Vital Role of the Information Technology Team in Delivering and Implementing Skills Lab Assessments

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INTRODUCTION

The four-year, integrated PharmD curriculum at the University of Houston College of Pharmacy (UHCOP) incorporates skills lab assessments to achieve key learning outcomes. These assessments include competency check-offs, objective structured clinical examinations (OSCEs), and written exams, engaging approximately 105-120 learners per cohort.
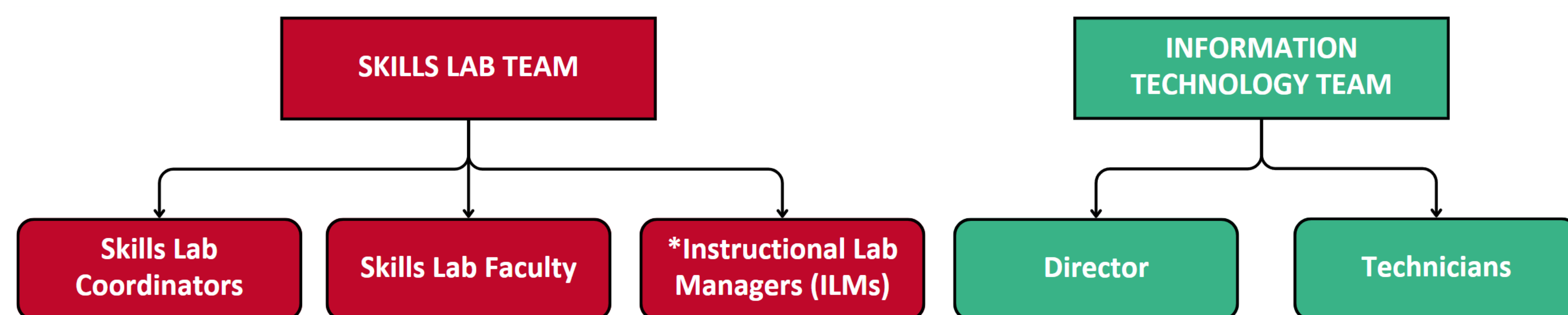
Pharmacy Care Lab
65 workstations, and a mock pharmacy

OSCE Suites
9 enclosed rooms and an IT control room

Sterile Compounding Lab
16 hoods with cleanroom and anteroom

PURPOSE

This poster highlights the crucial role of the Information Technology (IT) team and the collaborative, team-based approach that facilitate the development and implementation of skills lab assessments.

SKILLS LAB TEAM
- Skills Lab Coordinators
- Skills Lab Faculty
- *Instructional Lab Managers (ILMs)

INFORMATION TECHNOLOGY TEAM
- Director
- Technicians

*Instructional Lab Managers are registered pharmacy technicians by the Texas State Board of Pharmacy with extensive experience in various settings of pharmacy practice.

CONCLUSION

In our integrated PharmD curriculum, skills lab assessments continue to play an instrumental role in evaluating and achieving learning outcomes. The IT team provides optimal guidance to enhance each assessment experience for every learner.

The collaborative efforts between the IT team and the Skills Lab team have resulted in:
- ✓ More time for faculty to dedicate towards creating content, developing rubrics, and creating training materials for standardized patients and evaluators
- ✓ Simultaneous offerings of various assessment types
- ✓ Synchronous and asynchronous grading
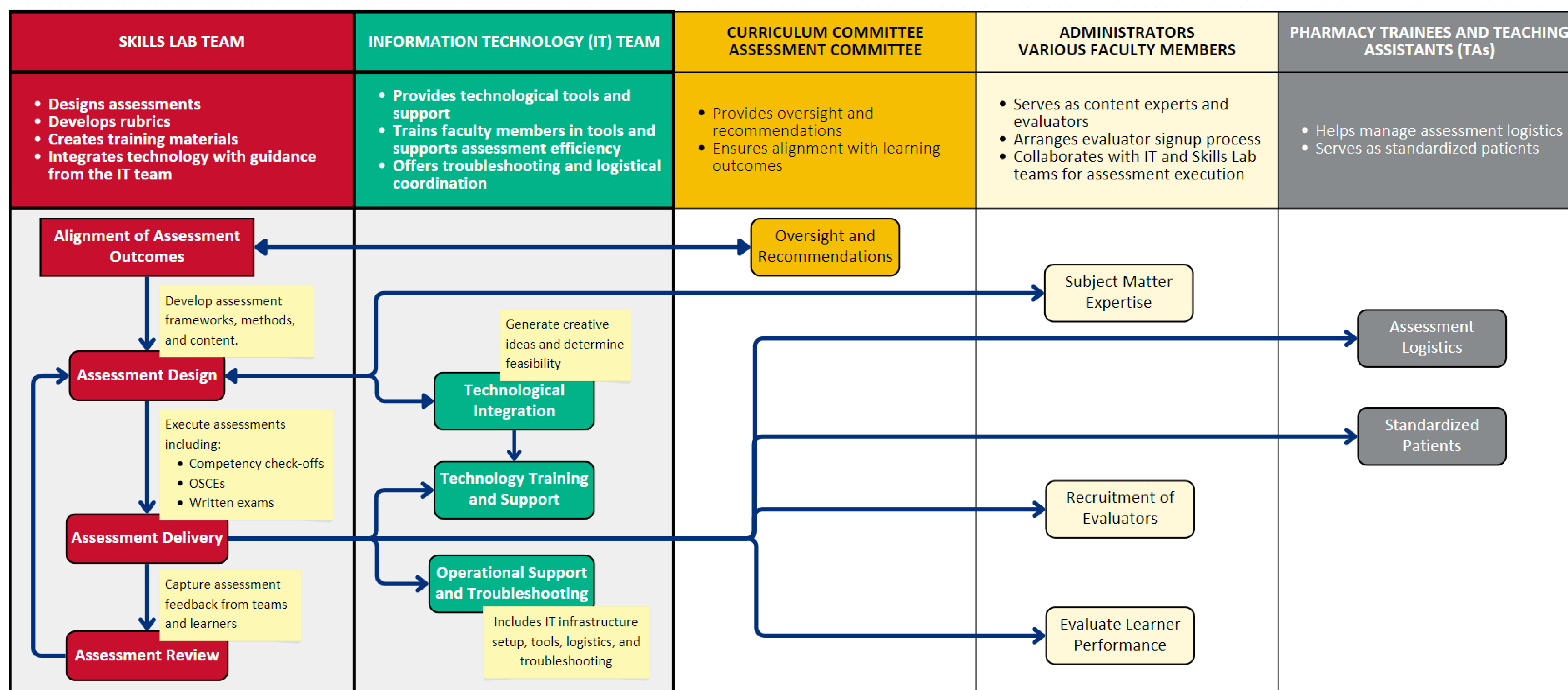- ✓ Efficient grading turnaround time

ACKNOWLEDGEMENTS

IT team, Skills Lab team faculty, ILMs, Curriculum Committee, Assessment Committee, faculty members that serve as content experts and evaluators, pharmacy trainees, teaching assistants, and administrators at the University of Houston College of Pharmacy.

COLLABORATIVE APPROACH

Designing and implementing skills lab assessments at UHCOP is a collaborative effort involving the Skills Lab team, IT team, Curriculum and Assessment Committees, faculty members, pharmacy trainees (residents, fellows, P4 student pharmacists), and teaching assistants (TAs). This teamwork ensures effective integration of technology, enhancing hands-on and simulated learning experiences for students.

Figure 1. Diagram Depicting Teams and Responsibilities

SKILLS LAB TEAM	INFORMATION TECHNOLOGY (IT) TEAM	CURRICULUM COMMITTEE ASSESSMENT COMMITTEE	ADMINISTRATORS VARIOUS FACULTY MEMBERS	PHARMACY TRAINEES AND TEACHING ASSISTANTS (TAs)
• Designs assessments • Develops rubrics • Creates training materials • Integrates technology with guidance from the IT team	• Provides technological tools and support • Trains faculty members in tools and supports assessment efficiency • Offers troubleshooting and logistical coordination	• Provides oversight and recommendations • Ensures alignment with learning outcomes	• Serves as content experts and evaluators • Arranges evaluator signup process • Collaborates with IT and Skills Lab teams for assessment execution	• Helps manage assessment logistics • Serves as standardized patients

Alignment of Assessment Outcomes → Develop assessment frameworks, methods, and content. → Assessment Design → Execute assessments including: Competency check-offs, OSCEs, Written exams → Assessment Delivery → Capture assessment feedback from teams and learners → Assessment Review

Generate creative ideas and determine feasibility → Technological Integration → Technology Training and Support → Operational Support and Troubleshooting → Includes IT infrastructure setup, tools, logistics, and troubleshooting

Oversight and Recommendations — Subject Matter Expertise — Assessment Logistics — Standardized Patients — Recruitment of Evaluators — Evaluate Learner Performance

TECHNOLOGICAL INTEGRATION IN ASSESSMENT DELIVERY

Technological tools play a pivotal role in delivering over 25 skills-based assessments annually across the P1 - P3 cohorts at UHCOP. Different combination of these tools are utilized for various competency check-offs, Objective Structured Clinical Exams (OSCEs), and written exams. The IT team provides technical guidance in selecting technological tools, training faculty in their use, and offering ongoing support to troubleshoot and resolve technical issues during assessments.

Below are examples of skills-based assessments requiring technology at UHCOP. For a more comprehensive overview of core skills assessment at UHCOP, please scan the QR code.

COMPETENCY
Immunizations
Fingerstick blood glucose

OSCE
Patient counseling
Admission medication history

WRITTEN
Case-based calculations
Care plan documentation

Table 1: Support and Integration of Tools by the IT Team in Skills Lab Assessments

	Tool	Examples of IT Team's Responsibilities
Information Technology Use of computers and software to store, transmit, and manage information.	ExamSoft® by Turnitin	❑ Collaborate with Faculty on rubric/assessment design ❑ Provide technical guidance for setting up rubrics and grader assignment. ❑ Ensure session meets assessment requirements.
	EHRGo®	❑ Configure and troubleshoot simulated EMRs for accuracy and functionality. ❑ Customize EMR setups according to assessment needs.
	UpToDate® Lexidrug™	❑ Assist in configuring desktop setups in the Care Lab for optimal use.
	Canvas®	❑ Integrate and maintain learning modules in the LMS for assessment purposes.
Instructional Technology Use of tools and pedagogical strategies to create, develop, support, evaluate, and deliver instructional programs or instruction.	SimulationiQ™	❑ Manage logistics and recording setup for OSCE sessions. ❑ Coordinate with faculty on session planning. ❑ Ensure seamless recording and playback of sessions.
	ConnectWise®	❑ Provide remote technical support for software and hardware issues. ❑ Troubleshoot connectivity problems during assessments.
	PowerShell®	❑ Develop scripts to automate desktop setups for efficiency. ❑ Ensure uniform setup across multiple workstations in assessment labs.