

Introducing MyDispense as a tool to support placement and practice readiness in a new School of Pharmacy.

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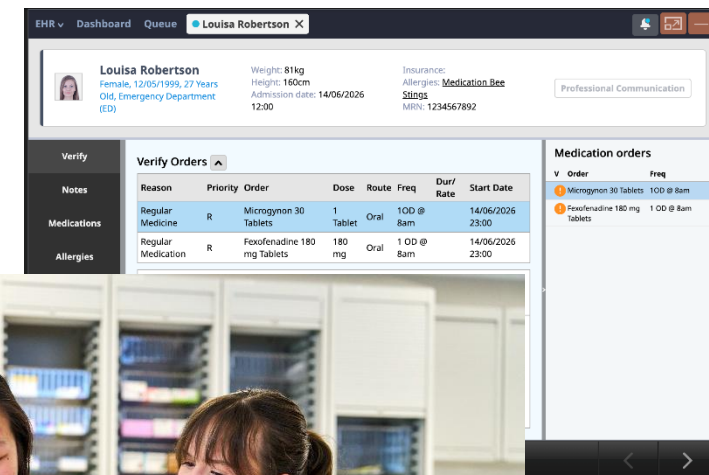
This evaluation assessed the use of MyDispense in Year 2 of the University of Plymouth-based Bath MPharm, focusing on practice readiness and familiarity with electronic prescribing systems. Evaluation was completed using Microsoft Forms with Likert scales and open-response questions.

Results

- Students perceived the EHR activities as more realistic than paper drug charts, better reflecting systems encountered on placement.
- Students reported increased familiarity with electronic prescribing workflows used in clinical practice.

Conclusion

- MyDispense has helped bridge classroom learning and placement experiences by providing an authentic and contemporary simulated EHR experience.
- Findings support the continued integration of MyDispense to enhance practice readiness and digital prescribing skills throughout the MPharm curriculum.



The screenshot displays the MyDispense EHR interface for a patient named Louisa Robertson. The interface includes a header with navigation tabs (EHR, Dashboard, Queue) and a patient profile section with details such as name, date of birth, weight, height, and admission date. Below this, there is a 'Verify Orders' section with a table of medication orders. The table has columns for Reason, Priority, Order, Dose, Route, Freq, Dur/Rate, and Start Date. Two orders are listed: Microgynon 30 Tablets and Fexofenadine 180 mg Tablets. To the right of the table, there is a 'Medication orders' section with a list of orders and their frequencies.

Reason	Priority	Order	Dose	Route	Freq	Dur/Rate	Start Date
Regular Medication	R	Microgynon 30 Tablets	1 Tablet	Oral	1 OD @ 8am		14/06/2026 23:00
Regular Medication	R	Fexofenadine 180 mg Tablets	180 mg	Oral	1 OD @ 8am		14/06/2026 23:00



Scaffolding Critical Thinking in Pharmacy Education Through a Redesigned Literature Thesis

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Dept of Pharmaceutical Sciences, Faculty of Science, Utrecht University



Aim: Redesign 3rd year literature thesis

End-product focused assignment → competency-centered capstone + targeted workshops

Approach: Student questionnaire (n=22) + supervisor focus groups (2x n=4)

Targeted, timely workshops:

- Formulating research question
- Systematic literature search
- Critical analysis literature
- Scientific argumentation

Results: Most important learning gains mentioned:

Students

Supervisors

● Formulation research questions

● Systematic approach to search scientific literature

● Critical analysis of scientific literature

● Selecting and structuring relevant information for argumentation

● Scientific argumentation + discussion challenging

Next step: Workshop “Writing an effective discussion section”

From Dispensing to Prescribing: Preparing Future Pharmacists for Management of Acute Upper Respiratory Tract and Ear Infections

Emily Black^{1,2,3}, Kyle Wilby¹, Daniel Rainkie¹, Andrea Bishop⁴, Sarah Abu Fadaleh¹, Katelyn Zwicker¹, Jenny Curran^{1,2}, Emma Reid³, Jeannette Comeau^{1,2}, Tasha Ramsey^{1,3}, Sarah Burgess³

¹Dalhousie University, Halifax, Canada, ²IWK Health, Halifax, Canada, ³Nova Scotia Health, ⁴Nova Scotia Pharmacy Regulator



Objective

- To determine curricular changes necessary to prepare pharmacy students for expanding to manage URT and ear infections

Methods

Environmental Scan

- Curricular content from 11 pharmacy schools in Canada

Focus Groups

- Experiences of pharmacists prescribing for URT and ear infections

Survey

- Self-perceived confidence and competence of community pharmacists

RESULTS



1. CURRICULAR CONTENT

Most schools include didactic instruction on diagnostic criteria and therapeutic content on common URT and ear infections but fewer provide instruction on differential diagnosis or provide opportunities to develop skills in physical assessment

2. FOCUS GROUPS

Themes included: preparedness, making time, how we learn, motivation, external influences



"We're prepared for diagnosing purely based on symptoms. But when there's any kind of physical exam or any kind of test..., we will need some additional training"



3. SURVEY

Most community pharmacists are confident in selecting and prescribing an appropriate choice of pharmacotherapy for common URT and ear infections but before are confident in assessment and diagnosis

Conclusion

- Additional training on assessment including physical exam and differential diagnosis is required to better prepare pharmacists and ensure adequate confidence and competence

Funding was provided by the Shoppers Drug Mart Research Collaboration Advisory Committee (Dalhousie University).

Cross-institutional insights on curriculum gaps for future-ready pharmacy graduates in the AI and digital health era

Parisa Gazerani
Oslo Metropolitan University, Norway
SingHealth/NUS, Singapore

"Innovation is not a one-time event but an ongoing process requiring continuous improvement based on user feedback"
- Prof. Parisa

Objective: To identify curriculum gaps and future competency needs for pharmacy graduates in the era of artificial intelligence (AI) and digital health.

Design: Cross-institutional collaboration between Norway and Singapore involving expert discussions, innovation workshops, and curriculum gap analysis.

Key Findings:

- ◆ Need for AI literacy and critical evaluation skills
- ◆ Risk of deskilling through over-reliance on AI
- ◆ Ethical and responsible AI use must be embedded in curricula
- ◆ Innovation and digital health competencies are insufficiently defined

Conclusion: Future-ready pharmacy graduates require competencies that extend beyond traditional pharmacy training, including AI literacy, digital health, ethical decision-making, and innovation skills.



OSLO METROPOLITAN UNIVERSITY
STORBYUNIVERSITETET



PHARMACY INNOVATION FUTURES DAY (4 NOV 2025)

PIFD Session	No. of Participants Who Attended*
Roundtable	18
World Café	24
Symposium	67 out of 106 who registered (63.2%)

*excluding organizing team



PRACTICE INNOVATION TRACK



EDUCATIONAL INNOVATION TRACK

Preparation Density: making assessment workload visible

A quantitative, student- and staff-facing approach

Maurice Hall • Alan Hanna • Dan Corbett • Lezley-Anne Hanna

School of Pharmacy, Queen's University Belfast



PRESENTER
Prof Maurice Hall

OBJECTIVE

Develop outputs that make assessment-driven workload compression visible and actionable — for students planning study and for staff scheduling & sequencing assessments

DESIGN

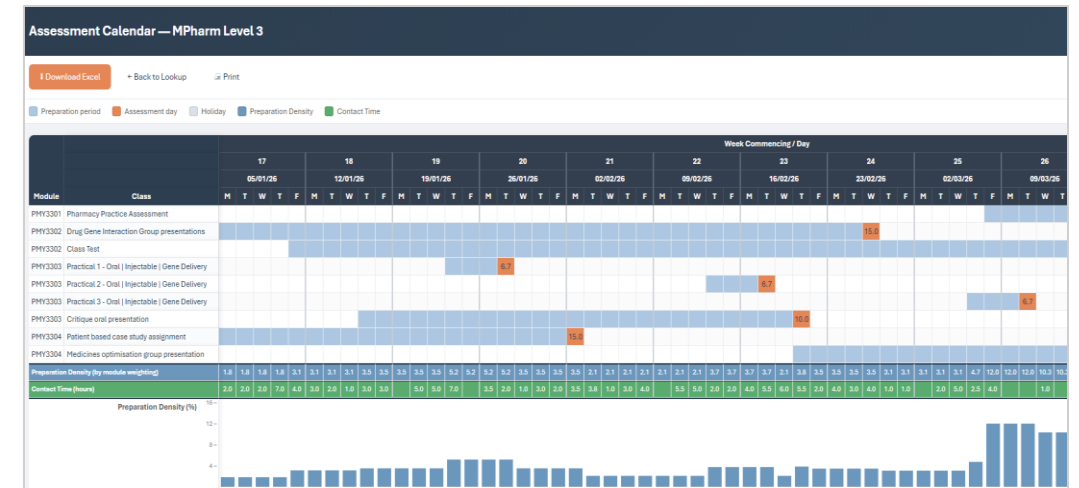
One semester of MPharm assessment data (credits, weightings, deadlines, prep windows). **Daily preparation density** = (credit × weighting) is spread across the prep window, summed across concurrent modules

CONCLUSION

A novel assessment workload model that supports student planning and informs staff decisions on assessment sequencing & quality assurance. Further evaluation required.

RESULTS

Preparation density reveals workload peaks that deadline-only calendars conceal



Pilot student feedback (n=14): 13/14 identified high-workload periods; 11/14 found it easy to understand; 10/14 useful for planning.

Staff-facing analytics show assessment load at individual and cohort level — which shows effects of class group distributions on assessment loads.



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Factors influencing assessment outcomes in pharmacy students

Implications for curriculum design and student support

Maurice Hall · Martha Brickland · Lezley-Anne Hanna

School of Pharmacy, Queen's University Belfast



PRESENTER
Prof Maurice Hall

OBJECTIVE

Identify student-specific factors associated with higher and lower academic performance in an MPharm programme — to inform curriculum design and targeted academic support.

DESIGN

Online questionnaire (2025) of MPharm students in highest (Q1) and lowest (Q4) quartiles. Items covered **environment, habits, lifestyle, motivation & support** (Walberg framework). χ^2 tests, SPSS v29, Holm–Bonferroni correction; $p < 0.05$.

CONCLUSION

Motivation and lifestyle play a complex role in outcomes. Interventions promoting self-efficacy, growth goals and active learning may support performance.

RESULTS

Main finding:
Students in Q1 were significantly more motivated by high grades than those in Q4.

Q1 · HIGHEST QUARTILE

64%

Q4 · LOWEST QUARTILE

30%

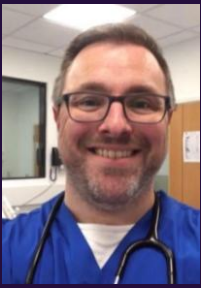
Percentage of students who were motivated by high grades

Higher performance was associated with longer sleep duration, lower social media use, home-based study and active recall (e.g. past papers).

Lower performance was associated with fear of failure and personal expectations as motivators.

Exploratory associations; not significant after Holm–Bonferroni correction.

Evaluating trainee independent prescribing pharmacists' (tIPs) perceptions of a simulation workshop designed to enhance clinical reasoning (CR) and clinical decision-making (CDM)



Dr Michael Leech, Mr. William Swain, Mr. Raj Bhamra. School of Pharmacy, UCL

Background:

- Prescribing rights for UK pharmacists from 2026
- Need to develop CR and CDM skills
- Simulation used to support skill acquisition

Aim:

Embed Clinical Reasoning (CR) and Clinical Decision-Making (CDM)^{1,2} skills for pharmacists

Design:

Post session questionnaire

- Voluntary and self-administered
- 10 item Likert scale, QIP focussed
- Electronic
- Purposive sampling
- Descriptive statistics applied

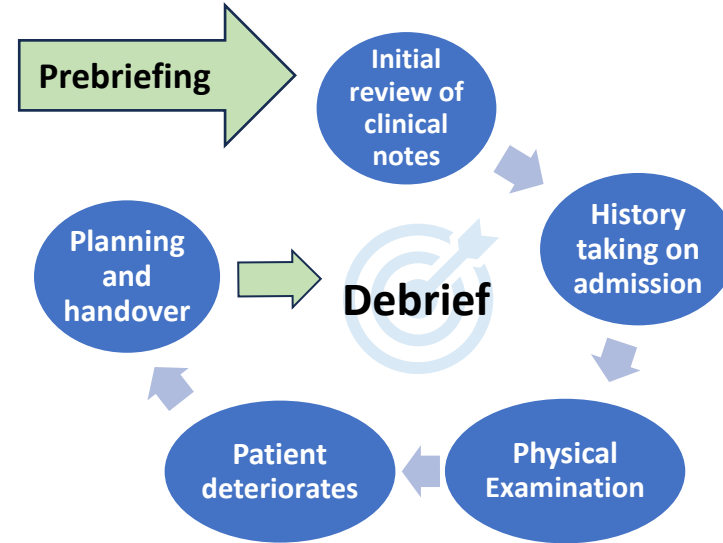
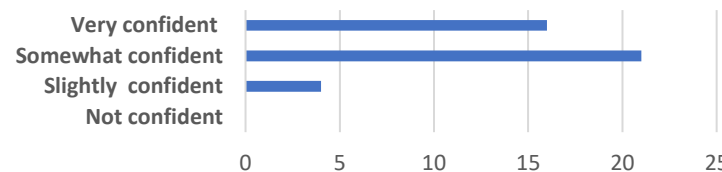


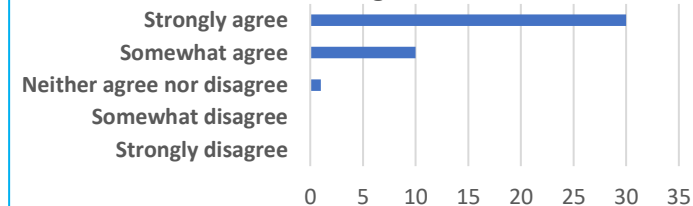
Figure 1: How confident do you feel in applying the skills learned to real patient care? n=41



Results:

- 59% response rate (n=41) from 70 tIPs.
- 100% could **relate aspects** to the Royal College of Pharmacy (RCPH) framework³
- 66% (27/41) stated workshop felt **realistic**

Figure 2: The workshop improved my clinical decision-making skills. n=41



- 95% (40/41) agreed or strongly agreed the workshop improved CDM skills.

Conclusions:

Session was well received.

- 100% stated workshop aims were met.
- Demonstrated feasibility of delivering simulation at scale, 36 students completing in 2 hours.
- Supports sustainability of the model.

References:

1. Rutter PM, Harrison T. **Differential diagnosis in pharmacy practice: time to adopt clinical reasoning and decision making.** Res Social Adm Pharm. 2020;16(11):1483-1486
2. General Pharmaceutical Council. **Standards for the initial education and training of pharmacists** [Internet]. London: General Pharmaceutical Council; 2021
3. Royal College of Pharmacy. **A competency framework for all prescribers.** London: Royal Pharmaceutical Society; 2021.



Redesigning Medicinal Chemistry Seminars to Promote Student Engagement and Research Competences

Ivana Perković, Iva Mucalo

University of Zagreb Faculty of Pharmacy and Biochemistry, A. Kovačića 1, Zagreb, Croatia



Objective

Medicinal chemistry seminars in the integrated undergraduate and graduate Pharmacy programme were traditionally knowledge-based.

A redesigned, collaborative, research-oriented seminar format was introduced in 2022/2023. This study evaluated students' perceptions – engagement, collaboration and research relevance.

Study Design

- Students worked in groups of three on a structured medicinal chemistry research task within a therapeutic area
- Each group developed a research plan, sourced compounds, analysed ADME properties (SwissADME) and proposed new derivatives (SciFinder)
- Anonymous post-course questionnaires (Likert-scale and open-ended questions) assessed student perceptions
- Seminars were refined after year 1 based on feedback; subsequent cohorts were compared

Results

- Student satisfaction with the redesigned seminars rose from an average Likert score of **4.39** (first cohort) to **4.72** (most recent cohort), after refining the seminars based on feedback (see chart)
- Ratings improved across all seminar components – synthesis planning, SciFinder-based derivative design, SwissADME property analysis – and instructor evaluation
- Qualitative feedback highlighted increased motivation and the perceived relevance of acquired skills for pharmaceutical research and professional practice
- Students valued the shift from individual topic presentations to collaborative, research-oriented group work

Key Results at a Glance

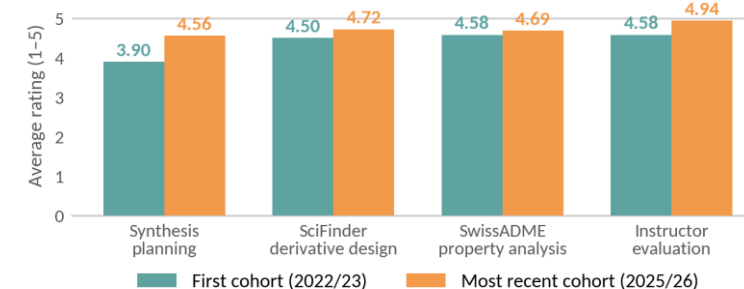
4.39

avg. rating, first cohort
(2022/23)

4.72

avg. rating, most recent cohort
(2025/26)

Average seminar ratings by component



Conclusion

The redesigned, collaborative seminar format was positively received. Linking medicinal chemistry concepts to therapeutic areas reinforced across the curriculum supports vertical integration and early development of research-relevant competencies.

Development and Implementation of Pediatric Pharmacy Education Modules for Hospital Pharmacists within a Provincial Health Authority

Heidi Zapata, PharmD, ACPR¹, Tara Rousseaux, BSP, ACPR¹, **Andrea Tang, BSP, PharmD, ACPR²**, Laura Almas, BSP, ACPR¹

¹Department of Pharmacy Services, Saskatchewan Health Authority, ²College of Pharmacy and Nutrition, University of Saskatchewan, Saskatoon SK, Canada



Objective

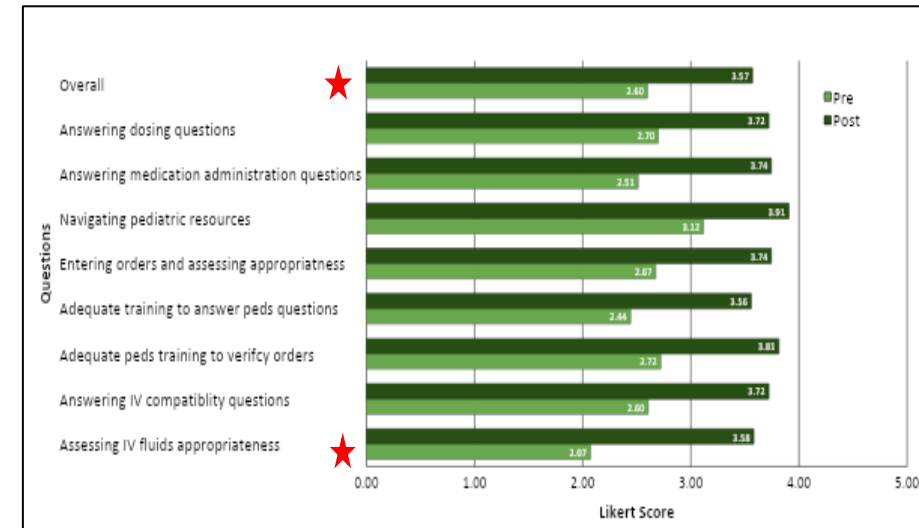
- Develop and implement pediatric education modules for hospital pharmacists
- Assess module effectiveness through changes in pharmacists' confidence in pediatric pharmacotherapy

Study Design



Results

- Overall improvement: pre- and post-questionnaires (MD = 0.97; 95% CI 0.73 - 1.21; $p < 0.05$)
- Greatest improvement was shown in assessing IV fluid appropriateness (MD = 1.51; 95% CI 1.26 - 1.77; $p < 0.05$)



Conclusion

- Targeted education in pediatric pharmacotherapy improved pharmacists' self-reported confidence
- Further research: incorporate additional pediatric topics, like pediatric antimicrobial therapy (highly requested)

Towards Indigenous Excellence in Pharmacy Education

Jaime Tutbury, PhD candidate

Supervisors: Prof Alesha Smith,

Dr Amber Young,

Prof Suzanne Pitama

Key curriculum themes identified



Indigenous health models and frameworks



Indigenous involvement in curriculum design



Decolonising the health system



Workforce under-representation



Lack of confidence



Safe learning environments



Hidden curriculum



Quality of teaching and assessment

1



Background

Persistent Indigenous health inequities in Aotearoa New Zealand continue despite system-wide interventions.

2



Aim

To establish the current state of Indigenous health curricula in New Zealand undergraduate pharmacy and health programmes.

3



Methods

Scoping review of literature and curriculum documents examining how Indigenous health content is included in undergraduate pharmacy and health education.

4



Emerging findings

- Consistent themes appear across the Indigenous health education literature.
- Evidence of meaningful change and measurable impact remains limited.
- Recurrent findings highlight slow progress despite mandated inclusion in education.

5



Take-home message

Meaningful Indigenous leadership, safer learning environments, and stronger teaching and assessment approaches are needed to achieve Indigenous excellence in pharmacy education.

Modernization of Pharmacy Business Management and Patient-Centered Communications Courses Using Specifications Grading and Artificial Intelligence

Sara A. Wettergreen¹, Deborah Gallegos¹, Ashley Daffron², Kelsey Schwander¹

1. University of Colorado (Aurora, CO, USA); 2. Chapman University (Irvine, CA, USA)



Skaggs School of Pharmacy and Pharmaceutical Sciences

Objectives

- This project aimed to evaluate whether modernizing assessment through specifications grading and intentional integration of artificial intelligence (AI) could enhance students’ knowledge, self-efficacy, and perceptions of course principles.

Design

- A phased course modernization strategy utilizing specifications grading and the integration of AI was implemented; first piloted in a required 2-credit Pharmacy Business Management course and subsequently expanded to a required 4-credit Patient-Centered Communications course.
- Student participants in the first offering of each modernized course completed pre- and post-surveys to assess knowledge, self-efficacy, and perceptions utilizing Likert-scale responses. A previous cohort of students from management received the same post-survey for comparison.

Results

Survey Items	Pharmacy Business Management 2023 (Modernized)		Patient-Centered Communications 2025 (Modernized)	
	Pre; Mean (SD); n=61	Post; Mean (SD); n=26	Pre; Mean (SD); n=42	Post; Mean (SD); n=42
Specifications grading will allow me to be more engaged in the topics I am more interested in.	3.9 ± 0.85	3.8 ± 1.13	4.1 ± 0.74	4.2 ± 0.91
Specification grading empowers me to be in more control of my grade outcome.	3.9 ± 0.87	4.1 ± 1.09	4.0 ± 0.9	4.2 ± 0.97
Specifications grading will improve my personal time management.	3.5 ± 0.99	3.1 ± 1.2	3.6 ± 1.05	4.0 ± 1.04

- Reported AI use increased by 22.1% in management and decreased by 4.7% in communications, possibly related to higher baseline use in communications. Students in both courses demonstrated improved ability to discern appropriate AI applications.
- Course modernization improved student perceptions of management course relevance and understanding of course principles. Learners highly rated communication course relevance, applicability, and understanding of course principles.

Conclusion

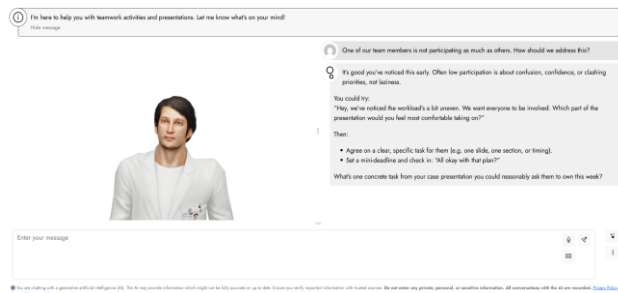
- A phased modernization strategy using specifications grading and AI integration supports student agency, engagement, and AI literacy which are critical for practice-ready pharmacists. This pilot highlights a scalable, transferable approach to engaging learners in curricula.

Thai Duong Pham¹, Danny Liu², Elizabeth Yuriev¹, Betty Exintaris¹, Nilushi Karunaratne¹, Angelina Lim^{1,3}

¹Faculty of Pharmacy and Pharmaceutical Sciences, Monash University, 381 Royal Parade, Parkville, VIC 3052, Australia; ²Office of the Deputy Vice-Chancellor (Education), The University of Sydney, Eastern Ave, Camperdown NSW 2050, Australia; ³Murdoch Childrens Research Institute, Royal Children's Hospital, Parkville, VIC 3052, Australia

Intervention

The **Teamwork Helper Agent** using **CognitiAI platform** was implemented in a semester-long team-based learning activity with *448 third-year Monash University pharmacy students* across Australia and Malaysia. **The agent** was designed as a kind but firm faculty-style teamwork facilitator.



Agent role: Providing step-by-step support for managing teamwork concerns, including conflict, uneven contribution, task delegation, and respectful communication.

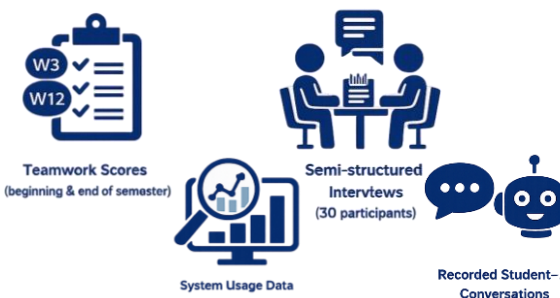
Study Objective

This study examined how third-year pharmacy students engaged with a curriculum-aligned generative AI tool, the **Teamwork Helper Agent**, to support teamwork.

- 1 What patterns of association were observed between tool adoption and teamwork performance?
- 2 How did students use the **agent** to support teamwork?
- 3 What factors influenced **adoption** and **non-adoption**?

Study Design

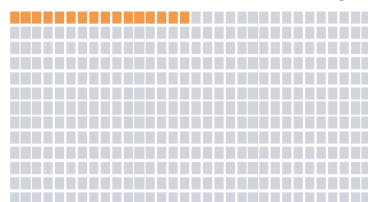
Mixed-methods evaluation



Presenter:
Thai Duong Pham

Adoption rate and performance

16/448 students used **Teamwork Helper Agent**
*excluding clinical or unrelated queries



Slightly greater score improvement among users, but not significant (**+1.41% vs +0.52%; p = 0.26**).

r = 0.40 *Moderate positive association* between frequency of use and improvement

Non-adoption

Limited perceived need

"Never considered using AI because my team has been great"

Existing confidence

"Task distribution is something I should already know"

Human judgement

"Handled based on how I think... In the end we're humans"

Adoption

Contextual guidance

"It's more specific to the Monash situation"

Interpersonal sensitivity

"It could help me check whether I might offend someone"

Language support

"It helps me convey the meaning I want to say in English"

Key take-away: The *Teamwork Helper Agent* might be most valuable as a targeted communication bridge for students facing interpersonal or language-related barriers, rather than as a universal tool for teamwork.

How Master of Pharmaceutical Science students use generative AI and/or digital tools in authentic funding-proposal assessment

Authors: Yassmin Samak¹, Angelina Lim¹ and Karen J. Gregory¹, Muhammad Azlan¹, Yilin Chen¹, Lucero Cuzcano¹, Linh Ha¹, Jason Huynh¹, 1) Faculty of Pharmacy and Pharmaceutical Sciences, Monash University, Australia

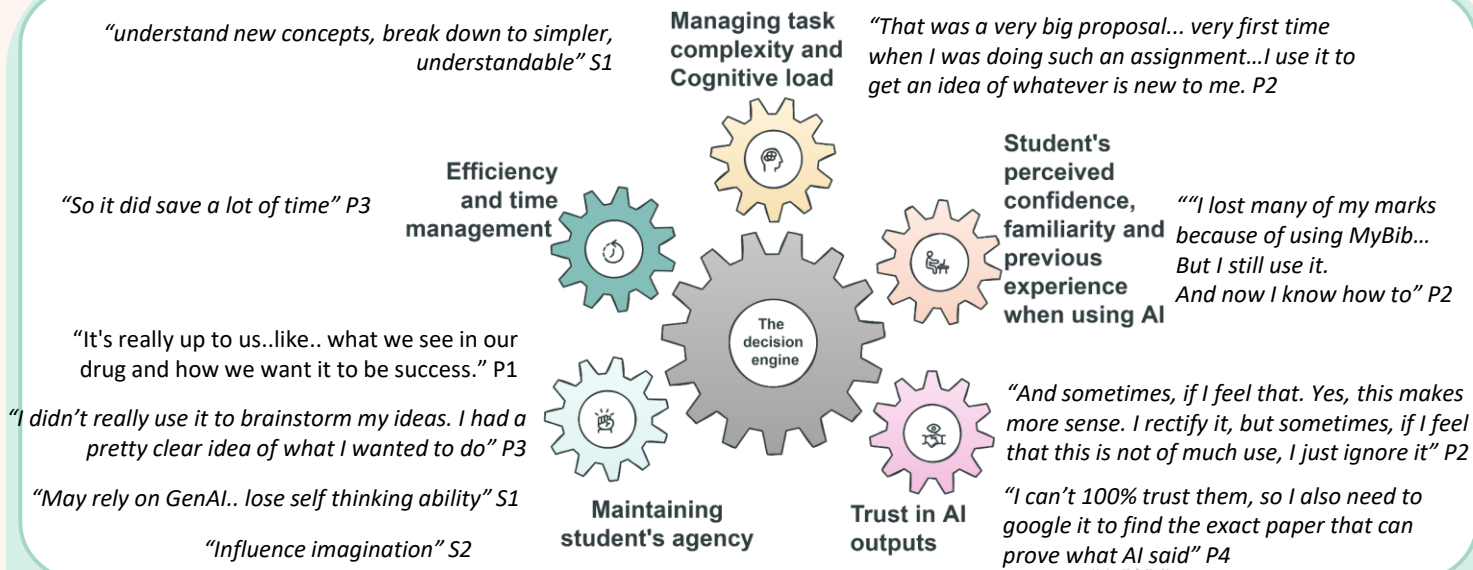


Aim:

To investigate how students use GenAI/digital tools when writing staged funding proposals, its impact on performance and perceived benefits/boundaries.

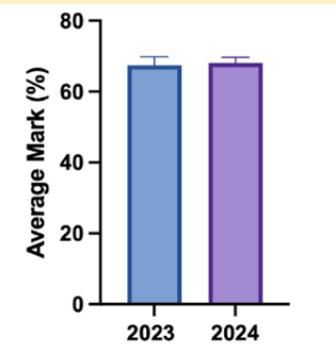
Study Design:

Quantitative comparison of final proposal marks in 2023 (AI not permitted) vs 2024 (AI permitted). Qualitative analysis of student's reflections (n=200), surveys (n=13) and interviews (n=5)



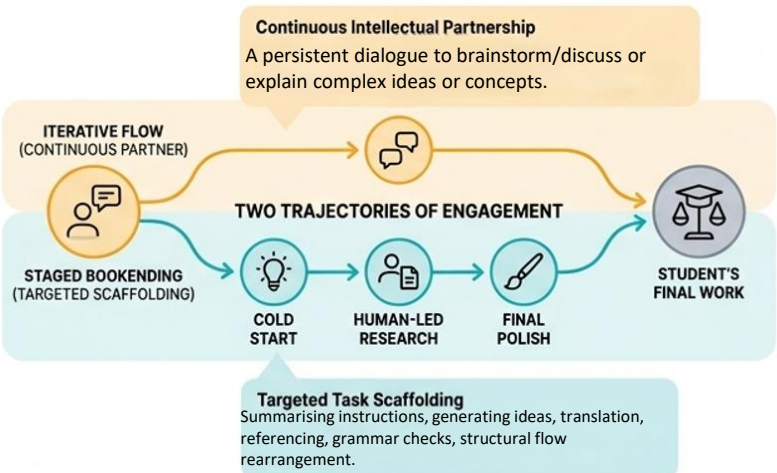
Results:

In 2024 ~80% of students acknowledged the use of GenAI. It has proven to have **little impact** on quality of their writing. Mean marks were similar across cohorts (2023: 68% vs 2024: 67%)



Conclusion:

These findings support assessment designs that teach verification/attribution practices and leverage GenAI for capability development rather than perceived "grade advantage".



"That's really good to help you improve yourself...like it's not just...to help you (with the task) but it helps you to develop yourself also" P1

"It's like a brainstorm between me and the AI..I use AI to help me see the hidden points" P1

"it's quite complex and quite messy, because we talk, too" P4

"I do use it when I feel that I don't know how to draft an assignment like I just use it to get a brief idea about the structure of the assignment and what things does it include? But then, ultimately, that is just a starting point" P2

"I used it to help me find sources and kind of those more niche articles" P3

"... it would just generate the bibliography" P3

"...to generate, graph or flow, flow, chart" P4

Piloting a Deaf-Literacy Curriculum Co-Designed with a Hard-of-Hearing Partner to Prepare Pharmacy Students for Effective Patient Interactions



Emily Stokes, Carmen Abeyaratne, Jamuna Rani Appalasamy, Amutha Selvaraj, Daania Amin, Amatul Najiya, Louisa Ngo, Jou-Yi Yap & Mocun Zhan, Monash University

Objective: To evaluate whether communication strategies taught in a co designed deaf literacy curriculum developed with a hard of hearing consumer were demonstrated during pharmacy students' interactions with a simulated hard-of-hearing patient in a placement-based mystery shop activity.

Design: A mixed-methods study was conducted with second-year pharmacy students studying at Monash University, Australia, to evaluate the impact of a targeted educational intervention on communication with Deaf and Hard-of-Hearing (DHH) patients. The design included an observational mystery-shopper assessment using a structured checklist to capture students' real-time behaviours in community pharmacy placements, followed by a qualitative focus group exploring students' perceptions of their performance, confidence and the new curriculum content introduced in the intervention.

Results: Of the 275 students enrolled in the unit, 25 participated in the mystery shopper activity, demonstrating strong foundational behaviours such as patience and empathy (100%), visible lip patterns and eye contact (84%), clear speech (76%) and visual cue use (92%), while several key communication strategies including preferred communication method (12%), reducing background noise (8%) and teach-back (24%) were rarely implemented. Four students participated in a qualitative focus group and deductive thematic analysis revealed challenges in recognising DHH patients and environmental barriers that limited inclusive communication, alongside a desire for broader disability-focused curriculum content.

Conclusion: The co-designed deaf literacy curriculum supported strong foundational communication behaviours, but key strategies such as teach-back were used inconsistently. Students reported increased awareness yet ongoing uncertainty, noting that 'this experience has definitely allowed me to reflect deeper.' Students also expressed interest in more disability focused content.

