms of communication.

Formative assessment and feedback can support learner reflection and gradual improvement in learning [13-16]. Similar formative assessment practices have also been examined in Italian educational settings [17].

This combination, however, raises practical challenges with regard to how to design meaningful game-based tasks, how to avoid point-collecting, and how to ensure the feedback is clear, useful, and pedagogically sound.

The objective of this article is to study how gamified elements and formative assessment practices can benefit the teaching of Italian culture in digital contexts. The research questions guiding this study, which will be discussed next, are the following:

- RQ1: How can formative assessment be used to improve learning and understanding of cultural aspects?
- RQ2: What are the benefits and limitations of integrating gamification and feedback in digital learning environments?

In addition, this research aims to provide a theoretical discussion and practical guidance for designing digital learning activities. The use of this research is to develop a formative assessment, feedback, and gamification in support of not only language but also cultural learning, learner engagement, and reflective learning in the teaching of Italian culture.

## ■ 2. LITERATURE REVIEW

Gamified learning in language education engages learners actively and focuses primarily on their motivation and engagement with the learning material. Gamification does not simply mean making learning fun. Instead,

selected game components like goals, progress indicators, missions, badges, and feedback are incorporated, which makes learning more understandable and motivating. Previous studies have examined the effects of other educational approaches, including the Predict–Observe–Explain strategy and flipped classrooms [18, 19]. In comparison, research on gamification has examined its effects on learning outcomes and the importance of instructional design [20-25].

Studies on language acquisition indicate that applications like Kahoot, Quizizz and similar tools can enhance achievement and motivation and may decrease learner anxiety. Students encounter foreign languages constantly now. They need many repetitions of educational resources to learn how and feel confident in using them. However, their educational value may be limited when they are used solely as stand-alone quizzes. When coupled with meaningful activities, stated goals, and useful feedback that helps learners learn what to do next, the educational value of assessment tasks increases [22, 26-28].

The use of gamification in the teaching of cultural content, such as Italian culture, can be beneficial when game mechanics are linked to genuine cultural material. Badges, missions, and points can enhance learning but only when they're linked to tasks that lead students to observe, compare, interpret, and discuss cultural practices. Thus, students are not merely taught to memorize cultural facts. They work with symbols, customs, and everyday behavior that are given social meanings [29]. A previous study involving Ukrainian children learning Italian as a second language reported greater vocabulary improvement through game-based learning compared with traditional teaching methods [30]. At the same time, according to the literature, gamification elements that are not used for a clear objective may lead to only short-term external motivation, and there is little evidence that these elements lead to deeper learning [21, 25].

Formative assessment is the element that can turn gamified activity into documented learning progress. Without assessment and feedback, a game-based activity may be enjoyable but pedagogically weak. Strategies such as clear success criteria, targeted questioning, timely feedback, peer assessment, and self-assessment help learners understand what they are doing, why it matters, and how they can improve. These strategies have also been found to be useful in digital learning environments [31, 32]. In higher education, reviews show that low-stakes activities, such as short

quizzes and micro-tasks with immediate feedback, can support learning when the feedback is specific, timely, and usable in the next attempt [33, 34].

Digital formative assessment frameworks help explain how technology can support this process [35-37]. They connect assessment strategies (including clarifying goals, asking questions, giving feedback, and activating peer or self-assessment) with technological functions (such as submission tools, analytics, automated processing, and interactive environments). These frameworks can support the design of digital culture courses by showing how online tools can assist, rather than replace, the pedagogical role of the teacher [31].

The connection between gamification and formative assessment is particularly pertinent in cultural learning [38]. Cultural understanding is not just the memorizing of information but also interpreting, comparing, reflecting on, and responding personally to it. Through playful inquiry, teachers can conduct missions to investigate different Italian symbols, customs, food practices, cinema, gestures, and everyday social behavior. Evidence of student learning can be used by teachers and learners for feedback. Through reflective prompts, peer reviews of digital stories, and short revision cycles, students will connect cultural content with their own understanding and intercultural sensitivity [22, 29, 39].

In this review, intercultural competence refers to the ability to communicate and interact effectively with people from different cultural backgrounds. Based on Deardorff's model, it includes attitudes such as openness and respect, cultural knowledge, and skills related to interpretation and reflection [49]. These elements are relevant to activities where students compare Italian cultural practices with their own experiences. However, intercultural competence was not directly measured in this article. Previous findings related to vocabulary, motivation, and social skills are considered relevant but not direct evidence of intercultural competence. Therefore, this review discusses its potential development rather than experimentally verified improvements.

Previous reviews have also examined the potential benefits of formative assessment for student learning in school education [40-42]. For instance, leaderboards add value when they don't just encourage competition but instead link to the performance criteria. When badges describe achievement, they become more useful. Feedback must elaborate on why an answer or interpretation is strong or weak, and not simply state that it is right or wrong [22, 26, 34].

In digital learning environments, learning analytics can also support formative assessment, as it helps teachers track progress and personalize feedback. It can be especially valuable in culturally enriching tasks, which may have different learning paths for students or require different types of guides [43].

Although previous studies have examined gamification and formative assessment in different educational contexts, further research is still needed on their combined use in teaching Italian culture. In particular, there is a need to examine cultural learning beyond vocabulary scores and general language performance [21, 25, 29]. Based on the literature discussed in this review, gamified activities combined with formative feedback may provide useful opportunities for cultural interpretation, reflection, and intercultural awareness. For this reason, teachers could consider designing cultural micro-missions supported by clear assessment criteria, student reflection, and feedback. However, these suggestions are based on previous research and should be further examined through empirical studies.

Previous reviews have mainly examined gamification and its effects on learning and motivation [20-22], while other studies have focused on formative assessment and feedback [31, 33]. Research has also explored intercultural skills and Italian language learning in specific educational contexts [29, 30]. However, less attention has been given to how these approaches can be connected specifically for teaching Italian culture. The contribution of this article is to bring these areas together and discuss how digital cultural missions, feedback, and reflection can support intercultural learning.

### ■ 3. REVIEW METHODOLOGY

This study uses a narrative literature review approach to understand the relationship between gamification, formative assessment, and intercultural learning in digital education. Relevant literature was collected from various academic databases and indexing services, including Dimensions, Scopus, CNKI Scholar, EBSCO databases, and resources provided by the German National Library of Science and Technology (TIB). Ulrich's International Periodicals Directory was also consulted for journal information. The search included terms such as gamification, game-based learning, formative assessment, feedback, digital learning, intercultural competence, and Italian language and culture. These terms were combined to identify studies relevant to the research questions.

Special attention was given to publications from the last five years, while earlier publications were also included when they provided relevant theoretical background or important findings. The selected literature included empirical studies, systematic reviews, meta-analyses, and theoretical contributions related to educational practices. Studies without a clear connection to the research questions were not prioritized. More specifically, studies were selected based on their relevance to the research questions and their contribution to understanding gamification, feedback, and cultural learning. Since this paper follows a narrative rather than a systematic review approach, it does not aim to cover all available publications. Therefore, the possibility of selection bias is acknowledged as a limitation of the study. The discussion focuses on learners of the Italian language and culture in digital educational environments, without being limited to a specific age group or educational level. Studies from other educational contexts are considered to identify general pedagogical principles rather than direct evidence of outcomes in Italian cultural learning.

#### ■ 4. DESIGNING AND INTEGRATING GAMIFIED LEARNING AND FORMATIVE ASSESSMENT IN TEACHING ITALIAN CULTURE IN DIGITAL LEARNING ENVIRONMENTS

Gamified learning refers to the benefits and design elements taken from video games for learning. Gamified activities should promote motivation and collaboration while remaining aligned with clearly defined educational objectives. In the teaching of Italian culture, gamification needs to be designed carefully. Enjoyment is useful, but it is not enough on its own. The activity must still lead students toward specific learning outcomes. For this reason, the most effective designs are those that connect points, badges, leaderboards, missions, and levels with clear cultural and linguistic goals [21, 25].

Gamification can convey experience in cultural learning, acting as a bridge to knowledge. Through digital missions and role-based activities, social situations, cultural practices, and everyday behaviors can be simulated, showing how Italian culture is performed in context. For instance, students may compare customs, interpret social interactions, analyze cultural products, or complete tasks related to Italian public life, art, cinema, food, or verbal communication. They are not merely receiving information about culture in this way; they are also actively working with cultural meaning. Previous research involving Italian and Portuguese master's students examined the development of leadership-related soft skills [29], while a study involving Ukrainian children

learning Italian as a second language reported improvements in vocabulary through game-based learning [30]. However, these studies did not directly measure intercultural competence.

Formative assessment adds the reflective layer that gamification needs, helping to ensure that learning is not limited to participation or enjoyment. Feedback is most useful when it can be applied in the next learning attempt [33, 34]. Timely and descriptive feedback allows students to understand what they have achieved, what still needs work, and what they should do next. The use of Learning apps, Edmodo quizzes, and Moodle workshops can assist teachers in providing adaptive feedback, monitoring student progress, and helping them self-regulate [31].

Forward-looking feedback is particularly valuable because it helps learners identify specific steps for improvement. Students don't just see the mistakes, but they also see guidance for the next step. Students may develop an enhanced sense of autonomy and independence from this kind of feedback [32]. When the criteria for assessing the students are transparent and integrated with the gamified activities, the learner understands the aim of the task better. Additionally, the learner adjusts his behavior according to it more effectively [44]. Another important component is peer feedback. In gamified environments, students can review each other's work, come up with alternative interpretations, and take up learning responsibility. This social aspect enhances metacognitive awareness and collaborative learning [43].

To teach Italian culture, a well-designed gamified environment should thus include levels of learning and moments of reflection. It has been shown that the effectiveness of gamification depends on the reward-learning relation [22]. Students should not be merely incentivized with rewards to rack up points. Incentives should help learners see progress, effort, and improvement. Reflective journals can help students examine their cultural experiences, attitudes, and interpretations [45].

Selecting the right digital platform influences outcomes too. Research reveals that digital tools Kahoot and Quizizz facilitate formative assessment when used with clear quality criteria [21, 28]. These criteria include aligning questions with learning objectives, allowing enough thinking time, and using the quiz results as a starting point for discussion. In the teaching of Italian culture, such tools can be used to explore topics including customs, cinema, art, food culture, regional

identities, gestures, and social behavior. The aim should not be only to check whether students remember facts, but to encourage comparison, interpretation, and cultural reflection.

As a practical example, we propose a simple Cultural Mission–Feedback Cycle for teaching Italian culture. Students could complete a digital mission about Italian greetings and gestures by comparing formal and informal interactions with practices from their own culture. Their work could be assessed using three criteria: accuracy of cultural interpretation, use of examples, and intercultural reflection. Each criterion could be scored from 0 (limited) to 2 (clearly demonstrated). The activity would follow five steps: cultural mission, assessment using the rubric, peer feedback, teacher feedback, and revision. Students would then improve their initial responses based on the feedback received. This proposed cycle connects gamification with formative assessment and cultural reflection [22, 29, 31, 34, 44]. It is presented as a practical suggestion rather than an empirically tested model.

Gamification and formative assessment must have a clear objective with continuous feedback to be effective [46]. Through recording of learning paths, learning analytics can help teachers recognize where support is needed. Learning data can be obtained from students' quizzes, missions, discussion forums, peer reviews, digital portfolios, etc. It allows teachers to see how the learner is progressing, where they are hesitant, and which learners are still unclear. At the course-design level, the TPACK model is useful because it brings together technological, pedagogical, and content knowledge.

Gamification and formative assessment by themselves strengthen intercultural learning. When designed as connected parts of the same process, they do so even more. Gamification enables learners to experiment with less risk in a safe space. Formative assessment assists

students in processing their experiences, questioning their assumptions, and linking cultural information to language use and reflection [39]. The integration of gamified learning and formative assessment into the teaching of Italian culture in digital environments can thus support emotional engagement and in-depth learning. It will also help the learners not only understand language as a system of words and rules, but also as a carrier of culture, identity, and social meaning.

## ■ 5. ANALYSIS AND SYNTHESIS OF THE BIBLIOGRAPHIC FINDINGS

Based on the literature reviewed in this study, gamified learning and formative assessment should not be regarded as just a technology-based addition to a course. It can be understood better as a design choice that affects how students interact in learning and how the teacher mediates that interaction [20, 21]. When both approaches are used in the same digital environment, they may support different parts of learning. Gamification can create engagement, motivation, and a feeling of advancement in the students. On the contrary, formative assessment enriches that engagement through the integration of feedback, reflection, and evidence of progress [22]. The relevance of this connection is especially strong in Italian culture teaching, in which the objective is not only to know language or facts, but also to discover meanings, practices, and social behavior [29].

Constructivist visions of learning provide the theoretical foundations of this connection. From this perspective, rather than receiving passively, students build knowledge through activity, interaction, and reflection. According to [27], tasks that have been gamified (e.g., challenges, missions, levels, and cooperative activities) can help facilitate this process by prompting learners to act, decide, compare, and respond. Formative assessment adds extra opportunity for the learners to stop and think about what they have done thus far. In cultural learning, this step is reflective. Students might need to identify the

**Table 1: Comparison of Gamification and Formative Assessment**

| Parameter              | Gamification                                               | Formative Assessment                              |
|------------------------|------------------------------------------------------------|---------------------------------------------------|
| Main goal              | Enhancing engagement and motivation                        | Providing continuous feedback                     |
| Motivation             | Extrinsic and intrinsic, through rewards and achievement   | Intrinsic, through self-regulation and reflection |
| Main tools             | Points, leaderboards, badges, missions                     | Questions, feedback, peer/self-assessment         |
| Implementation context | Digital learning platforms such as Kahoot, Moodle, Quizizz | Formative practices at every stage of learning    |
| Expected outcome       | Increased participation, enjoyment, engagement             | Deeper learning, understanding, self-evaluation   |
| Research evidence      | [20, 22]                                                   | [31, 34]                                          |

assumptions, stereotypes, or interpretative patterns that influence their understanding of Italian culture [45]. Table 1 summarizes the complementary roles of gamification and formative assessment.

The practical connection between these two approaches is also discussed in previous empirical studies. Research on gamified assessment has examined its effects on academic achievement [24], while previous reviews have highlighted the importance of formative assessment and feedback for learning [33]. However, this does not mean that gamification alone can guarantee better learning outcomes. The reviewed literature suggests that gamified activities may become more useful when participation is followed by feedback, revision, and reflection. In this approach, the teacher becomes less a transmitter of information and more a facilitator and designer of learning experiences.

To teach Italian culture through digital tools, in practice, we need tasks that are culturally meaningful and assessable. Students could carry out cultural missions that are located in Naples, Rome, Florence, or Palermo. People who undertake this exploration could collect material on everyday practices, public spaces, food traditions, gestures, local identities, or forms of social interactions. After including some short reflective tasks, peer conversations, or self-assessments, the activities become more meaningful. In this manner, gamification isn't used like decoration; rather, it integrates into the learning scenario itself. Students feel ownership of the learning process when they contribute to the criteria for assessments [43, 44].

The cultural dimension is particularly important here. It is important to adapt game mechanics so that they do not reduce the culture to simple facts or quiz answers. While points, badges, and leaderboards can increase engagement, they must help students understand values, attitudes, social roles, and everyday practices. Learning is not produced by technology by itself. What counts is the nature of the task, the cultural content, and the feedback that helps students understand what they are doing. For cultural learning, gamified tasks should be

combined with reflection, discussion, and peer feedback. The findings on gamification and formative assessment have been presented in Table 2.

The studies that were reviewed also show that in this type of learning environment, the teacher's role changes. The teacher is responsible not only for the delivery of cultural information but also for the design of the sequence of challenges, the determination of how rewards relate to learning outcomes, the setting of checkpoints, and the teacher's guidance through feedback. Professional development and pedagogical support of these kinds of work is needed to help teachers who are expected to use digital media more formally [34].

Another important finding concerns social interaction. The combined effect of gamification and formative assessment appears to be stronger when students work with others rather than only completing individual tasks. A study involving Italian and Portuguese master's students reported improvements in communication, strategic decision-making, and conflict-resolution skills through gamified leadership activities [29]. However, these findings should not be considered direct evidence of intercultural learning. These findings can be linked to cultural intelligence, which refers to the ability to understand and adapt to different cultural environments [47]. For the teaching of Italian culture, group missions, peer review, and intercultural comparison can help learners move beyond memorization and develop a more active relationship with cultural knowledge.

Overall, the literature discussed in this review suggests that gamification and formative assessment should be planned together from the beginning:

- Game mechanisms should be linked to clear learning objectives;
- Feedback should be continuous, descriptive, and actually used by learners;
- Activities should be connected to real or realistic cultural experiences of Italy.

**Table 2: Practical Design Factors For Gamification And Formative Assessment**

| Study | Focus                                                | Key Findings                                                            |
|-------|------------------------------------------------------|-------------------------------------------------------------------------|
| [21]  | Meta-analysis of 41 studies (49 independent samples) | Positive effect on learning outcomes ( $g = 0.822$ )                    |
| [33]  | Systematic review on formative assessment            | Significant improvement in learning outcomes with feedback              |
| [29]  | Gamification applications in Italy-Portugal          | Improved communication, decision-making, and conflict-resolution skills |
| [44]  | Assessment criteria and peer feedback                | Increased self-regulation and goal transparency                         |

Based on the reviewed literature, coherent course design appears to be an important factor in combining gamification and formative assessment effectively (Table 3). New technology or game-like features are not enough on their own. The activity needs a clear pedagogical reason, the feedback must help students make progress, and the cultural content must be treated as something to interpret and discuss, not only as information to remember.

## ■ 6. DISCUSSION & SUMMARY

This article discussed how formative assessment may support learning and improve the understanding of cultural elements, as well as the potential benefits and limitations of combining gamified learning with feedback in digital environments. Based on the reviewed literature, these approaches appear to be more useful when they are connected to clear learning objectives and supported by continuous feedback [20, 21, 34]. However, their effectiveness may depend on the educational context, the design of the activities, and the needs of the learners. Therefore, gamification and formative assessment should be considered complementary approaches that can be planned together from the beginning.

Formative assessment appears to be one of the main supports of digital pedagogy. Its value is not limited to checking progress. It helps students understand what they have already achieved, what still needs improvement, and what they can do next. Descriptive and timely feedback strengthens self-regulation and active engagement, because students are not simply told whether they are right or wrong; they are given guidance that can be used in the next learning step [32, 33]. When the feedback is related to specific activities and course goals, which are embedded in the gamified environment, it becomes useful, as it will make them interested, participate, and cooperate [22].

Gamification and formative evaluation, according to the research, can aid each other. Gamification strategies can help make students more willing to engage, while

formative assessment can help make learning engaging. Game elements like missions, badges, challenges, and levels of progress can boost motivation, but these elements link with feedback, criteria, and reflection to make them far more useful. Gamification helps motivate students at the beginning, while formative assessment keeps them on track to improve [25, 44].

This is especially the case for the Italian social context and culture. Cultural learning is not just about memorizing information. This has, therefore, implications for how social practices, values, and everyday meanings are understood through interpretation, comparison, and reflection. Gamified activities with cultural content, such as virtual tours of Naples or digital missions based on Italian customs, can help learners connect knowledge with lived experience [29]. When this activity is followed by feedback based on explicit and authentic criteria, students can strengthen their intercultural sensitivity and critical thinking [39].

The findings also connect with self-determination theory. Formative assessment can support intrinsic motivation by helping learners feel more autonomous and competent. When the focus is on feedback rather than grades, students are more likely to see learning as a process they can control and improve. According to self-determination theory, autonomy, competence, and relatedness are basic conditions for sustained learning [48]. Gamified systems designed with the right set of challenges, achievement systems, difficulty levels, and immediate feedback can serve the same needs [24, 28]. For this reason, the relationship between gamification and formative assessment, therefore, is not only a technical one, but also psychological and pedagogical.

This combination has another great advantage: adaptive teaching. Learning analytics can gather information from the students' activities in gamification tasks so teachers can see where learners are progressing and where they struggle. As a result, feedback can be about the specific behavior and not the person. When data from digital platforms and the teacher's qualitative judgement are

**Table 3: Research Findings on Gamification and Formative Assessment**

| Factor                    | Description                                       | Research Support |
|---------------------------|---------------------------------------------------|------------------|
| Clear learning objectives | Alignment of game activities with learning skills | [46]             |
| Active feedback           | Descriptive, timely, and actionable               | [33, 34]         |
| Collaborative activities  | Group missions and peer review                    | [43, 44]         |
| Cultural authenticity     | Content closely linked to Italian culture         | [29]             |
| Reflection                | Use of e-portfolios, journals, and discussions    | [45]             |

used in combination, the learning process becomes more transparent and easier to adjust [43]. Nonetheless, this does not mean that the teacher will be replaced by technology. Learning analytics data must be interpreted in relation to the pedagogical and cultural objectives of the course. It needs to take into account the cultural and linguistic aims of the course. It also needs to be clear how the teacher will provide feedback.

Several limitations have been noted in the literature. Excessive gamification is one risk. When game items are used without educational purpose, students will focus on points, leaderboards, or rewards instead of studying the material [21]. There's also the challenge of the time factor in creating a coherent gamified environment with meaningful feedback. In addition, teachers will require enough technological and pedagogical confidence, as the quality of implementation depends heavily on their ability to connect tools, tasks, feedback, and outcomes [32]. These limitations are particularly significant in teaching Italian culture. It is important to be careful in the selection of materials that reflect the diversity of Italian society. Instructional materials should avoid reinforcing cultural stereotypes. Superficial gamification may present an attractive but oversimplified image of Italian culture, thereby limiting its educational value. Nonetheless, if it is applied carefully, it can assist intercultural learning by allowing students to move through a real set of cultural practices, compare perspectives, and reflect on meaning [29].

Lastly, an important limitation of this article is that it follows a narrative literature review approach and does not include original empirical data or experimental evaluation. The discussion is based on the findings and theoretical contributions reported in previous publications. Therefore, the conclusions should be understood as possible educational benefits identified through the literature rather than as experimentally verified results of this study. Future research could examine these suggestions through classroom activities, student feedback, and the evaluation of cultural learning outcomes.

## ■ 7. CONCLUSIONS

Our article showcases that gamified learning and formative assessment can work together as two complementary parts of digital language and culture teaching. Gamification can increase interest, participation, and emotional engagement, while formative assessment gives this activity direction through feedback, reflection, and clear learning criteria. In teaching Italian culture in digital environments, this combination can help students

approach culture as lived practice rather than as a set of facts to memorize.

The first research question concerned how formative assessment can improve learning and understanding of cultural elements. Based on the reviewed literature, formative assessment may support cultural learning through continuous feedback, reflection, and opportunities for improvement. These practices can help students become more aware of their progress and identify difficulties in interpreting cultural material. Through supportive and detailed feedback, students may also develop a better understanding of cultural differences and connections between cultures [33, 34]. Based on Deardorff's model, these activities may support openness, cultural knowledge, and reflection, although intercultural competence was not directly measured in this narrative review [49].

However, the available studies related to Italian education mainly examine language learning and social skills rather than directly measuring cultural understanding [29, 30]. Therefore, further empirical research is needed to confirm how formative assessment contributes specifically to intercultural learning.

The second research question concerned the benefits and limitations of integrating gamification and feedback into digital learning environments. The reviewed literature suggests that this combination may support participation, motivation, and emotional engagement, particularly when students take part in meaningful and interactive activities. However, these benefits are not automatic and may depend on the quality of the learning activities, the feedback provided, and the educational context. Excessive attention to rewards and competition may also reduce opportunities for deeper learning and reflection [21, 29]. Therefore, gamification should be connected to clear learning objectives and appropriate formative assessment practices.

More specifically, the main potential benefits identified in the literature include increased motivation, participation, and opportunities for reflection and feedback [20, 21, 33, 34]. The main limitations concern excessive attention to rewards, the need for careful instructional design, and limited direct evidence of improvements in intercultural competence [21, 29, 30].

As per our analysis, some actionable recommendations can be made.

- Teaching activities must ensure a clear alignment of learning objectives, game elements, and assessment

criteria. Every quiz, task, mission, badge, or challenge must have an aim within a specific culture or language.

- The meaning of feedback, or 'feed-forward', is that it should give constructive information about what was done and what to do next.
- Peer review and ensuing discussions should be included so that students can take part in assessment, compare their interpretations and develop metacognition.
- Cultural integrity must be safeguarded. Missions should be related to real cultural phenomena, whether music, cinema, gastronomy, social customs, regional identity or everyday discourse. When having clear pedagogical aims, AR/VR tools may also support experiential learning.
- Teacher training should be supported by universities. Teachers must be prepared to know how to design gamified courses, use digital tools, and link feedback with assessment and cultural learning.

According to our analysis, gamification is valuable, but only when it's applied as intended. Analytically, game elements alone do not guarantee learning. Their educational value comes from the way they are connected to cultural content, reflection, and feedback. In the same way, formative assessment becomes more effective when it is not limited to correction, but helps students understand their progress and take responsibility for improvement.

In conclusion, the integration of gamified learning and formative assessment offers a useful direction for teaching Italian culture in digital environments. It can support experiential, participatory, and reflective learning, while also helping students develop intercultural awareness and self-regulation. Its success, however, depends on careful design, meaningful feedback, and culturally responsible teaching. Once the conditions are in place, digital learning will not just be a repository of curricular content or a mere delivery platform. Moreover, students will use this space to actively engage with language, culture, and interpretation.

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## ■ CONFLICT OF INTEREST

The author declared no conflicts of interest.

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