



Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva
Italian Journal of Health Education, Sports and Inclusive Didactics
Anno 7 n. 2 - aprile - giugno 2023

RESEARCH ON EDUCATIONAL NEUROSCIENCE
IL FUTURO PROSSIMO DELL'EDUCAZIONE
NELL'UNIVERSO DIGITALE

Ripensare, ricollegare e visualizzare:
il contributo delle neuroscienze educative

THE NEAR FUTURE OF EDUCATION IN THE DIGITAL
UNIVERSE

Rethinking, reconnecting and visualising: the contribution of educational neuroscience

Volume 2

A cura di
Francesco Peluso Cassese



EDIZIONI
UNIVERSITARIE
ROMANE

WHICH RELATIONSHIP BETWEEN AUTHENTIC ASSESSMENT AND NEW TECHNOLOGIES?

QUALE RAPPORTO TRA VALUTAZIONE AUTENTICA E NUOVE TECNOLOGIE?

Giovanni Arduini

Univeristà di cassino e lazio meridionale

g.arduini@unicas.it

0000-0002-5947-410X

Double Blind Peer Review

Citazione

Arduini G., (2023) Which relationship between authentic assessment and new technologies, *Giornale Italiano di Educazione alla Salute, Sport e Didattica Inclusiva - Italian Journal of Health Education, Sports and Inclusive Didactics*. Anno 7, V 2. Edizioni Universitarie Romane

Doi:

<https://doi.org/10.32043/gsd.v7i2.887>

Copyright notice:

© 2023 this is an open access, peer-reviewed article published by Open Journal System and distributed under the terms of the Creative Commons Attribution 4.0 International, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

gsdjournal.it

ISSN: 2532-3296

ISBN: 978-88-6022-470-5

ABSTRACT

The evaluation of learning processes is a very important key topic for educational research. In the current scientific framework it is evident the interest generated by most recent pedagogical and technological developments, that are influencing teaching and learning activities. It is in this context that you should put the attention on the existing relations between the evaluation of learning processes and technologies. Starting from these considerations, the aim of this article is a reflection on the relationship between an authentic evaluation and new technologies.

La valutazione dei processi di apprendimento è un argomento chiave molto importante per la ricerca educativa. Nell'attuale quadro scientifico è evidente l'interesse generato dai più recenti sviluppi pedagogici e tecnologici, che stanno influenzando le attività di insegnamento e apprendimento. È in questo contesto che occorre porre l'attenzione sulle relazioni esistenti tra la valutazione dei processi di apprendimento e le tecnologie. Partendo da queste considerazioni, l'obiettivo di questo articolo è una riflessione sul rapporto tra valutazione autentica e nuove tecnologie

KEYWORDS

Learning processes- authentic evaluation- new technologies

Processi di apprendimento- valutazione autentica- nuove tecnologie

Received 10/05/2023

Accepted 11/05/2023

Published 20/05/2023

1. Technology in the authentic learning processes:

Education is committed to teach students to be able to work and live together in an increasingly digital society. The so called “The Fourth Industrial Revolution” (Schwab, 2016) suggests several changes that are drastically affecting the world in which we are living and working, and so the way we use to relate to each other. The change is the way we work, how we communicate, how we access to information and the way we use to spend our free time. Therefore, simply, it is happening a paradigm change, which represents the typical condition of scientific revolutions (Kuhn, 2008). The change concerns rules and explanatory models and criteria for solving problems, and digital technologies such as smartphones have become intricate and constitutive of the life of each, so that all kind of work and of life can be considered within and inside of a digital world.

The term digital refers to both a digital technology and a social practice: in the current digital world, we use to live with technology rather than just using it (Bearman, Nieminen e Ajjawi, 2022). For nowadays kids, digital devices are becoming an extension of themselves as they create and use contents through social networks as YouTube and Instagram, connecting and sharing with others through social media as Snapchat and Twitter or engaging themselves in role-playing and experiential games such as Fortnite. Since students increasingly rely on technology in their daily lives outside the classroom, teacher must necessarily adopt a technology that encourages students to create, to connect, to share, a useful and experiential learning connected with their world and so useful to achieve an authentic learning.

Infact, students are growing up in a world where information are just few clicks away. Employers do not seek anymore for employees with a specific knowledge but people who can interpret and use information to solve complex problems.

An authentic learning can real prepare students for a future job, through the practice of problem solving and any possible outcomes connected to the real world situations that currently are well used by professionals in working contexts.

Thanks to the connection between what they are learning and real world issue, it is possible that they will be engaged in meaningful activities with no chance to question the learning assessment in the classroom.

Technology helps to fill the gap between the school environment and the real world situations giving access to information in a different way and from different perspectives, for example using and creating contents through You-tube can be very useful and tangible to provide students interest and students learning.

As we know, learning by doing helps to promote authentic learning and when it happens, with laboratory and virtual experiences it can be easier, less expensive, offering to students the chance to restore the initial conditions and repeat the experiential learning journey.

Another effective way to link classroom contents to the real world situations is to report testimonial experts, about how they use in their profession disciplines such as mathematics, science or writing.

Even with the use of images, you can invoke powerful insights, inspirations and discussion during an authentic learning journey, students can be get better involved in their curriculum contents with an exploratory approach. Infact, they have to define the problem, collect, investigate resources, think on information and ask questions to develop any possible outcomes.

Moreover, with an interactive on-line lesson it is possible to help students to learning by their own rhythm and to provide a non-hostile environment, which is useful to improve the skills they need for problem solving.

A digital environment can provide more student-focused instruction to create a deeper learning in accord with the rhythms of each student including the use of different media that offer an on-line cooperative situation to all students.

Even the use of virtual reality can be an immersive experience that puts students in a realistic situation, even if it is a virtual world. Regarding to this it is useful to mention Google Explorations that offer a variety of virtual learning experiences useful to engage students in a set that reproduces a virtual trip in real different places of the world, giving them the chance to have a new exploring perspective discovering a place or a location.

Finally, it is possible to say that authentic learning allows students to be self-taught. This process involves students through challenges, solving problems and creating real connections with the contents. It therefore changes students'

passive mind in favor of a dynamic and constructive mind that encourage students to achieve through their skills the highest standards.

The authentic learning allows students to have the opportunity to share ideas, to think on information, and to develop their thinking and reasoning skills to control over their understanding.

2. The authentic evaluation with new technologies

With the introduction of practices that are focused on different, and more complex educational products, for example the so called artifact, that becomes digital when are combined with the use of ICT in teaching, the teacher may have to change traditional instruments and approaches in favor of latest technology tools.

The evaluation process also poses other long-standing problems to teachers, such as the difficulty of finding

criteria of transparency in the formalization of judgments, and in the purpose of the evaluation process concerned with the transmitted contents. (Castoldi, 2006).

A perspective that could move the focus of evaluation towards a new and effective mode is the authentic evaluation. In short, "The authentic evaluation is the assessment that is continuously involved at any stage during an authentic learning and reflects earned experiences of real-life setting that can be documented (...).

The authentic evaluation may include individual as well as group tasks. The focus is on reflection, comprehension, and on the growth rather than on audiences only based on isolated facts. (Wiggins, 1993).

For teachers, this new evaluation approach can represent a challenge with themselves and with the ability to question themselves, to promote a different vision, a "revolutionary" way that let think about their new teaching role.

The educational learning, is no more seen as a sequentially of abstract tasks, of simple activities detached from the context, in which paper and pen stopped to be the central tools of the process, but a way to get skills. The intent of the authentic evaluation is, therefore, to engage students in students-focused tasks using and applying knowledge and skills in real-life settings.

The authentic evaluation discourages traditional tasks clearly disconnected from teaching and learning journey (Comoglio 2003).

What we assess, in summary, is the ability of the learning environment and of teaching strategies, useful to put in contact students' needs with their performances, and this to give students the chance to achieve their best standards and potential. (Nigris, 2018)

The authentic assessment, therefore, quoting again Wiggins, replicates or simulates real-life settings and evaluate student's ability to use efficiently and in a tangible way the knowledge and skills to negotiate a complex task; it allows appropriate opportunities to rehearse, to practice, to consult resources, and to have feedback on performances and products and so the opportunity to improve them.

In this context, the evaluation rubrics represent an efficient instrument for teachers and that is why here it is proposed the result of a direct experience, with an evaluation assessment about the product of the group also by specific software.

Authentic evaluation is an alternative to conventional evaluation, born in the United States of America in the early 1990s as a critical contrast to the behaviourist evaluation, essentially based on the use of standardized test as the multiple choice. Specifically, the Italian traditional assessment wanted to check student's learning concerning with specific knowledge transmitted by the teacher (Comoglio, 2002).

This type of traditional evaluation paid attention to what the student knows about the transmitted knowledge and not about the development of the learning process or about the achievement of skills.

According to Comoglio, on the other hand, an evaluation that seeks to be more authentic should enable

a deeper extensive evaluation of learning, that is, the achievement of the critical thinking, of the problem solving, of the metacognition, of the efficiency in testing, of teamwork cooperation, of reasoning ability and of lifelong learning. (Arter, 1990).

So the question is about promoting an alternative evaluation, replacing the traditional one, since it measures not only what a student knows, but what he

"can do with the knowledge he knows", it is, therefore, based on a real and adequate learning performance.

According to Wiggins (1998) the authentic evaluation is a true assessment of the performance because from it we measure if students can intelligently use what they have learned in situations and if they can transfer the knowledge to real-world context and if they can apply it to new situations.

According to Winograd and Perkins (1996), this is an assessment which is constantly used in the context of a deeper learning environment and it is linked to real learning experiences, the emphasis is on the reflection, understanding and growth rather than audiences only based on indirect and isolated notions.

In the authentic evaluation there is, therefore, a personal intent, a reason to commit, and a deeper and true listening beyond the abilities and talents of a teacher.

Two pillars, on which this type of assessment is based, are the authentic task and the feedback on the task.

In fact, an authentic assess requires an authentic feedback, consistent and constructive that not only supports the teaching experience, but also offers to all students several opportunities to reflect and adapt their work to the standards required. (Ellerani, 2006, p.51)

The opportunities offered by an authentic evaluation using digital technologies come from a request to students to whom it is asked to practice and to demonstrate how they learn through an authentic task rather than learning by storing and retrieving contents.

To develop knowledge of the domain in any discipline requires audience and application about contents, skills and contextual concepts. For example, an introductory science module could describe the steps of a laboratory procedure instead, an assessment of learning process cannot be measured through a multiple-choice test.

Infact, asking a question by a multiple-choice test is something different from asking to students to edit and to upload a video that records them while they are performing or running a simulation of the procedure. This kind of authentic assessment, thanks to digital technologies, can be done on a large scale or on line.

3. Possible criticalities of the authentic assessment

Even if the authentic evaluation may be useful, it also presents criticalities. First, it requires more time and effort both for students and teachers than traditional assessment. Normally, students require more time to complete an authentic activity compared to a questionnaire or a test.

Since this type of evaluation is composed by many education activities, it could be inserted in several modules or it could be used for a longer period. In addition, students are accustomed to traditional evaluation, and this means that despite the advantages we have discussed, it could take more time to adapt themselves to this new kind of assess.

Even teacher are worried about longer period, infact, using an authentic assessment require a stronger effort to identify and/or to research relevant tasks, and this to ensure that tasks are tangible and applicable to students in the different areas, and refer to the requested learning outcomes and to teaching contents of education instruments and materials used.

Finally, authentic evaluation requires a detailed, personalised and a specific feedback, which means that, as useful as it may be for students, it requires additional time for the design and the implementation of it.

Conclusions

Evaluating the authentically learning means searching for the meaning, recognizing the potential of each student, assessing, give importance on how students have succeeded in learning and how they construct their own growth , to improve themselves and to promote self-knowledge and of society. (Tessaro, 2014). With this kind of assessment, each student is led to replicate as strictly as possible the activities that the real world situations offers, by the use of assessments instruments, that allow the implementation of practices and actions aimed at the promotion of an inclusive education.

Nowadays, for the so heterogeneous complex educational contexts, also caused by the use of technologies, we must think about how it should be better to use new authentic evaluation forms that can give a contribution in the design of an educational curriculum, which should be also inclusive. Evaluation forms that have the aim to provide all students opportunities to engage themselves in authentic tasks, and this to promote a constructive learning, to understand how to use and

how to transfer the knowledge, to develop an higher order thinking, and to achieve other skills to be used in a real-life context.

New challenges are on the horizon that require maximum attention, the possible implications of artificial intelligence (AI) both in learning processes and in the construction of new authentic and adaptive evaluation models.

Bibliography

Arter J. (1990). Using portfolios in instruction and assessment. State of the art summary. Port-land, OR: Northwest Regional Educational Laboratory.

Baldascino, R. (2015). Insegnare e apprendere in un mondo digitale. Napoli: Tecnodid.

Bearman M., Nieminen J.H. & Ajjawi R., Designing assessment in a digital world: an organising framework, *Assessment & Evaluation in Higher Education*, pp. 1-14, 2022.

Castoldi, M. (2006). La valutazione autentica e le rubriche valutative. *Scuola e Didattica*, 52, 38-41.

Castoldi, M. (2018). *Compiti autentici: un nuovo modo di insegnare e apprendere*. Novara: UTET Università.

Comoglio M. (2002). Il portfolio: strumento di valutazione autentica. *Orientamenti pedagogici*, 49(290), 199-224.

Comoglio M. (2003). *Insegnare e apprendere con il portfolio*. Milano: Fabbri.

Ellerani P. G. (2006). Per una valutazione «autentica». *Innovazione educativa*, 2, 50-56.

Kuhn, T. S. (2008). *Le rivoluzioni scientifiche*. Bologna, Il mulino.

Nigris, E. (2018). Compito autentico o compito di realtà... questo è il problema. *OPPIinformazioni*, 124, 34-40.

Pellerey, M. (2004). *Le competenze individuali e il Portfolio*. Firenze: La Nuova Italia.

Schwab, K. (2016). *La quarta rivoluzione industriale*. Milano: Angeli.

Tessaro F. (2014). Compiti autentici o prove di realtà?. *Formazione & insegnamento*, 12(3), 77-88.

Wiggins, G. (1993). *Assessing student performance: Exploring the purpose and limits of testing*. San Francisco, CA: Jossey-Bass.

Winograd P., Perkins F. D. (1996). *Authentic assessment in the classroom: Principles and practices. A handbook for student performance assessment in an era of restructuring*, 1-11.