Designing Program-Wide Assessment: Creating Coherent Student Development Through Assessment Themes

Abstract

This case study demonstrates how a carefully structured programmatic assessment approach in a pharmacy degree program uses detailed rubrics and consistent assessment types to create coherent student development across all four years. By implementing three core coursework themes that repeat annually (research, formulary, and person-centred care), supported by comprehensive rubrics and strategic staff allocation, the program ensures consistent assessment standards while managing workload across a large teaching team. The success of this approach is evidenced by external examiner praise and improved student engagement with professional-standard reference sources.

Keywords

Program-level assessment, Assessment themes, Professional standards, Rubrics, Team coordination

Overview

Dr. Alice McCloskey is the programme leader for Pharmacy. The team has developed a comprehensive assessment structure in a Master of Pharmacy (MPharm) program that transforms traditional disconnected assessments into a coherent four-year development pathway. The approach creates clear assessment themes that spiral through the program while maintaining high standards of feedback and marking consistency through detailed rubrics and strategic staff allocation.

The Challenge

Traditional pharmacy programs often face several assessment-related challenges:

- Managing consistency across large teaching teams with mixed practitioner/academic backgrounds

- Coordinating assessment across multiple years with large student cohorts (150-180 per year)
- Balancing academic rigor with professional practice requirements
- Managing workload for part-time practitioner staff
- Ensuring consistent quality of feedback and referencing standards

The Innovation

The program implements a thematic assessment structure where each year students complete three 20-credit courseworks that align with core themes:

- Research project coursework
- Formulary coursework
- Person-centered care coursework

Key features include:

- **Theme Leadership:** Each assessment theme has an overall lead who coordinates across all four years
- **Multi-disciplinary Teams:** Assessment teams combine staff with practitioner experience and those with more academic or research focus.
- **Detailed Rubrics:** Comprehensive marking criteria provided to students upfront
- Strategic Staff Allocation: Overall theme leads typically don't mark but act as moderators
- **Templates and Guidelines:** Structured templates help students focus on content rather than format
- **Reference Source Handbook:** Curated guide to professional-standard reference sources

Theme leadership: The assessment theme leads play a crucial coordinating role to over-see the design and delivery across the four-year program. As Alice explains, "they are there to make sure that content and what's expected of the students is appropriate to the level of the students." Importantly, these leads step back from direct marking to act as moderators, providing "a fresh set of eyes" for quality assurance. The value of this role became particularly evident when comparing assessments across years: "This is the first year that we've had final years on the new program and the formulary equivalent coursework for final year... it is easier than the third year one, so we know that the third year one is pushing them a bit too far," notes Alice. This oversight allows for continuous refinement of assessment difficulty and ensures appropriate progression through the program.

Multidisciplinary teams: "It's really important for us that we have scientists but also those involved in clinical practice involved. I created multidisciplinary teams, so we have a team for each topic. Alice added "It's allowed us to marry up those two things to create a more streamlined programme and also then to sort of iron out any issues that we've had with the coursework."

Assessment Design

The assessment structure combines credit-bearing coursework with pass/fail professional elements:

Main assessment design:

- **Three themed assignments each year:** Each aligned to one of the three themes. The themes spiral up through the years, building in complexity while maintaining consistent core focus
- **Templates and page limits ensure focused responses:** Structured templates drawn from professional practice help prevent students from "going down rabbit holes" while ensuring workplace relevance. "We said this is a six page document, you don't go over the six pages. I think that's really helped focus content," explains Alice
- **Detailed rubrics provided at coursework introduction:** Students can see exactly what's expected to achieve each grade level from the start
- **Electronic submission and marking using Canvas including consistent submission dates (all coursework due Fridays at 1pm):** "That saves us the stress of students trying to submit on a Sunday night... looking for IT support on a Sunday afternoon"
- **Reference sources handbook:** Key scientific sources for the main subject concepts to move students away from citing pages such as wikipedia.

Professional Assessments (Pass/Fail):

- Professional portfolio
- Pharmaceutical law and ethics MCQs
- Pharmaceutical calculations
- Pharmacy skills assessments (OSCE-style)
- Capstone end-of-year examinations (MCQ and short answer)

Professional portfolio: "Everyone in every year has a professional portfolio to maintain, which draws on experiences that they've had throughout the year... It mimics what we actually do in real life practice."

Reference sources handbook: The handbook signposts students to appropriate professional resources for different types of information, from drug structures to pregnancy guidelines (Table 1). "A couple of us created a booklet. And that has all of the reference sources that we think they will need across the four years in it," explains Alice. Available both as an interactive Sway document and PDF, supported by workshops and practical exercises, its impact has been significant: "I've been marking some courseworks and definitely the quality of references that they're using has vastly improved... they are using proper scientific sources and I think that's really something to be quite proud of."
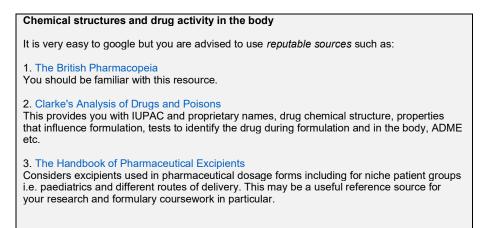
Chemical structures and drug activity in the body   It is very easy to google but you are advised to use *reputable sources* such as: 1. The British Pharmacopeia   You should be familiar with this resource.   2. Clarke's Analysis of Drugs and Poisons   This provides you with IUPAC and proprietary names, drug chemical structure, properties that influence formulation, tests to identify the drug during formulation and in the body, ADME etc.   3. The Handbook of Pharmaceutical Excipients   Considers excipients used in pharmaceutical dosage forms including for niche patient groups i.e. paediatrics and different routes of delivery. This may be a useful reference source for your research and formulary coursework in particular.

Table 1. A short extract from the handbook to illustrate the type of information included.

Capstone end-of-year examinations and AI: The program includes end-of-year examinations that serve as capstone assessments to validate learning across the year. As Alice explains: "They have a multiple choice paper and then they have a short answer paper as well, and that covers the content from both semesters." Both examinations are conducted online but in-campus under invigilation, with the design intentionally mirroring the future General Pharmaceutical Council registration exams that students will take after graduation: "It reflects the style of the general pharmaceutical exam... so they're sort of geared towards that from the beginning." MCQs are valued for their ability to test foundational knowledge - "they're very good at testing do you know it or do you not?" While some programs might worry about AI's impact on assessment integrity, the design of these examinations - combining invigilated on-campus delivery, professional registration exam format, and integration with year-round coursework and practical assessments - creates a robust approach to maintaining assessment security.

Feedback Design

Multiple feedback channels ensure comprehensive student support:

Pre-Submission:

- **Introduction sessions for each coursework:** Live sessions where coursework leads introduce content expectations and requirements, taking either lecture or workshop format depending on the year and coursework type
- **Online drop-in sessions:** Scheduled virtual support sessions supplemented with Vevox or a Canvas discussion board where students can ask specific questions about their work
- **Workshop support where needed:** Additional targeted sessions such as EndNote training for third-year students preparing for research projects

Post-Submission:

- Generic class feedback before marks release
- Individual detailed feedback via rubric
- In-text comments on submissions
- Optional individual feedback sessions
- Integration with personal tutoring process for development planning

Rubric design: "The students are provided with the rubric at the beginning when they're introduced to the coursework, and it's very descriptive," notes Alice. "If they look at the rubric, they can see where they sit on that and what's expected to achieve a particular mark."

Tutorials, feedback and feedforward : The assessment structure deliberately connects with the personal tutoring system to support ongoing student development. As Alice explains: "At the beginning of each year as part of the portfolio preparation, they have workshops and they have to identify their learning needs for the semester. Those are reviewed and discussed with the personal tutors." This integration is particularly important as it creates opportunities for students to reflect on their assessment feedback and plan their development. "At this time of year (January), they do an interim reflection on their learning needs, and they may generate new ones, or they may decide that they want to continue with the ones that they've developed in September," notes Alice. The process culminates with end-of-year reflection where students consider their progress and future development needs.

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improved… they are using proper scientific sources and I think that's really something to be quite proud of."

Impact and Outcomes

The assessment approach has achieved several positive outcomes:

- External examiner praise for rubric usage and marking consistency
- Improved quality of student reference sources
- Better workload management across the teaching team
- Maintained standards across a large program
- Enhanced coordination between academic and practitioner staff
- Improve scientific reference sources

Transferability

While developed for pharmacy education, the core principles could be adapted for other professional programs:

- Thematic assessment structure
- Strategic team organization
- Comprehensive rubric design
- Reference resource guidance
- Multiple feedback channels
- Professional skills integration
- Stronger link between tutorials and feedback