



# HIIT Recommendations

## **Recommendation for HE training & skills recognition**

Version 1.0  
January 2024

Elaboration: RUAK

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





## Document Identity

Recipients	HIIT Consortium
Confidentiality Status	Public

## Document Versioning

	Date	Author
V1	15.01.2024	RUAK

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# 1. Introduction

## Context

The HIIT (Higher Education Instructional Technology) project arises within the dynamic landscape of Higher Education (HE), responding to the evolving challenges faced by STEM (Science, Technology, Engineering, and Mathematics) teachers. In the contemporary educational environment, the closure of physical spaces and the increasing reliance on digital platforms have underscored the critical need for educators to adeptly integrate Instructional Technology into their teaching methodologies. Recognizing this imperative, the HIIT project emerges as a strategic initiative to empower HE STEM teachers with the requisite skills and self-efficacy to navigate the digital realm effectively. The project situates itself at the intersection of educational innovation and the inclusive nature of learning, aiming to equip educators with tools that transcend the limitations imposed by closures and foster a resilient and engaging learning environment.

## Scope

The scope of the HIIT project extends beyond a mere infusion of technology into the classroom; it envisions a comprehensive transformation of instructional practices in Higher Education Institutions (HEIs). The project's scope encompasses the development and refinement of a robust curriculum and syllabus for Instructional Technology tailored to the specific needs of HE STEM teachers. Moreover, it delves into the creation of learning content and assessment methods grounded in sound pedagogical principles and digital innovation. The scope further extends to the establishment of an e-Learning Space as a dynamic and accessible platform, fortified by insights gained from a rigorous pilot study involving HE STEM teachers. Recommendations offered by the project will guide the wider Higher Education community, fostering a cohesive integration of Instructional Technology principles horizontally across diverse disciplines.

## Goals

The overarching goals of the HIIT project are threefold: first, to elevate the self-efficacy, competencies, and skills of HE STEM teachers, ensuring they become adept practitioners of Instructional Technology. Second, the project aims to fortify the resilience of Higher Education against disruptions by providing educators with the tools to swiftly leverage digital resources for effective teaching and learning. Finally, the HIIT project seeks to disseminate its outcomes widely, reaching HE STEM teachers, Higher Education Institutions, students, and relevant stakeholders at local, regional, national, and European levels. By achieving these goals, HIIT aspires to not only navigate the challenges posed by closures but also to contribute significantly to the broader conversation on the seamless integration of technology in higher education, promoting an inclusive and forward-thinking learning environment.

# 2. Target Group

The primary audience for the HIIT project is HE STEM teachers. These educators are the focal point of the project, and HIIT aims to equip them with the necessary skills, competencies, and self-efficacy to integrate Instructional Technology effectively into their teaching practices. Additionally, the project recognizes Higher Education Institutions (HEIs) as a key audience,





expecting them to play a crucial role in adopting and mainstreaming the results of the project within their organizations.

The secondary audience comprises students in HE. While not the primary focus, HIIT acknowledges the importance of raising awareness among students about the project's objectives. Specific promotion and communication activities are planned to help students understand why their teachers and institutions are involved in the HIIT project. This outreach aims to foster a supportive environment and promote understanding among the end beneficiaries of the educational enhancements facilitated by HIIT.

### 3. What does HIIT offers?

The HIIT project presents a pioneering approach to address the pressing needs of HE STEM teachers. At its core, HIIT offers a carefully crafted curriculum and syllabus focused on Instructional Technology, empowering educators with self-efficacy, competencies, and skills essential for navigating the digital landscape. Through a meticulous methodology involving focus groups and surveys, HIIT ensures that the learning objectives, methodology, content, and skills assessment methods are refined and aligned with the dynamic requirements of HE STEM teaching. HIIT special module for students with learning barriers presents an approach for applying the appropriate methodology to different situation of the learning barriers.

#### **Practical Implementation through Learning Content and Assessment:**

HIIT goes beyond theoretical frameworks by providing tangible tools for HE STEM teachers. The project's second outcome, the HIIT Instructional Technology Learning Content & Assessment Method, is designed to bridge the gap between educational theory and practical application. Grounded in Instructional Technology concepts, methods, and tools, this aspect of HIIT enables educators to seamlessly integrate digital resources into their teaching. The project recognizes the importance of considering learning contexts and circumstances, ensuring that the application of Instructional Technology principles is relevant and effective in the design, realization, and evaluation of online learning experiences.

#### **Accessible E-Learning Space and Wider Community Impact:**

The culmination of HIIT's efforts is the creation of the e-Learning Space (PR3), a dynamic platform based on Instructional Technology principles. This space is not only a repository for the curriculum and learning content but has been extensively tested in a comprehensive pilot study involving HE STEM teachers. It serves as a practical and accessible hub for educators to implement and refine their use of digital tools. Moreover, HIIT extends its impact beyond individual teachers and institutions by offering Recommendations (PR4) to the wider Higher Education community. These recommendations guide HEIs, teachers, and stakeholders on the transfer and application of Instructional Technology, ensuring a coherent and strategic uptake of the project's outcomes in the broader educational landscape. In essence, HIIT offers a holistic and forward-thinking solution to the challenges faced by HE STEM teachers in an increasingly digital educational environment.





## 4. HIIT Training

Detail on HIIT learning ecosystem (including resources), and guidelines for its replication, samples (i.e. tools and learning activities/objectives).

One of the biggest advantages of the e-Learning Space platform is that it allows the user to use a search engine to provide him with the best recommendations, depending on his needs. The digital tools included in the electronic platform are grouped into different categories according to the specifics of the training for which they are intended. In this way, the learner has the opportunity to select one or more tools to use in his classes, to benefit from the information published about each of these tools, as well as from the resources related to each of them.

The HIIT training can be based on the HIIT E-learning Space (<https://www.hiitproject.eu/e-learning-space/>). This can direct various interested parties in different directions: Instructional Technology, Instructional Design, Students with Learning Barriers, and The HIIT Toolkit. The Toolkit allows customization based on the specific course. The selection criteria are size of the group, type of class, group/individual training, type of activity, duration of the activity, pertinent STEM area, and tool category. Furthermore, for each tool there is a detailed explanation what it is about, its purpose and limitations, when and how to use the tools, and additional resources such as links, videos, papers, books, etc. The actual training depends on the current level of the relevant interested party (HE teacher, student, etc.). It is advisable to seek a balance in the usage of tools, e.g. more attractive and engaging tools to be combined with more practical and professional ones.

## 5. Testimonials, and Use Cases

Detail on early-stage results and feedback collected during pilots

Both HE teachers and students are looking for visually appealing tools that stimulate the educational process. *Mentimeter* and *Kahoot!* are good ice-breakers or discussion starters for the class. Ideas can then be organized using *Mural* or *Conceptboard*. Assignments can be fairly distributed using *Spin the wheel*. *Mindmup* and *Miro* can be used for collaboration within a team or between teams. *Draw.io* can later be applied to create a flowchart of a process, and finally *Prezi* can be “the icing on the cake” to showcase the results of the team’s efforts. This sequence of tools has been applied at the University of Ruse in different classes as "Quality Management Systems, and in Innovation Management"; "Computer Control Systems"; "Quality control" etc.

## 6. Concluding Remarks

The training and careers plan for the institutions and for the individual career plans for HE (STEM) teachers are based on methodologies, principles and techniques. The HIIT includes Instructional technologies; design principles; special module for students with learning barriers and powerful toolkit which are the base on the training and carriers plan of the institutions and individual HE STEM teachers.





They could be applied from the beginning of the course development in the training process through course content development and tools uses till assessment and evaluation methodology and feedback.

In the professional careers individual plan of HE STEM teacher HIIT helps for increase the professional skills and competency need for professional growing.

