

# Start-IT: A Collaborative Active Learning Approach to Teaching Soft and Future Skills in Higher Education

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## Abstract

*This paper examines student feedback from a project that used a collaborative active learning approach to teach soft and future skills in higher education. The project, named Start-IT, ran over three years. The Start-IT project included three sub-projects, each of which lasted ten days and involved a minimum of 50 students. The three sub-projects took place in Porto, Portugal in 2022; Berlin, Germany in 2023; and Antwerp, Belgium in 2024.*

*This study analyzes feedback from the students who participated in the Antwerp project that took place in March 2024. The Antwerp project involved 50 students from six EU countries (Germany, Ireland, Finland, Belgium, Poland and Portugal). The students were mainly from Computer Science and Business Studies undergraduate programs, though some students from other disciplines also participated in the project. The 50 students were organized into ten diverse, international, and multidisciplinary teams. The teams were tasked with developing a mobile app prototype, creating a business plan, and devising a marketing strategy, with the restriction that their mobile app prototypes had to relate to the topic of sustainability.*

*This paper presents students' quantitative and qualitative feedback from the Antwerp Start-IT project. The findings show that engaging in collaborative active learning can enhance university students' soft and future skills.*

## Keywords

Active learning, collaborative learning, future skills, soft skills.

## INTRODUCTION

The Start-IT project is built upon a structured pedagogical framework that is designed to foster soft and future skills through collaborative active learning in an international setting. The architecture of the program integrates instructional design, team dynamics, real-world problem-solving, and iterative feedback mechanisms to provide a comprehensive learning experience.

This paper is motivated from a desire to close the gap between traditional higher education approaches and the evolving demands of the global workforce. As industries continue to undergo rapid technological transformation, the importance of soft and future skills - such as adaptability, collaboration, critical thinking, and digital literacy - has become more pronounced. Despite this, many university programs remain focused on discipline-specific knowledge, overlooking the development of essential soft and future skills. The Start-IT project was designed to address this gap by implementing collaborative active learning within a cross-cultural, multidisciplinary setting. This paper aims to evaluate the effectiveness of this approach by analysing student feedback, with the goal of contributing to ongoing efforts to align higher education practices with the skills required in modern professional environments.

## A. Soft Skills

Soft skills refer to a combination of interpersonal skills, social abilities, communication skills, emotional intelligence, and personal attributes that enable people to interact effectively and harmoniously with others. Key soft skills include communication, leadership, teamwork, creativity, time management, adaptability, problem-solving, work ethic, critical thinking, conflict management and emotional intelligence [1]. Unlike hard skills, such as programming or accounting, soft skills are more about behavior, attitudes, and personality traits.

Soft skills are crucial in both professional and personal settings, as they influence how individuals interact, build relationships, and achieve success in team-based environments. Employers value employees with a blend of technical expertise and soft skills. Employers place a high value on soft skills, because employees with these skills contribute to a positive workplace culture and help organizations achieve their goals. Patacsil & Tablatin state that “Employers rate soft skills such as teamwork, communication, and adaptability as equally, if not more, important than technical knowledge” [2].

The teaching of soft skills in higher education is researched by several authors. McKenna et al. look at the challenges faced by STEM undergraduates in acquiring soft skills [3]. They recommend that STEM students should take part in interdisciplinary courses that have a focus on soft skills

development. Penprase agrees with McKenna et al. that education needs to adapt to include more teaching of soft skills. Penprase argues that future work will require a strong emphasis on soft skills to navigate a workplace that is full of technological advancements [4]. Penprase states that *“The fourth industrial revolution calls for a holistic approach to education, where soft skills become a focal point in preparing students for a rapidly changing job market”*. Schulz emphasizes that, while technical skills are vital, soft skills such as teamwork, communication, and time management are essential for project success [5]. Schulz argues that students must develop these skills to collaborate effectively in teams, particularly in agile project management environments where communication is key to success.

Most of the students who were involved in the Start-IT project were from IT or business backgrounds. Robles emphasizes that soft skills are crucial for business students [6]. Robles argues that while business technical knowledge is essential, employers place high value on soft skills, because they enable graduates to work effectively in teams, manage conflicts, and lead projects, making them more competitive in the business world. Hynes explores the importance of communication skills in business education, highlighting how soft skills complement technical knowledge [7]. Hynes’ study finds that business students who develop strong written and oral communication skills are better equipped to navigate organizational hierarchies, lead teams, and present ideas effectively in business settings. Succi and Canovi investigate the growing demand for soft skills among business graduates [8]. Their study shows that employers are increasingly prioritizing skills like emotional intelligence, adaptability, and creativity in business roles, especially in fast-changing environments. These soft skills are viewed as key differentiators that enhance a business student’s ability to succeed and lead in dynamic industries. Andrews and Higson analyze the importance of soft skills in the transition from education to employment for business and management students [9]. Their study finds that employers seek graduates who not only have academic knowledge but also possess soft skills like teamwork, adaptability, and leadership. These competencies allow graduates to integrate into organizations more effectively and contribute to overall business success. Mitchell, Skinner, and White explore the role of soft skills in IT education, particularly how interpersonal skills enhance employability [10]. Their research suggests that IT students who possess strong problem-solving, adaptability, and teamwork skills are better positioned to collaborate in team-based environments, making them highly valuable to employers who require both technical and interpersonal expertise. Kechagias discusses the significance of soft skills in both IT and business education, showing that soft skills like problem-solving, adaptability, and critical thinking complement technical abilities [11]. Kechagias’ study states that graduates who possess a balance of technical and soft skills are more adaptable in multidisciplinary environments and are better able to handle complex organizational

challenges. Winberg, Winberf and Wolff evaluate the effectiveness of problem-based and active learning methods in developing transversal competencies such as critical thinking, teamwork, and communication in engineering students [12]. They conclude that such pedagogies foster skill sets that are highly transferable across professional contexts.

## **B. Future Skills**

Future skills refer to the personal attributes that are expected to be in high demand in the future workplace, due to advances in technology, globalization, and changing work environments. LinkedIn state that future skills include analytical thinking, complex problem-solving, communication, cognitive flexibility, creativity, critical thinking, digital literacy, emotional intelligence, initiative, interpersonal skills, leadership and social influence, and reasoning and ideation [13]. LinkedIn state that *“Future skills refer to the set of competencies, abilities, and knowledge that are predicted to be in high demand in the future job market.”*. The same article states that *“The concept of future skills recognizes that the workforce is undergoing a fundamental shift, driven by advances in technology, globalization, and changing workplace dynamics. Jobs that were once considered stable and secure may no longer exist, and new jobs are emerging that require a different set of skills and competencies”*. Future skills are necessary to meet the demands of future workplaces and foster innovation in technology-driven industries. By developing future skills, individuals can better prepare themselves for shifts in the workforce and remain competitive in their careers, regardless of changes in industry.

Several authors studied the integration of future skills in higher education. Ehlers and Kellermann believe that educational institutions need to focus more on interdisciplinary skills that prepare students for complex environments [14]. Ehlers and Kellermann state that *“Educational institutions should place a stronger focus on the integration of future competences across curriculums to ensure sufficient space for them, as they are complex and cross-disciplinary in their nature.* Miranda supports the teaching of future skills in higher education, stating that *“21st century students need to learn relevant skills that reflect the demands placed upon them in the global modern world rather than skills learned by students in the 20th century”* [15]. Brown believes that universities must equip students not only with technical skills but also with the ability to navigate uncertainty [16]. Ehlers agrees with Brown. Ehlers states that *“The focus on future skills development must move beyond mere technical skills to include reflective and ethical competence, preparing graduates to thrive in unpredictable environments”* [17]. QAA outlines how sustainability-focused education initiatives can promote future-ready skills. It emphasizes the importance of embedding critical thinking, systems thinking, and collaborative learning into course design to prepare students for emerging global challenges [18].

Future skills, such as critical thinking, digital literacy, adaptability, innovation, and social skills are essential for the IT and business students who took part in the Start-IT project. As automation, digital transformation and artificial intelligence reshape industries, these skills will prepare students to remain competitive and contribute to evolving business and technology landscapes. Binkley et al. discuss the relevance of 21st-century skills in preparing IT and business students for future job markets [19]. They identify future skills, such as critical thinking, problem-solving, collaboration, and digital literacy, as essential for adapting to the fast-changing technological landscape. Van Laar et al. focus on the importance of digital literacy skills for business and IT students [20]. Their study emphasizes that, as digital technologies become ubiquitous in the workplace, students must develop future skills, such as digital communication, data analysis, and cybersecurity awareness. Bughin et al. investigate the future skills that are needed in the age of automation [21]. They find that automation will replace routine tasks, making future skills like innovation, design thinking, and human-centered problem-solving crucial for maintaining a competitive edge. Wekerle et al. examine the future skill requirements in business education, emphasizing the need for entrepreneurial and leadership capabilities [22]. Their study finds that business students must acquire skills like strategic thinking, digital leadership, and innovation management to navigate the challenges of rapidly changing industries. These future skills are essential for fostering growth and adapting to market disruptions. Deming discusses the increasing importance of social and emotional skills for future business and IT professionals [23]. Deming highlights that as automation takes over technical tasks, human-centered skills such as emotional intelligence, communication, and teamwork will become critical differentiators. Deming states that these future skills will help students lead teams, build strong client relationships, and adapt to interdisciplinary work environments.

### C. Active Learning

Cornell University states that active learning can increase student engagement, retention, creativity, and practical understanding of the topic being studied [24]. Cornell University states that “*Active learning methods ask students to engage in their learning by thinking, discussing, investigating, and creating*”. Engageli shows that active learning can boost student engagement and improve knowledge retention compared to traditional lectures. Freeman et al. conducted a meta-analysis of 225 studies comparing active learning to traditional lectures in STEM disciplines [25]. They found that active learning significantly improves student performance on exams and lowers failure rates. They argue that active learning can lead to better conceptual understanding and higher retention of knowledge. Bonwell and Eison state that active learning promotes student engagement, because it involves participation in meaningful activities and reflection on the content [26]. They state that

active learning, particularly through methods such as discussion and collaborative learning, can significantly enhance student motivation and learning outcomes. Chi and Wylie state that active learning activities, such as peer teaching and problem-solving, foster deeper understanding [27]. They argue that active learning is effective because it requires students to engage in higher-order thinking processes, such as analyzing, synthesizing, and evaluating information. Jackson explores how active learning can better prepare students for the complexities of the modern workforce. The study highlights that active engagement in team-based projects enhances students’ communication, adaptability, and reflective thinking—skills increasingly demanded by employers [28]. Prince investigates the advantages of active learning over traditional lecture-based approaches in engineering education [29]. Prince emphasizes that active learning results in better retention and understanding of content.

### D. Collaborative Learning

Collaborative learning benefits students by fostering critical thinking, enhancing teamwork and improving communication. Collaborative learning prepares students for the real-world challenges that they will face when they enter the workforce. Löfgren and Löfgren investigate how interdisciplinary, student-led project environments contribute to student engagement and motivation. Their findings suggest that autonomy, ownership, and collaboration significantly improve students’ engagement and future skill development [30]. Alavi highlights the effectiveness of collaborative learning in business education [31]. Alavi states that collaborative learning promotes deeper understanding and greater engagement with course materials, because it enhances student problem-solving abilities and decision-making skills. Civera, Meoli and Paleari examine how collaborative learning experiences enhance entrepreneurial self-efficacy among students. They find that structured teamwork and real-world challenges, especially when tied to sustainability and innovation, strengthen students’ leadership and problem-solving abilities [32]. De Wever et al. state that collaborative learning improves student engagement and encourages deeper learning [33]. It enables students to practice communication and decision-making in a group setting, which is crucial for their future careers. Smith and McKeen focus on IT students. They explore how collaborative learning environments facilitate better team dynamics and communication skills [34]. Their study demonstrates that by working in teams, IT students learn how to collaborate on complex projects, mirroring the real-world software development environment. Their study states that collaborative learning prepares students for industry challenges and enhances employability. Shah, Cox and Zegwaart explore the impact of collaborative learning on IT students’ performance, particularly in systems development projects [35]. Their study demonstrates that collaborative learning improves students’ ability to manage



complex tasks, resolve conflicts, and think critically. It also highlights the role of collaboration in replicating real-world IT project management environments, where teamwork is essential. Roberts and McInnerney investigate the role of collaborative learning in online IT education [36]. Their study finds that collaborative learning fosters higher student satisfaction and better academic performance in virtual learning environments. It also helps IT students develop communication and project management skills that are critical in the IT industry, especially for geographically distributed teams. Tseng and Yeh focus on IT students and the role of collaborative learning in fostering creativity and innovation [37]. They show that working in groups allows students to brainstorm and share diverse ideas, which is vital in software design and problem-solving. Their study states that collaborative learning enhances innovation, creativity, and critical thinking skills, all of which are key competencies for IT professionals.

### **E. International Environment**

The students who participated in the Start-IT projects got to work in an international and multicultural environment. This presented the students with additional benefits. Grad & van state that international projects provide students with a broader understanding of global issues, enabling students to apply theoretical knowledge in a practical, real-world setting [38]. This type of experiential learning fosters higher engagement with the subject matter and deepens students' comprehension of complex topics. The authors found that participating in international projects cultivates intercultural awareness and sensitivity. Students gain a better understanding of different cultural contexts, enhancing their communication and collaboration abilities. This cross-cultural competence is crucial for fostering global citizenship and preparing students to navigate multicultural environments effectively. Denson & Zhang emphasize the transformative learning experiences that occur when students participate in international projects. They state that these projects encourage students to challenge stereotypes and build empathy, which leads to personal growth [39]. Hudzik argues that international exposure prepares students for future careers by equipping them with skills that are highly valued in the global job market. Through international projects, students develop key competencies such as teamwork, adaptability, and leadership, making them more competitive candidates for international roles [40].

### **START-IT PROJECT STRUCTURE**

The students who participated in the Antwerp Start-IT project Antwerp were assigned to diverse, international, multidisciplinary teams. All the teams were tasked with developing a mobile app prototype, business plan, and marketing plan that addressed the Erasmus+ horizontal priority of "*environment and fight against climate change*". The Antwerp Start-IT project involved collaboration with a local business partner. The business partner brought domain

expertise to the project. This helped ensure that student solutions aligned with real-world marketplace needs.

During the project, students from the different colleges and disciplines were put into teams of five people. Each team included a student from each of the five visiting colleges.

The project used a collaborative active learning methodology. Students were encouraged to take ownership of their product idea. They had to engage in discussions, investigations, and creative problem-solving in order to develop their app prototype, business plan, marketing plan and presentations. Throughout the project, students had to manage their time and allocate tasks, developing essential independent learning skills as they navigated their project goals. This responsibility fostered communication, interpersonal, and conflict resolution skills, as student teams had to resolve issues internally.

Some of the participating academics took on the role of team mentors. Each team was assigned a mentor. Daily mentor meetings provided the students with ongoing feedback, helped the students to organize daily tasks. The daily mentor meetings kept teams focused on their objectives. The mentors helped ensure that all the teams stayed on track and that all the teams delivered a high-quality outcome. The mentors also acted as a fallback in the case where a team's members ran into major confrontational problems.

The teams presented their progress on days two, six, and ten to the academics and the other students. This allowed for timely feedback and the sharing of best practices between the teams. The presentations also helped the teams compare their progress with the other teams and based on the feedback they received, to improve the quality of their work. This helped the students stay motivated and gave them a shared sense of belonging to the project group.

The Antwerp Start-IT project focused on the sustainable entrepreneurship theme of "*the 15-Minute City*". Aligning the project with local and real-world issues helped students grasp the entrepreneurial potential of their solutions.

A major goal of the Start-IT project was to equip students with soft and future skills, which are essential in the modern labor market. The project employed a collaborative active learning approach, where students worked together to solve real-world problems, thus developing critical soft and future skills. These experiences reflect the collaborative nature of the professional world. The Antwerp Start-IT project prepared students to be adaptable, critical thinkers, and creative problem solvers.

### **RESULTS**

The Antwerp Start-IT project ran from 17<sup>th</sup> to 27<sup>th</sup> March 2024.

The students who took part in the Antwerp Start-IT project were asked ten questions. For each question, the students had the option of providing additional, qualitative feedback. A total of 48 students answered the survey.

To ensure that the students understood what the terms collaborative learning and active learning meant in the

questionnaire, the questionnaire included the following description of the two terms: “This project uses a collaborative active learning approach. Collaborative learning involves students working together in a team to achieve a common goal. Active learning engages students in the learning process through activities and participation, as opposed to passive learning where students simply receive information in a classroom. The questions below relate to the collaborative active learning approach that we take in this project.”

### Following is a Discussion of the Students’ Quantitative and Qualitative Feedback for the Survey

**Q1. Do you feel that this project promoted student involvement, making the learning experience more interesting and engaging for you?**



Almost all the students (96%) felt that the project promoted student involvement, making the learning experience more interesting and engaging for them. One student stated that “I agree because working with international teammates has a significantly positive impact on students in terms of communication and collaboration”. A second stated that “the project engages international students altogether, sharing responsibility, knowledge, working moral. Those factors make me think that the project is more interesting and engaging”. A third student stated that “it is ‘forcing’ us to get out of our bubble and work/learn from different age/experiences/expertises students”.

**Q2. Do you feel that this project encouraged you to engage in discussions, evaluate options, and apply critical thinking skills to arrive at informed decisions?**



Almost all students (98%) felt that this project encouraged them to engage in discussions, evaluate options, and apply critical thinking skills to arrive at informed decisions. One student stated that “We had to look at our idea from different angles and consider plenty of ‘what ifs’ so in my opinion in certainly boosted our critical thinking ability”. A second student stated that “Doing this project gave me ability to come up with your idea and how to present to others. It gave me ability to think critically”. A third student stated that “We have come across many difficult situations and had to make critical choices. Some of the choices were good and some of them were bad, but in the end it made all of us think”.

**Q3. Do you feel that, by involving real-world scenarios and practical applications of knowledge, this project helped you see the relevance of what you are learning and how it can be applied in different contexts?**



Almost all students (96%) felt that that, by involving real-world scenarios and practical applications of knowledge, this project helped them see the relevance of what they are learning and how it can be applied in different contexts. One student stated that “I think so. It is much more interesting because of the real scenarios”. A second student stated that “It is easier and more fun to learn when you feel like you could potentially see your idea being implemented and used”. A third student stated that “I just realised that developing an application is much harder than it seems”.

**Q4. Do you feel that this project helped you to develop problem-solving skills and the ability to apply theoretical knowledge to real-world situations?**



Most students (89%) felt that this project helped them to develop problem-solving skills and the ability to apply theoretical knowledge to real-world situations. One student stated that “Like in life, a lot of thinking, googling and research was needed to finish the project, and also we encountered a lot of problems that needed to be solved”. A second student stated that “Yes many of the tasks given are making us use that theoretical knowledge we got to know through our studies”. A third student stated that “Seeing how my teammates approach and adapt helped me greatly”.

Of the students who answered ‘No’ to this question, one stated that “I think i already had good problem solving skills, because I am working for a certain time”. A second ‘No’ student stated “For me there were no moments where I felt like I have to overcome a problem”.

**Q5. Do you feel that this project enhanced your communication skills by providing you with opportunities to articulate your thoughts, listen to others, and express your ideas coherently?**



Almost all students (96%) felt that this project enhanced their communication skills by providing them with opportunities to articulate their thoughts, listen to others, and express their ideas coherently. One student stated that “Absolutely. Being a member of a team for 6-7 days, where we worked more than 8 hours every day, can definitely enhance communication skills”. A second student stated that

“Yes, this project has enhanced my communication skills by providing opportunities to articulate thoughts, listen to others, and express ideas coherently”. A third student stated that “Yes, so much communication was involved to share ideas among groups inside the team as well as communicating with the other groups within the team too”.

**Q6. Do you feel that this project boosted your motivation by giving you a sense of shared responsibility and the opportunity to contribute to your team’s success?**



Most students (87%) felt that this project boosted their motivation by giving them a sense of shared responsibility and the opportunity to contribute to their team’s success. One student stated that “Yes, this project has boosted my motivation by providing a sense of shared responsibility and the chance to contribute to my team’s success”. A second student stated that “yes, the project boosts my working motivation. I hope I can keep up with this enthusiasm”. A third student stated that “Yes. It motivated me to get out of comfort zone”.

Of the students who answered ‘No’, one student stated that “Since the tasks and my personal interests don’t overlap there was no real intrinsic motivation. My only motivation was to do my part so that the project doesn’t fail”. A second ‘No’ student stated that “The theme of the project was not that interesting for students in our age group. The time period set for us to come up with a creative and innovative idea for an was really unrealistic and there were high expectations, which did not really make sense to me. It would have been more productive, if we had time to actually come up with an idea we were all interested in and to work on it”.

**Q7. Do you feel that this project helped you develop various life skills, such as leadership, teamwork, negotiation, and conflict resolution?**



Most students (92%) felt that this project helped them develop various life skills, such as leadership, teamwork, negotiation, and conflict resolution. One student stated that “It developed a lot of soft skills such as communication, team-work, critical thinking, time management and communication skills as well as developing my technical skills like using Figma and designing”. A second student stated that “Yes, I strongly believe that this project has helped me develop various life skills. Through it, I’ve honed my abilities in leadership, teamwork, negotiation, and conflict resolution”. A third student stated that “yes, I feel like I have learnt some basics skills of leadership, negotiation, and conflict solution since I haven’t learnt this for a long time”.

**Q8. Do you feel that open-ended projects are a good way for you to learn?**



Most students (92%) felt that open-ended projects are a good way for them to learn. One student stated that “The open-ended nature of this project, where our team had the autonomy to choose our application focus and decide on the implementation of our solution, was incredibly valuable. I believe that open-ended projects provide an excellent learning opportunity”. A second student stated that “yes, because it gives us the chance to work on something that we find really interesting”. A third student stated that “yes, I feel in that way because the ideas will be shared amongst the members”.

Of the students who answered ‘No’ to this question, one student stated that “This was not an open-ended project. We did not have a broad choice for our application focus. We had no choice but to come up with an idea for green world and sustainability. Honestly, I would not download an app for sustainability”. A second ‘No’ student stated that “I do not feel like it was really open ended. I get the sustainability part, but that was pretty restricting”.

**Q9. Do you feel that you learn more in a collaborative active learning environment than in a traditional classroom setting?**



Most students (92%) felt that that they learn more in a collaborative active learning environment than in a traditional classroom setting. One student stated that “Yes definitely, it felt like a real world environment rather than a classroom where we often aren’t taught where we can apply the knowledge that we learn”. A second student stated that “Yes, I strongly believe that I learn more in a collaborative active learning environment compared to a traditional classroom setting. The engagement and interaction within a team in such an environment facilitate deeper understanding and retention of knowledge”. A third student stated that “100% because it was so much more fun to work on something”.

Of the students who answered ‘No’, one student stated that “not directly. You need the knowledge before which you get from lectures normally. But afterwards you can learn more in interdisciplinary teams”. A second student stated that “No. Obviously I learned a lot - but I could only do that because I did a lot of traditional learning already”.



**Q10. Do you feel that this project promotes excellence in teaching and learning?**

Most students (89%) felt that this project promotes excellence in teaching and learning. One student stated that *“I believe this project promotes excellence in both teaching and learning. It encourages a high standard of work and fosters a dynamic environment where continuous improvement is emphasized”*. A second student stated that *“I think its good way for both students and mentors to adapt the way they teach and learn as it is not your everyday classroom experience”*. A third student stated that *“Absolutely. Almost every lecturer we asked for opinion or feedback was critical, but also gave us tips and advice on how to move forward”*.

Of the students who answered ‘No’ to this question, one student stated that *“Not in teaching like in a school. But the learning curve was very high”*. A second ‘No’ student stated that *“This question does not make sense to me. I can't answer that question with yes, so I have to chose no here”*.

**CONCLUSION**

The student feedback from the survey was overwhelmingly positive.

The survey results show that collaborative active learning can support student learning and students’ understanding and appreciation of soft and future skills. The results show that this type of project can support students’ understanding of various life skills, such as communication, leadership, teamwork, negotiation, and conflict resolution.

The survey results show that the project helped the participating students to develop problem-solving skills and the ability to apply theoretical knowledge to real-world situations.

The results show that this type of project encourages students to engage in discussions, evaluate options, and apply critical thinking skills to arrive at informed decisions.

While the results from the Antwerp Start-IT project are encouraging, there are several limitations to this study that should be acknowledged.

Firstly, the analysis focuses solely on one of the three sub-projects within the broader Start-IT initiative. As such, the findings may not fully represent the experiences of students who participated in the Porto or Berlin projects.

Secondly, the participants in this project were mainly from IT and business-related disciplines. This may limit the generalizability of the findings to students from other academic areas such as engineering, healthcare, or the humanities.

Thirdly, the duration of the project was relatively short, with each sub-project running for ten days. While this intensive format promoted active engagement, it may not have provided sufficient time for the long-term development

and reinforcement of soft and future skills.

Fourthly, the study relies primarily on self-reported feedback from students. Although this provides valuable insights into their perceived learning, it introduces the potential for response bias and does not offer an objective measure of skill acquisition.

Fifthly, the study does not track the long-term impact of the project on students’ academic or professional development. It remains unclear whether the skills acquired during the project were retained or applied beyond the project’s completion.

To build upon this work, future research could involve a comparative analysis of student feedback across all three Start-IT sub-projects. Incorporating longitudinal studies would provide a better understanding of the lasting impact of the project on students’ personal and professional growth. Additionally, expanding participation to include students from a broader range of disciplines could help determine the effectiveness of the collaborative active learning approach across academic contexts.

Future iterations of the project may also benefit from incorporating more objective assessment methods, such as mentor evaluations or peer reviews, to complement student self-assessments. Exploring hybrid or extended project formats could also offer further opportunities for skill development, particularly for students who face travel limitations. Future research could examine how the Start-IT model might be scaled or integrated into existing university curricula to support the development of soft and future skills on a wider institutional level.

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