



SIMON: Supporting at-risk students through evidence-based personalized guidance

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ABSTRACT

This study examines the SIMON (Study skills and Interest MONitor) platform, developed at Ghent University (UGent), which supports bachelor's students by addressing three key questions: *What am I capable of? What can I do to succeed? Am I making progress?* SIMON integrates predictive models, targeted interventions, and continuous monitoring to enhance academic trajectories.

At entry, SIMON provides evidence-based insights into students' likelihood of success using assessments of cognitive and non-cognitive factors such as mathematics, reading comprehension, motivation, and test anxiety. These predictions, grounded in historical data, help students set realistic expectations, which research links to better outcomes. Building on this, faculty advisors enter tailored recommendations and remediation actions into the platform, connecting students to appropriate support resources. Progress monitoring is facilitated through visualizations and clear metrics, providing transparency in the face of strict academic progress regulations in Flanders.

This study analyzes SIMON's effectiveness through predictive validity of success probabilities, the impact of faculty interventions, and student engagement with the platform. The dataset includes anonymized records from over 30,000 bachelor's students. Preliminary results show a strong correlation between SIMON predictions and actual performance, as well as the platform's utility in identifying at-risk students and supporting timely interventions.

Findings highlight the importance of combining data-driven insights with human guidance to foster proactive student engagement. While SIMON effectively predicts outcomes and offers actionable advice, its impact depends on students' willingness to engage and implement recommendations.

In conclusion, SIMON demonstrates how universities can enhance academic success and study progress through continuous, personalized guidance. This integrated approach underscores the potential of combining advanced predictive analytics with supportive human interaction to improve higher education outcomes.

Keywords: predictive model, academic achievement, feedback, engagement, targeted intervention

Introduction

Higher education institutions increasingly employ data-driven systems to support student success and retention. In Flanders, however, the open-access nature of higher education presents a unique challenge: almost all students with a secondary school diploma can enroll in university, regardless of prior academic performance. As a result, the first year of higher education often functions as a de facto selection phase, with fewer than 40% of students completing it successfully (Fonteyne, 2017). These outcomes underscore the necessity of targeted interventions that not only identify students at risk of failure but also equip them

with the skills and insights needed to succeed. Such interventions appear most effective when they combine individualized data insights with clear, behaviourally specific advice, helping students to translate self-awareness into concrete action (Tempelaar et al., 2020)

In line with this ambition, Ghent University (UGent) developed SIMON (Study skills and Interest MONitor) an evidence-based platform designed to provide prospective and first-year students with actionable insights into their likelihood of academic success and their fit with specific study programs in order to alleviate student success.

SIMON for prospective students (Ask SIMON)

The SIMON (Study skills and Interest MONitor) platform was initially conceived as a digital orientation tool to help prospective students make informed study choices. The goal is not to select or exclude students, but to orient and inform them, helping align expectations with preparedness and guiding them toward a suitable study program. Prospective students can consult SIMON to assess their compatibility with specific higher education study programs, thereby justifying the application's name 'Ask SIMON'. SIMON emphasizes accuracy in identifying at-risk individuals while avoiding discouragement of those with moderate prospects (Fonteyne et al., 2017). SIMON focusses on the lower end of the ability range by assessing a very basic level of skills and abilities. As such, the main focus is on growth potential and not on the knowledge that may or may not have been gained through secondary education. As students with a lower socio-economic status (SES) are disproportionately more often enrolled in secondary education tracks that prepare less for higher education (Groenez et al., 2003), the focus on the identification of a lack in very basic prerequisites is potentially a powerful aid in promoting social fairness. In this regard, objective assessments of basic prerequisite knowledge may offer a more socially equitable basis for identifying prospective student success, as they are less influenced by the structural inequalities embedded in secondary education tracking systems.

The aim of the freely available online tool is to support the quest for answers to the fundamental pieces of information prospective students require when making a study choice: (1) a clear understanding of the *self* (abilities, interests); (2) knowledge of the requirements of the *environment* (conditions of success, advantages and disadvantages); (3) true reasoning on the *relations of these two* groups of facts (Parsons, 1909, as cited in Brown, 2002, p.5). In doing so, SIMON encompasses two modules that provide validated feedback on two key questions: what programs match my interests? and what programs match my competencies?

To answer the first question, a comprehensive interest inventory (SIMON-I; Fonteyne et al., 2016) was developed to assess how students' academic and vocational interests align with different study programs. This inventory builds on the Holland RIASEC framework (Holland, 1997) and integrates contextualized items tailored to the higher education landscape. Prospective students receive information on their personal interest profile and on how it is related to study programs in higher education. The main goal in the provision of information on interests-environment fit is to encourage maximal exploration of (relevant) study options. Previous research has demonstrated that student decision makers typically pick initial, intuitively derived choices, and then fail to give serious consideration to other options later in the process (Feldman & Whitcomb, 2005; Krieschok et. al., 2009). Therefore, by giving prospective students a list of matching programs based on their personal interests, the ambition is to broaden their perception of viable options.

To give prospective students insight into their competencies and the match of their strengths and abilities with study programs (SIMON-C), they can complete a set of assessments measuring cognitive competencies (such as Basic Mathematics (Fonteyne et al., 2015); Reading Comprehension (SweSAT; 2011); Vocabulary Knowledge (Lemhöfer & Broersma, 2012) and program-specific knowledge tests for chemistry and physics) and non-cognitive factors, including Motivation (Vansteenkiste et al., 2009); Self-Efficacy (Owen & Froman, 1988); Test Anxiety (Cassady, 2004); Metacognition (Schraw & Dennison, 1994) (SIMON-C; Fonteyne et al., 2017). These assessments are benchmarked against historical data from over 70,000 students. Based on test scores, SIMON predicts a personal chance of success for each study program. The predictive models use logistic regression and cross-validation to estimate individual success probabilities for each study program. Students receive visual feedback on their personalized chance of success for each study program separately. Chance of success is categorized as very low, low, average, fairly high and high. They also get feedback on all test scores, situating their performance relative to successful peers in their intended program and contextualizing the need for that specific competency in higher education.

Through these two components, SIMON provides prospective students with the necessary information to choose a higher education study program that maximally suits their interests and potential.

SIMON for students (SIMON says)

The SIMON platform for prospective students was validated through longitudinal research in which the complete test battery was administered at the beginning of students' academic programs and their subsequent study progress was systematically tracked over time. Given the availability of large-scale datasets on both cognitive and non-cognitive student abilities, providing individualized feedback at the onset of higher education represented a logical next step rather than a conceptual leap. Predictive models and early success probability estimations had already been developed and empirically validated. Drawing on evidence that the combination of early risk detection, targeted interventions, and continuous monitoring enhances academic success (Hattie & Timperley, 2007), additional functionalities were developed to deliver personalized guidance throughout students' academic journeys. As a result, 'SIMON says' was born. An online platform where students receive feedback and advice on how to optimize their study trajectory.

Since 2024, SIMON has structured its student support around three central questions that reflect the key stages of the student experience: (1) What am I capable of? (2) What can I do to succeed? and (3) Am I making progress?

To address the first question, SIMON provides students with a personalized success probability based on cognitive and non-cognitive assessments within the SIMON-C component (Figure 1). This evidence-based feedback helps students develop realistic expectations about their academic prospects, which has been shown to improve performance and persistence (Nicholson et al., 2013).

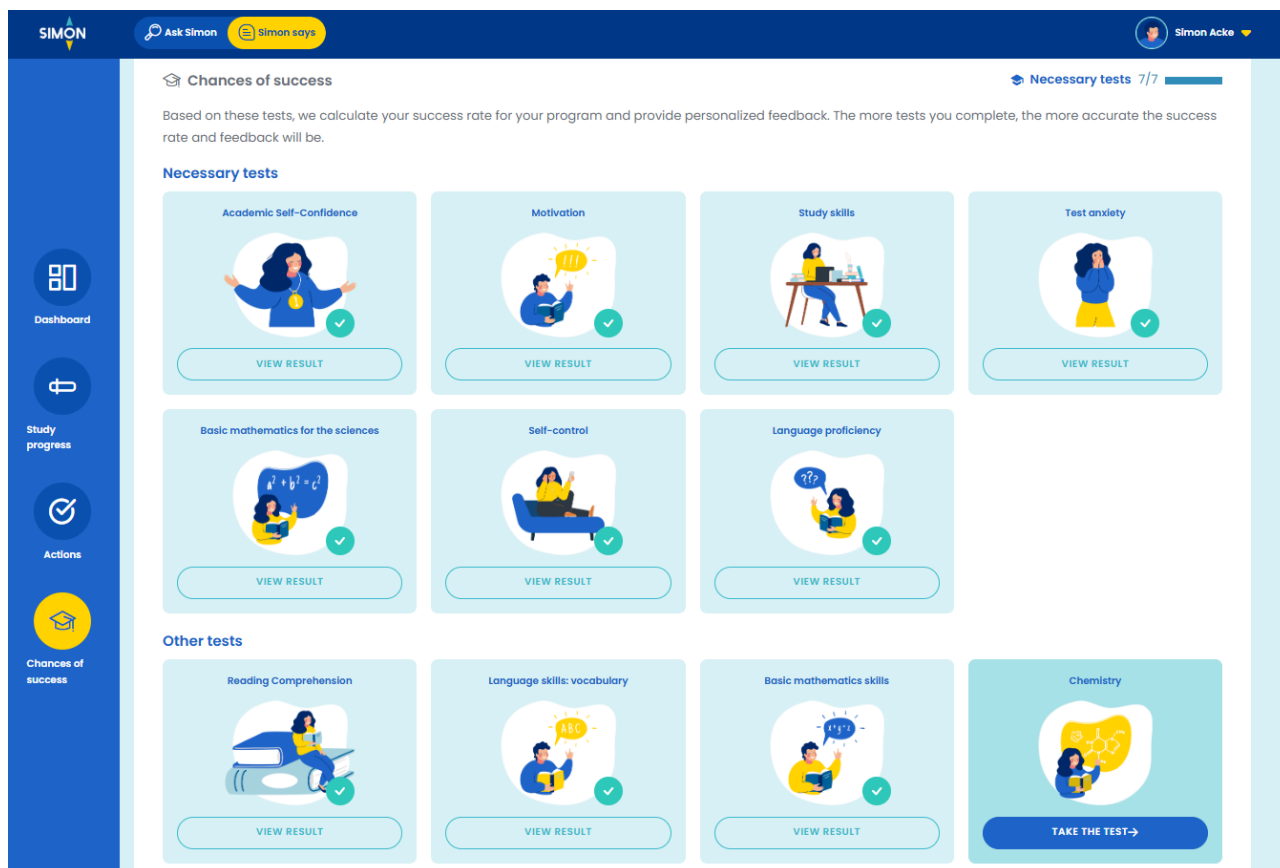


Figure 1: Screenshot of SIMON-C test components: students are shown which tests they should complete to get a personalized success probability in their chosen program (Academic self-confidence, Motivation, Study skills, Test anxiety, Mathematics, Self-control and Language proficiency)

The second question regarding student support focuses on actionable guidance: what can I do to succeed? Prioritizing the accessibility of feedback and recommendations is essential, as students most in need of feedback are often the least likely to engage with it (Harrison et al., 2013). Faculty advisors play a pivotal role by providing tailored recommendations. Recommendations consist of a personalized message and of specific actions the student can undertake to improve success in the study trajectory. These actions typically include readily available remediation strategies and direct links to institutional support services, thereby enabling students to take immediate, informed steps toward improving their academic trajectory (Figure 2). These recommendations are program-specific, time-sensitive, and dependent on the students' study progress and SIMON-C test results. The platform enables targeted referrals by program or faculty, providing students with information about the timing and location of remedial activities or directing them to relevant resources. Recommendations are compiled in a shared document, and faculty advisors are encouraged to engage with those proposed by colleagues, as this process fosters reflection and inspiration. The management and administration of these actions are centralized, with a designated coordinator responsible for the final entry into the platform, thereby ensuring consistency and coherence in both the recommendations and their formulation across programs.

Students are, for instance, encouraged to participate in course feedback sessions. This recommendation is communicated following the release of their academic results and remains accessible until the corresponding feedback session has taken place. Or, they can be stimulated to take a workshop on

strengthening their study skills, when SIMON-C results indicates there is room for improvement with regards to these skills. Students that are failing to make sufficient study progress may be encouraged to reevaluate their study choice. By redirecting them to Ask SIMON, they can explore other options that may be more suited to their interests, skills and abilities.

Moreover, certain actions are continuously displayed, irrespective of the student's program or the specific period within the academic year. This ensures that students can access appropriate support services when needed for instance, after receiving unsatisfactory academic outcomes. For example, the platform may highlight sessions addressing topics such as procrastination, stress management, and anxiety. These sessions are facilitated by student psychologists.

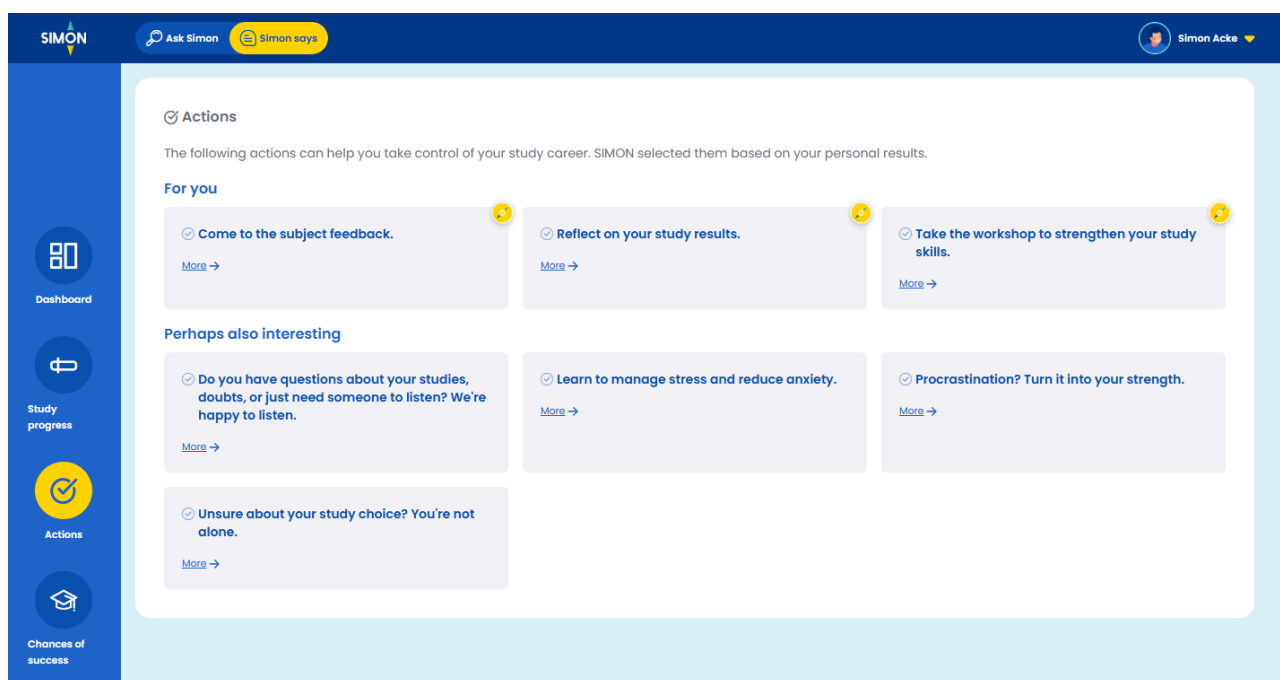


Figure 2 Personalized actions as recommended by SIMON (e.g. ‘come to the subject feedback, ‘take the workshop to strengthen your study skills’).

The third question centers on self-monitoring and progress evaluation. SIMON provides a comprehensive overview of each student's academic progression through visualizations and transparent performance metrics. For example, students are provided with a clear visualization of the credits they have obtained relative to the 180 ECTS required to complete a Bachelor's degree. In addition, given that the Flemish government requires students to successfully complete all first-year courses within two years, students receive transparent feedback on how their academic progress aligns with this study progress requirement. Through its direct linkage to the university's central database, SIMON presents students with an up-to-date and integrated view of their current study status, thereby fostering informed self-monitoring and timely decision-making.

By combining predictive analytics, personalized feedback, and continuous monitoring, SIMON is aimed at empowering students and fostering academic success through informed self-regulation and timely intervention. It enables continuous monitoring, significantly improving student follow-up, and offering a

visually appealing and user-friendly experience. Figure 3 illustrates the SIMON dashboard that assembles information on (1) What am I capable of? (through the SIMON-C component) (2) What can I do to succeed? (by giving personalized advice and tailored actions) and (3) Am I making progress? (by providing personal information on study progress).

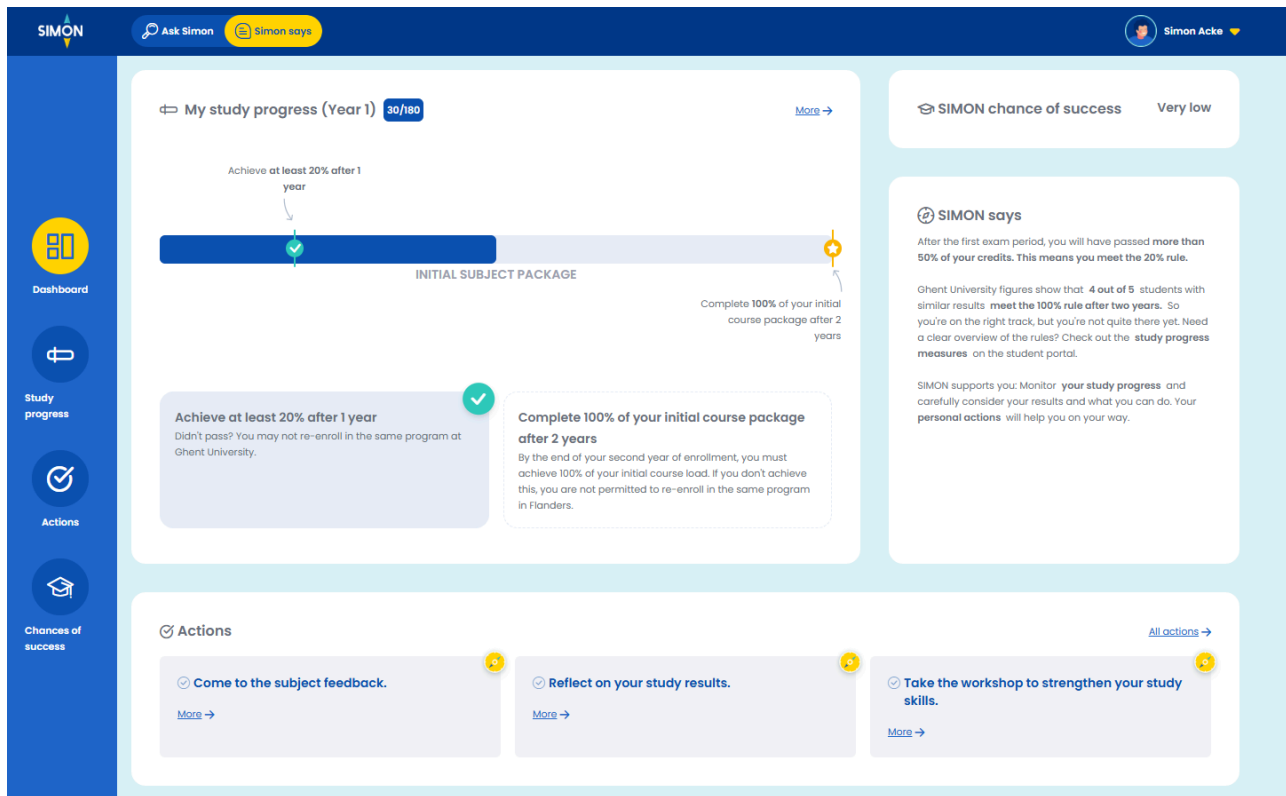


Figure 3 SIMON dashboard with an overview of answers to the three key questions: (1) What am I capable of? (2) What can I do to succeed? and (3) Am I making progress?

Current study

Student success is a multifaceted phenomenon influenced by a wide range of cognitive, motivational, social, and institutional factors (see e.g., Richardson et al., 2012; Tinto, 2017). No single model or intervention can therefore fully capture or predict academic outcomes. Within this complex context, *SIMON says* seeks to offer a partial but meaningful contribution to understanding and supporting students' learning trajectories.

The platform integrates data-driven analytics which generate individualized success probabilities, with the advisory and remedial actions provided by faculties, and the self-regulatory features that encourage students to actively monitor and adjust their study behaviour. This combination aims to bridge the gap between quantitative prediction and qualitative support, fostering both awareness and agency in the learning process.

This study analyzes the effectiveness of SIMON says through:

1. **Predictive Validity:** Evaluating the relationship between SIMON success probabilities and actual academic performance. Previous evidence on predictive validity of SIMON (Fonteyne, 2022) shows that only 10% of students with a very low chance of success obtain the bachelor's degree within the standard duration of the program plus one year whereas this proportion climbs to 80,1% in the high chance of success group. The current study updates this validity evidence.
2. **User Experience and Adoption:** Although higher education institutions increasingly invest in academic support initiatives, research consistently shows that students do not always engage with the resources available to them. Additionally, those who might benefit the most from such interventions are often the least likely to seek or use them (Petrovic & Milosevic, 2024). This is in line with a control theoretical perspective (Carver & Scheier, 1990), wherein negative feedback provokes feelings of resistance, which in turn leads people to discard the feedback. In this study, the extent to which students effectively use SIMON is assessed which informs how engagement with the support in SIMON can be maximalized.
3. **Impact of Interventions:** A central question for educational interventions is not merely whether feedback and recommendations are provided, but whether they lead to measurable improvements in students' academic trajectories. In this study, we aim to investigate to what extent personalized messages and targeted actions (derived from diagnostic assessments or learning analytics) actually contribute to tangible outcomes such as timely reorientation, improved engagement, or remediation of weak skill areas.

Methods

Participants and context

Since 2015, all new incoming undergraduate students of Ghent University are invited to fill out SIMON-C at the start of the academic year. In the email they receive after enrollment, students are made aware of the fact they are expected to fill out SIMON. Students who do not complete the tests by the second week of the academic year receive a reminder by email. A second reminder is sent at the end of the second week and the assessment is closed down at the beginning of the third week of the academic year. During this period, colleagues in the faculties are encouraged to complete SIMON both during classes and through announcements on their own communication platforms. Students are stimulated to reflect on their SIMON feedback after every exam period by including a referral to the platform in the results transcript. At the end of each academic year, exam results (both obtained ECTS credits after the first and successful completion of the degree) are retrieved from the university database. It is important to emphasize that individual test results remain strictly confidential and are not shared with faculty staff; they are intended solely to provide students with personalized feedback on their competencies and to guide possible actions to support their study progress. The retrieval of study results from the university database has received ethical approval and is aligned with the university's mandate of monitoring and stimulating students' study progress. The evaluation of predictive validity in the current study is based on SIMON-C test scores and academic achievement of 33.985 students for first year results and on results of 18.142 students for degree completion (80,6% of all new incoming students).

To monitor the user experience and adoption of the SIMON platform as well as the impact of interventions, two standardized surveys were constructed and are administered each academic year. The first survey is

administered in early October, to all new first-year students. This survey aims to capture students' initial perceptions of the feedback they received, their self-assessed study preparedness, and early indicators of engagement. The second survey takes place in early February, following the publication of first-semester results. This second wave assesses students' academic progress, reactions to their results, and potential changes in motivation, self-regulation, and orientation toward their study program.

The current study results are based on the post-semester 1 survey for students enrolled in the academic year 2024-2025. 2,088 complete responses were collected (34.1% response rate). In addition, a follow-up survey was launched in October 2025 targeting the cohort of 2024, focusing on their past experiences with SIMON and the perceived usefulness of SIMON feedback for their study process. This survey resulted in 814 complete responses (13.3% response rate), offering valuable longitudinal insights into how students interpret and apply diagnostic feedback over time. Response rate was lower for the follow-up survey as a result of the high level of attrition in the open access system.

The study was approved by the ethics committee and students gave written consent for participation.

Measures

SIMON-C (Fonteyne et al., 2017) assesses cognitive competencies such as Basic Mathematics (Fonteyne et al., 2015); Reading Comprehension (SweSAT; 2011); Vocabulary Knowledge (Lemhöfer & Broersma, 2012) and program-specific knowledge tests for chemistry and physics) and non-cognitive factors (including Motivation (Vansteenkiste et al., 2009); Self-Efficacy (Owen & Froman, 1988); Test Anxiety (Cassady, 2004); Metacognition (Schraw & Dennison, 1994)).

Student success was retrieved from the university database and was operationalized both as percentage of obtained ECTS credits at the end of the first academic year as well as obtaining the bachelor's degree with a maximum of 1 year delay.

User experience and adoption and impact of interventions were evaluated by user data from the application database and by data from a post-semester 1 survey and a follow-up survey.

The questionnaires used in both survey moments were developed in close collaboration with the participating faculties. Each year, the instruments are reviewed and updated to verify whether the items remain current, valid, and reflective of students' actual experiences within the evolving context of the SIMON platform. More specifically, most items remain the same to ensure comparability across cohorts but recently items were added to evaluate user experience with the platform.

The surveys focus on first year students' interaction with SIMON, examining how frequently and in what ways they use the platform, how they perceive the personalized feedback and whether this feedback motivates or activates them to take concrete actions. Additionally, students can provide suggestions for improving the platform and indicate their self-assessed likelihood of academic success. Students who did not fill in SIMON are also asked why they didn't engage with the platform, despite several reminders that they were obliged to do so.

Results

Predictive validity

To estimate students' probability of success within the SIMON framework, recursive feature elimination combined with cross-validation was employed (Kuhn & Johnson, 2013). These procedures were implemented independently for each study program, thereby producing program-specific estimates of success probability.

Table 1 reports, for each predicted success group, the mean number of ECTS credits obtained at the end of the first academic year, as well as the proportion of students who completed the bachelor's degree within the nominal duration or with a one-year delay.

The findings indicate pronounced differences across the predicted success groups. Among students classified in the low-probability group, only 4.9% obtained all ECTS credits by the end of the first year. This proportion increased progressively with higher predicted probabilities, reaching 64% in the high-probability group. A comparable gradient is observed for degree completion: merely 11.2% of students in the very low predicted success group attained the degree, even when accounting for a one-year delay, whereas 70.7% of those in the high predicted success group did so.

Taken together, these results provide robust evidence that the predictive model can accurately identify students at heightened risk of academic failure, underscoring its potential utility for data-informed student support strategies.

Table 1 Predictive validity of the SIMON-C component

Predicted Chance of success	N	% ECTS credits obtained at the end of the first year					% obtaining bachelor's degree	
		<30%	30-49 %	50-74 %	75-99 %	100%	within duration	within duration + 1 year
Very low	1873	58.9%	20.1%	9.9%	6.2%	4.9%	5.4%	5.8%
Low	5381	38.8%	22.3%	15.7%	10.6%	12.6%	13.1%	13.1%
Average	11976	22.3%	18.9%	16.4%	14.0%	28.5%	27.5%	16.4%
Fairly high	9492	12.2%	13.8%	15.0%	15.5%	43.6%	41.0%	16.1%
High	5263	5.6%	8.1%	10.5%	11.8%	64.0%	56.5%	14.2%

User experience and adoption

User data shows that 83% of first-year students made use of the SIMON platform following the semester 1-results. Students spent on average 13 minutes of session time on the platform. Results from the post-semester 1 survey reveal that the majority of students perceive the feedback provided through the SIMON platform as clear, useful, and satisfactory. Among first-year bachelor's students, 78.5% found the feedback clearly formulated, 68.4% reported being satisfied with it, and 70.9% considered it useful.

Table 2 presents results from the October 2025 follow-up survey. It shows which SIMON functionalities students have used during each period of the previous academic year and how useful they perceived them to be.

Table 2 Use and usefulness of functionalities within SIMON throughout the academic year

<i>N</i> = 814	Start academic year		After semester 1		After semester 2		After exam session 2	
	Viewed	Useful	Viewed	Useful	Viewed	Useful	Viewed	Useful
Simon Chance of success	85.9%	62.6%	78.0%	59.6%	71.0%	63.3%	67.6%	65.8%
Scores per test	70.4%	62.8%	44.2%	45.7%	40.3%	44.0%	33.7%	43.9%
SIMON Says Message	47.8%	45.8%	53.5%	53.1%	52.4%	55.3%	53.0%	60.0%
Personal Actions	48.5%	51.3%	52.6%	59.2%	53.0%	55.6%	50.0%	60.8%
Study Progress Bar	77.4%	80.9%	93.6%	91.1%	96.0%	92.5%	92.9%	95.1%

Over the course of the academic year, the use and perceived usefulness of certain SIMON functionalities evolved noticeably. While the SIMON Chance of success and Scores per Test were most frequently consulted at the beginning of the year, their relevance gradually decreased after the first semester. This decline may reflect a shift in focus from predictive indicators of success to actual performance outcomes after the exam periods.

Conversely, the SIMON Says Messages and Personal Actions features became increasingly valued throughout the year, suggesting that personalized feedback and actionable guidance gained importance as students progressed. The Study Progress Bar remained consistently and highly used, indicating its continuous relevance for monitoring academic progression.

Impact of interventions

When examining behavioural outcomes, the data suggest that students experiencing academic difficulties are particularly inclined to act upon the feedback provided by SIMON. Figure 4 presents the proportion of students in each performance category who reported that SIMON encouraged them to participate in a group guidance session, contact a study or academic advisor individually, or consider reorientation. The results indicate that first-year students with lower academic performance, as well as re-enrolling students who did not achieve a 100% study success rate, most frequently reported being prompted to take action following SIMON's feedback.

As displayed in Figure 4: Among first-time students who obtained 0% of the ECTS credits after the first-semester examination period, 53% contacted a student counsellor, 53% participated in study guidance activities such as group sessions, and 47% reported having considered reorientation. Similarly, among re-enrolled students who did not achieve full efficiency in their first-year courses, 44% contacted a student counsellor, 33% engaged in group guidance activities, and 41% considered reorientation.

Despite the comparatively more critical feedback and their lower academic progress, a substantial majority of these students remained positive about the system: 74% of first-time students and 76% of re-enrolled students who did not achieve full efficiency in their first-year courses indicated that they would recommend other students to use SIMON.

Figure 4 Percentage of students activated by SIMON after semester 1 by performance category

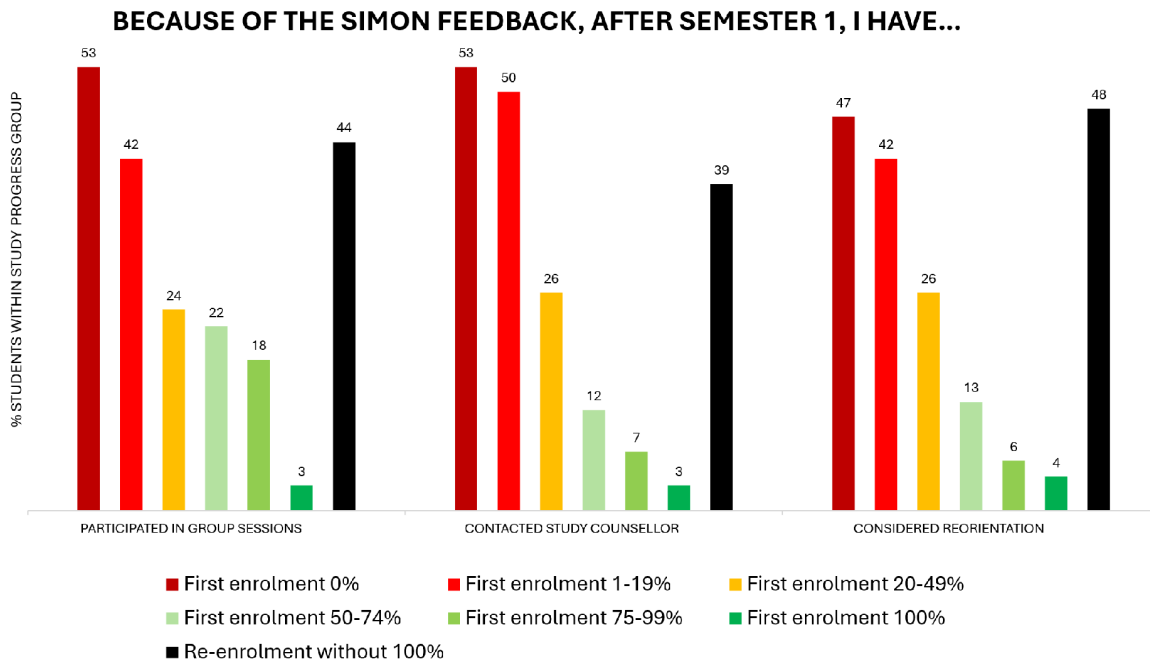


Figure 4 Percentage of students activated by SIMON after semester 1, by semester 1 obtained credits.

Discussion

The results from the current study indicate that the SIMON success probability correlates with actual academic performance, thereby confirming the predictive validity of the tool. Findings reinforce the platform’s effectiveness in identifying at-risk students and in guiding them to participate in targeted interventions. As the academic year progresses and more study results become available, students tend to consult the personalized actions and SIMON messages more frequently and perceive them as increasingly useful. Additionally, we see in the use of the platform that there is an important need for being able to monitor one’s study progress, which SIMON says provides.

An essential dimension in supporting student success is understanding how targeted interventions such as personalized faculty recommendations or remediation actions affect academic progress. While diagnostic assessments can identify areas for improvement, the impact of the subsequent guidance is what ultimately determines whether students translate insight into behavioural change. The way recommendations are formulated plays a central role in their impact. Feedback that is too generic or overly cautious may fail to prompt reflection or action, whereas overly confrontational feedback risks disengagement or defensiveness. Striking a balance where messages are both challenging and supportive appears key to eliciting meaningful responses (Nicol & Macfarlane-Dick, 2006). Moreover, interventions that convey a sense of personalization and empathy tend to be more influential. When students perceive feedback as personally relevant, they are more likely to allocate attention, internalize the message, and adjust their behaviour accordingly (Kizilcec et al., 2017). While prior research indicates that students with weaker academic performance are often the least likely to seek academic support (Harrisson et al., 2013; Petrovic & Milosevic, 2024), our findings suggest a different pattern. Within SIMON, these students do engage with the available resources, likely because the platform provides abundant, specific information and offers a low-threshold environment that facilitates further help-seeking. This suggests that SIMON succeeds in offering personalized, easily accessible digital feedback. In doing so, the instrument is aimed at lowering barriers to support and in fostering more inclusive student engagement.

As student engagement is crucial to the success of SIMON we aim to mitigate potential low engagement by making the tool as personalized as possible, ensuring that students receive tailored feedback and recommendations that feel directly relevant to their individual situation. In addition, engagement is actively supported through targeted communication strategies, particularly at key moments such as the start of the academic year, to encourage students to use and continue interacting with the platform.

SIMON is explicitly designed as a supportive and advisory instrument rather than a prescriptive system. The recommendations it provides are intended to stimulate reflection and guide students, not to dictate their actions. Student agency remains central: the results remain strictly confidential and we do not verify if they act upon this feedback, apart from our questionnaires. Moreover, SIMON is embedded within a broader support ecosystem that includes human advisors, ensuring that data-informed insights complement but do not replace personal guidance.

Rather than positioning digital feedback as a substitute for pedagogical relationships, SIMON is designed to function as a relational mediator that supports engagement between students and academic staff.

Academic colleagues remain crucial in interpreting, contextualizing and dialogically enacting the feedback generated by the system. In doing so, the platform aligns with a view of higher education in which digital tools can support more inclusive forms of belonging and participation, provided they are embedded within relational pedagogies that foreground care, ethical responsibility and student agency (Gourlay, 2015).

In sum, the results of this study show that SIMON succeeds in giving (prospective) students personalized advice that leads to action, specifically in students experiencing academic difficulties.

Limitations and future research

While SIMON effectively predicts academic outcomes and provides actionable recommendations, student engagement remains a critical factor. Future research will examine the direct impact of following recommended actions on academic success, exploring how students interact with feedback, who actively implements suggested interventions, and what factors influence engagement. A challenge herein is that

academic success depends on a wide range of factors, making it difficult to isolate the specific impact of a tool on students' study progress and overall achievement.

Future work should also explore longitudinal impact of feedback on study progress and validate SIMON's models across other educational systems.

Practical Implications for Higher Education

SIMON offers a non-selective and supportive approach to promoting student success. Its predictive feedback enables advisors to identify at-risk students early and tailor interventions, such as self-regulation coaching or stress management workshops. This early detection is particularly crucial for first-year students, who are still adjusting to the demands of higher education. By connecting predictive analytics to human advising, SIMON enhances data-informed guidance without replacing personal mentorship.

The components of the SIMON platform are also transferable to other higher education contexts. The need to monitor study progress in a quick and visually intuitive way aligns well with a contemporary, gamified learning culture in which students expect to see their progress at a glance (Sailer & Homner, 2020; Majuri et al., 2018). Furthermore, there is a growing demand for continuously updated guidance; the use of static documents no longer meets the expectations of today's students. This is especially relevant in the first year, where students are confronted with formal study progress requirements, which are often new to them, increasing the need for clear and timely feedback. Personalized advice is also crucial, as it helps students feel directly addressed and more inclined to engage actively with the platform.

In this regard, the combination of the study progress bar, the SIMON chance of success, the personalized SIMON says messages, and the tailored action suggestions can serve as a blueprint for other institutions seeking to develop user-friendly, dynamic support tools for their students. An additional advantage is the platform's flexibility: all actions and messages can be adapted to the specific needs, terminology, and communication style of each educational system, institution, faculty, or program.

Finally, the tool itself is fully operational. In the event of transfer to another institution, the associated financial costs are expected to remain limited, primarily involving minor adaptations to align the system with the specific institutional context. The principal investment lies in personnel resources required to tailor the actionable feedback and remedial recommendations to the institution's existing support structures and educational provisions.

Conclusion

The SIMON platform demonstrates how higher education institution can combine predictive analytics with human interaction to promote evidence-based, personalized student support. By linking data-driven predictions with targeted guidance, the platform not only identifies students at risk of failure but also provides a framework for fostering proactive engagement and academic success.

This study confirms that the SIMON platform is a valuable tool for enhancing self-awareness, informing study choices, and promoting timely interventions. It provides students with concrete tools to navigate their academic paths successfully and illustrates that learning analytics can be used to empower students. By shedding light on students' strengths, challenges, and progress, SIMON transforms predictive data into illumination that guides students toward academic success.

Biographies

Lot Fonteyne is a Policy Advisor at Ghent University, specializing in the transition from secondary to higher education and its link to academic success. Her work is focused on data-driven study choice guidance, dropout prevention, development and validation of assessment tools and predictive modeling of student success in tertiary education.

Simon Acke is a Policy Officer at Ghent University, focusing on data-driven student support in higher education. He works on analyzing study progress with a strong emphasis on reorientation, developing evidence-based messages and actions, integrating faculty support initiatives, and validating tests administered at the start of tertiary education.

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