Coaching with Calibrate

AQUIFER CALIBRATE

*Transformative assessments
for clinical learning mastery*

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WELCOME!

Becoming an effective clinician is more than just knowing a collection of facts. Clinicians in training must be able to integrate the information they've acquired and apply that knowledge to novel situations to make decisions about workup, diagnosis, and management. This is particularly true given how rapidly medical knowledge is changing. This rapid pace of change necessitates adaptability as a critical skill for clinical practice. Clinicians must continuously adapt to emerging disorders, treatments, and technologies. This is sometimes called adaptive expertise—the ability to apply foundational knowledge to efficiently solve everyday problems while innovating solutions to new challenges.

In the health professions literature, the Master Adaptive Learner approach is identified as a framework for achieving adaptive expertise. A Master Adaptive Learner is a clinician who continuously engages in metacognitive learning. This means they're not just learning—they're constantly thinking about how they learn, which enables them to adapt and enhance their clinical expertise over time. Master Adaptive Learners are adept at identifying their strengths and weaknesses and adjusting their approach to learning accordingly. Master Adaptive Learners adapt to new information and integrate it into their existing knowledge base. Master Adaptive Learners actively seek out feedback and use it to improve their performance. Despite an increased focus on developing Master Adaptive Learners, recent studies have concluded that only a minority of medical residents have adaptive expertise. At Aquifer, we believe that one way to address this need is to ensure that every student has a learning coach. With access to high-quality, low-stakes formative assessment information, as provided by Calibrate, learners can better self-assess. This, in turn, enriches the coaching process, increasing its impact and effectiveness in developing Master Adaptive Learners.

How Does Coaching Support Master Adaptive Learners?

Coaching can support a student in developing adaptive expertise by providing guidance and feedback on their learning process, helping them to identify areas of strength and weakness, and setting goals for improvement. Coaches can also help students to develop metacognitive strategies, such as self-regulation and self-reflection, which are essential for adaptive expertise. Additionally, coaches can provide students with opportunities to practice and apply their skills in real-world contexts, which can help them to develop the ability to adapt to different situations. There is evidence that coaching impacts many of the skills and traits that learners need to engage in the Master Adaptive Learner process (see Appendix A: Impact of Coaching).

What is A Learning Coach?

The role of a learning coach is not to teach the student about a specific subject area but rather to guide students in working through complex material. A good coach with limited medical knowledge on a specific subject can be more effective than a content expert in the field because, in the coaching model, the student is placed in a more active learning role. A learning coach is a thought partner who collaborates with students to help them

realize their fullest potential. Learning coaches should offer a depth of understanding, a set of tools, motivation, and accountability to assist you in transitioning from your current state to your desired goals. In the medical literature, a learning coach is described as helping to facilitate learners in achieving their maximum potential by evaluating performance through objective assessments, assisting learners in identifying needs and creating plans to address them, and helping learners maintain accountability. Learning coaches support student self-monitoring, guide learning strategies, and foster accountability.

In contrast, learning coaches prioritize a cooperative relationship with students. Rather than giving directives, they focus on helping students efficiently and effectively identify their own strengths and performance gaps, enhance the quality of their personal goals, and optimize learning strategies chosen to achieve those goals. Structured conversations with a learning coach, for example, can help students reflect on their progress, identify areas for improvement, and develop personalized learning strategies. The objective is for students to develop the skills and competencies necessary to engage in the Master Adaptive Learner process without support and to recognize the value of adaptive expertise.

What Distinguishes Learning Coaching from Mentoring and Advising?

Coaching, mentoring, and advising are all forms of professional support that health professions students encounter during their training. However, each has distinct goals and approaches.

Coaching aims to help students enhance their performance in specific areas, such as academic competency or clinical skills. A learning coach collaborates with students to set goals, develop learning strategies, and foster accountability, ultimately aiding them in achieving their objectives. In health professions education, coaching may involve working with students on particular skills or techniques related to patient care, such as physical examinations or patient communication. Learning coaches strive to evoke awareness by posing clarifying questions or prompting students to examine their assumptions. Learning coaches facilitate learning growth by encouraging students to adopt appropriate strategies to address their gaps. Finally, learning coaches foster accountability by stimulating the student to develop timelines and have an accountability plan.

Mentoring typically involves a long-term relationship where a mentor (an experienced individual) imparts their knowledge, skills, and experience to the mentee. The mentor offers guidance, advice, and support to help the mentee navigate their career or personal development. In health professions education, mentoring usually pairs students with more experienced physicians, residents, PAs, or nurse practitioners who can provide guidance and support as students progress through the educational system and begin clinical training. Mentors may offer advice on career development, networking, and other professional matters, as well as provide support and encouragement.

Advising is a form of guidance or consultation provided by an expert or professional. Advisors supply information, answer questions, and present recommendations to help individuals make informed decisions about specific topics or situations. In health professions education, advising is typically conducted by academic advisors, educators, or

administrators (e.g., deans, program directors). Advisors assist students in navigating the curriculum, offering information about electives, identifying research opportunities, and preparing for post-graduation steps.

Coaching Competencies

At Aquifer, we have identified six competencies that learning coaches should strive to develop. These coaching competencies have been informed by the International Coaching Federation (ICF) and competencies identified in the medical education literature.   The Aquifer Coaching Competencies:

- Establishing a trusting relationship with each student by creating a safe, supportive environment of mutual respect.
- Demonstrating communication skills that encourage and empower students, including active listening and effective questioning techniques.
- Encouraging students to identify new learning opportunities by applying the concepts from the Master Adaptive Learner framework.
- Implementing strategies to ensure student accountability and attention to what is important for the student.
- Demonstrating professional conduct and serving as role models in the coaching process.
- Engaging in continuous improvement by identifying knowledge or skills gaps and seeking opportunities to fill them.

Aquifer Coaching Competencies (Appendix B) provides a detailed description of each competency. These competencies are useful for defining the knowledge and skills that learning coaches demonstrate under ideal circumstances. However, most learning coaches will be educators that have not completed a coaching course and have not mastered these competencies. To ensure inexperienced learning coaches can leverage Aquifer's Coaching Competencies with limited experience, Aquifer has developed a simplified coaching model.

Anyone Can Coach!

Aquifer created the "Anyone Can Coach!" model to simplify the skills and competencies of effective coaching. Anyone Can Coach! is an academic coaching program that equips educators at all levels with the basic knowledge and tools needed to apply a coaching mindset with students. Anyone Can Coach! is a streamlined three-phase approach that makes coaching accessible and effective. The three phases are Evoke Awareness, Facilitate Growth and Foster Accountability.

Evoke Awareness: Learning coaches employ active listening and powerful questioning to facilitate reflection, enabling learners to develop self-awareness about their strengths, weaknesses, and goals. A learner-centered space is created, fostering trust and openness. By utilizing powerful questions and reflective statements across five categories (Prompting, Clarifying, Reflective Statements, Interrogating Assumptions, and General Evocative Questions), coaches help learners gain insights and shift their focus from problems to solutions, ultimately improving decision-making, communication, and relationships. Questions to evoke awareness (Appendix C) include helpful prompts for engaging in a coaching conversation.

Facilitate Growth: Learning coaches collaborate with students to prioritize focus areas,

create learning plans, and set achievable goals. They guide learners in identifying and building upon effective learning strategies, establishing evaluation criteria, anticipating the impact of various approaches, and refining their learning methods. Learning coaches stay updated with evidence-based strategies to optimize learning experiences, supporting learners in making informed decisions about their personal growth and enhancing their success. Questions to Facilitate Growth (Appendix D) has a list of questions you can use to encourage students to reflect on the strategies they are using to learn. Effective Learning Strategies (Appendix E) is a list of learning strategies supported by learning science that can be shared with students.

Foster Accountability: Learning coaches support students by implementing six key principles: establishing clear timelines, encouraging learner-led accountability, offering support without overstepping, scheduling regular check-ins, celebrating successes and learning from failures, and maintaining a balance between support and challenge. By applying these principles, coaches help learners develop self-reliance, resilience, and adaptability, ultimately empowering them to self-coach and achieve their goals. Foster Accountability - Principles (Appendix F) has a more extensive description of the principles.

Anyone Can Coach! Right Now (Seriously)

Aquifer has created a coaching script to scaffold the process. The script translates the Anyone Can Coach! model into a turnkey tool that can be used immediately. An educator that wants to implement the Anyone Can Coach! model uses the script with the student note-taking template (on the following pages). The learning coach reads the introduction, selects a question to start the process, and follows along as the student talks. The learning coach chooses questions or reflective statements to prompt the student. As the learning coach develops confidence and gains experience, the Anyone Can Coach! model can be applied more fluidly. Once the learning coach has used the script, they may want to turn to the appendices with more questions to enhance their effectiveness.

Aquifer encourages learning coaches to evaluate their own practices using a self-assessment aligned with the Anyone Can Coach! Model (Appendix G: Learning Coach Self-Assessment).

Aquifer Calibrate Coaching Script

This is a coaching script and note-taking tool designed to help you apply the principles of coaching with a student that has recently completed an Aquifer Calibrate assessment. The coaching relationship is intended to help students reflect on their progress, develop a learning plan, and provide accountability, which can help students stay motivated and on track with their learning. The goal is for students to become more self-directed by fostering their ability to plan, monitor, and adjust their own learning. We encourage you to follow the script until you develop comfort with coaching.

Introduction

"Welcome to this coaching conversation. The goal of this session is to support you as you plan your learning. This includes prioritizing your current strengths and gaps, identifying reasonable next steps, and agreeing on a plan to hold yourself accountable. Going into this session, my basic assumption is that you want to continue your learning journey. This process is not about grades. Instead, this is a conversation about where you are today, your goals, and your plan to accomplish your goals. Does that seem right to you? (pause for the student to acknowledge). Okay, let's get started.

While we're discussing your goals, I want to empower you to take the lead in developing your own plan. I will ask questions, but mostly I will listen. I will also expect you to take notes. I have a note-taking template that you are welcome to use (share the template). You are not required to use this template, and won't be asked to share it, so it is up to you. If that sounds good, let me start by asking...(move to Section 1: Evoke Awareness.

[1] - Evoking Awareness

Choose one of these questions to start the conversation:

- How would you describe your current goals or aspirations? (Focuses on goals)
- What do you feel are your strengths?
- What do you feel are your most significant areas for improvement?
- Did Calibrate provide any additional insights?

After the student reflects, ask "And what else?" This question opens the door for deeper exploration and additional insights.

Clarify Using One of the Questions Below:

- Would you tell me a little more about...?
- How would you prioritize your goals or objectives related to this situation?

Encourage reflection:

- It sounds like your main point is...
- From your perspective, it appears that...

Help explore assumptions:

- How did you decide (come to that conclusion)...?
- What factors or experiences have influenced your belief or assumption?

**[Transition Question] What are the action steps and learning strategies that will help you progress toward your goals?

[2] - Facilitating Growth

Which learning strategies have been most effective for you in the past?

How can you build on or enhance those strategies?

Are you open to exploring evidence-based learning strategies to optimize your learning experience (have the Learning Strategies Handout)?

[3] - Fostering Accountability

What steps will you take to hold yourself accountable for this plan?

Note-Taking Space

Student Note-Taking Template

This template is for you to use to capture important notes and support the development of a learning plan.

Notes

Use this note-taking space to capture the things that come to mind for you. Strengths, gaps, and goals.

Consider which goals are most important for you to focus on.

In the next section, you will name action steps to achieve your priority goal. Consider small steps that can get you there.

Student note-taking space.

Action Step	By when?	Resources Needed
Action Step	By when?	Resources Needed
Action Step	By when?	Resources Needed

Accountability

What steps will you take to hold yourself accountable for this plan?

How can your coach help?

What is your plan for holding yourself accountable?

Final Notes

When will you schedule the next meeting by (if needed)?

Plan for meeting again. Who will schedule and when will we meet?

Using the Aquifer Calibrate Coaching Script

As a coach, at the beginning of the conversation you want to **prompt** the student to solicit their learning goals. In the note-taking portion of the script, write down as many goals as they state. The way you do this is to ask them what they **WANT** to focus on. Then, keep asking "what else?"

If they struggle to come up with anything, you can use the Calibrate-specific questions to prompt their analysis.

During Phase 2, the coach is asking the student to prioritize and develop a plan by asking where they **WANT** to start. The aim is to have the student generate a list of action steps and ask, "by when?" The note-taking template on the next page has lines for collecting action steps, dates, and related resources.

Aquifer Calibrate Coaching Script

This is a coaching script and note-taking tool designed to help you apply the principles of coaching with a student that has recently completed an Aquifer Calibrate assessment. The coaching relationship is intended to help students reflect on their progress, develop a learning plan, and provide accountability, which can help students stay motivated and on track with their learning. The goal is for students to become more self-directed by fostering their ability to plan, monitor, and adjust their own learning. We encourage you to follow the script until you develop comfort with coaching.

Introduction

Welcome to this coaching conversation. The goal of this session is to support you as you plan your learning. This includes prioritizing your current strengths and gaps, identifying reasonable next steps, and agreeing on a plan to hold yourself accountable. Going into this session, my basic assumption is that you want to continue your learning journey in this coaching session. This session is not about grades. Instead, this is a conversation about where you are today, your goals, and your plan to accomplish your goals. Does that seem right to you? Okay, then, let's get started.

While we're discussing your goals, I'll be taking some brief notes to help guide our conversation. However, I want to empower you to take the lead in developing your own plan. I can share a template that we can use together during our discussion to help you structure your thoughts and ideas (SHARE the student template).

[1] - Evoking Awareness

Choose one of these questions to start the conversation:

- How would you describe your current goals or aspirations? (Focuses on goals)
- What do you feel are your strengths?
- What do you feel are your most significant areas for improvement?
- Did Calibrate provide any additional insights?

After the student reflects, ask "And what else?" This question opens the door for deeper exploration and additional insights.

Clarify Using One of the Questions Below:

- Would you tell me a little more about...?
- How would you prioritize your goals or objectives related to this situation?

Encourage reflection:

- It sounds like your main point is...
- From your perspective, it appears that...

Help explore assumptions:

- How did you decide (come to that conclusion)...?
- What factors or experiences have influenced your belief or assumption?

**What are the action steps and learning strategies that will help you progress toward your goals? [Transition Question]

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[2] - Facilitating Growth

Which learning strategies have been most effective for you in the past?

How can you build on or enhance those strategies?

Are you open to exploring evidence-based learning strategies to optimize your learning experience (have the Learn Strategies Handout)?

[3] - Fostering Accountability

What steps will you take to hold yourself accountable for this plan?

What challenges do you anticipate?

How can I help?

Note-Taking Space

Using the Aquifer Student Note-Taking Template

A coach can encourage the student to have a plan to hold themselves accountable. Saying this out loud can make a significant difference in whether the student follows through. The coach also asks how they can help. Leaving it to the student to decide.

Close the coaching session by asking whether you are meeting again. This may be decided in advance. If you are not planning to meet again, you can close the session by asking, "how would you like to close this session?" Leave this open-ended and up to them to decide.

Student Note-Taking Template

This template is for you to use to capture important notes and support the development of a learning plan.

Notes

Use this note-taking space to capture the things that come to mind for you. Strengths, gaps, and goals.

Consider which goals are most important for you to focus on.

In the next section, you will name action steps to achieve your priority goal. Consider small steps that can get you there.

Student note-taking space.

Action Step	By when?	Resources Needed
Action Step	By when?	Resources Needed
Action Step	By when?	Resources Needed

Accountability

What steps will you take to hold yourself accountable for this plan?

How can your coach help?

What is your plan for holding yourself accountable?

Final Notes

When will you schedule the next meeting by (if needed)?

Plan for meeting again. Who will schedule and when will we meet?

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Appendix A: Impact of Coaching

Curiosity

Curiosity has been described curiosity as the "urge to investigate, to discover." (Cutrer 2018). It is the desire to understand more. Students who demonstrate curiosity are "less likely to accept what they are told uncritically, enjoy asking questions, and are more willing to reveal their questions and uncertainties in public". One study found (Richards et al. 2013) that medical students with high levels of curiosity tend to utilize "deep" learning strategies that promote understanding rather than "surface" learning strategies that rely on memorization.

The good news is that there is some evidence that coaching in health professions education may improve behaviors associated with curiosity, including reflective practice (Konings et. al. 2016)

Resilience

Coaching has been found to have a positive impact on coping skills, including adaptive coping strategies, stress management, and, importantly, resilience. Grant (et. al. 2009) found that coaching enhanced goal attainment, increased resilience and workplace well-being, and reduced depression and stress. They also found that participants in their coaching program found coaching helped increase self-confidence and personal insight, build their management skills, and helped them deal with organizational change. All these attributes are essential to student resilience.

Motivation

It seems unlikely that coaching alone can cause a student to be more motivated, but there is evidence that coaching impacts some of the important conditions that do improve motivation.

A meta-analysis of coaching showed that coaching has impacts on well-being, coping, work attitudes, and goal-directed self-regulation behavior. And, the most significant impact was on goal-directed self-directed behavior. Another recent meta-analysis (Wang et. al. 2021) supports the findings of Theeboom (et. al. 2014), finding that coaching improved goal attainment and self-efficacy.

Mindset

A meta-analysis by Wang found that coaching approaches facilitated effective work-related outcomes, particularly on goal attainment   While this finding does not directly note whether coaching has resulted in an increase in growth mindset during coaching, outcomes related to goal attainment are a positive sign for the potential impact. If coaching increases goal-attainment, and self-efficacy, it is likely to have a positive reinforcing impact on growth mindset attainment.

If your investment in hard work and embrace of productive struggle results in goal-attainment, then the growth mindset will increase.

Appendix A: Impact of Coaching

Metacognition

Coaching has been found to have a positive impact on goal-directed self-regulation, including goal setting, planning, and self-monitoring. The evidence suggests that coaching can help individuals to develop greater self-awareness and self-directed learning skills and to achieve their learning and development goals more effectively.

"Coaching enhances organizational effectiveness through its potentially beneficial effect on employees' goal-directed self-regulation." (Theeboom et. al. 2014)

Performance

Being coached has been found to have a positive impact on a range of performance and skills-related outcomes, including job performance, leadership skills, communication skills, problem-solving skills, and decision-making skills. The evidence suggests that being coached can be an effective tool for promoting the acquisition and refinement of key competencies and skills.

"There is strong evidence that coaching for skill development works in medical training. Specifically, the evidence is derived from surgical procedure skills (Gagnon, L. and Abbasi 2018, Lovell 2018)."

ID At-Risk

In the study by Régo et al. (2009), the coaching program was designed to provide medical students with regular, one-on-one coaching from experienced clinicians. The coaching sessions were structured and focused on the development of clinical skills and professional behaviors. Feedback was based on the coaches' observations of the student's performance in the clinical setting, and was used to identify areas of strength and weakness in the students' performance. Through this process of ongoing feedback and assessment, the coaches identified students who were at risk of poor performance or who were struggling to meet the required standards for clinical skills and behaviors.

Well-Being

Coaching has been found to have a positive impact on a range of well-being outcomes, including job satisfaction, emotional well-being, stress reduction, and work-life balance. A recent study of coaching in the 3rd year of a medical school found, There was a significant effect of coaching on perceived stress; a trend toward significant effect of coaching on anxiety.

"Coaching holds promise as an intervention offered to medical students to reduce stress and anxiety, and provide positive support for students, preparing them for their professional futures." (Ross et. al. 2021)

Appendix B: Aquifer Coaching Competencies

The coaching competencies below are based on the International Coaching Federation (ICF) core competencies for certified professional coaches (ICF 2019) and are informed by the competencies for medical education (Wolff et. al. 2021). The goal is to describe a core set of competencies that coaches would strive for while providing academic coaching to students during the Aquifer Calibrate pilot. Coaching in medical education aims to support the development of self-directed students and clinicians with the goal of gaining adaptive expertise (Cutrer et. al. 2018). In academic coaching, the learner leads the way, and the goal is improved self-assessment, high-quality goal-setting, and co-creation of a process that includes accountability and results in improvement.

Establishes a Relationship

Coaches demonstrate practices necessary for developing and maintaining successful, longitudinal coaching relationships with each of their learners (or students).

Relationship:

- Establish a trusting relationship with each student by creating a safe, supportive environment of mutual respect.
- Continuously demonstrate personal integrity, honesty, and sincerity.
- Establish and adhere to agreements regarding interactions with the student (e.g., roles and responsibilities, meeting dates).
- Show genuine concern for the student's welfare and future success.
- Demonstrate respect for students' backgrounds, perceptions, and personal well-being.
- Provide ongoing support for and champion new behaviors and actions, including those involving risk-taking and fear of failure.

Communicates Effectively

Coaches demonstrate communication skills that encourage and empower students.

Active Listening or Mindful Listening: Focus on what the student is saying and is not saying, understand the meaning of what is said in the context of the student's desires and support student empowerment.

- The student sets the agenda. The student decides what is important.
- Hears the student's concerns, goals, values, and beliefs about their experiences and self-assessment without judgment.
- Summarizes, paraphrases, reiterates and mirrors back what the student has said to ensure clarity and understanding and build the coaching alliance.
- Integrates and builds on student ideas and suggestions helping them "bottom-line" issues.

Questioning: Ability to ask questions that reveal the information needed

for maximum benefit to the coaching relationship and the student.

- Asks questions that reflect active listening and understanding of the student's perspective.
- Asks questions that evoke discovery, insight, commitment, or action (e.g., those that challenge the student's assumptions).
- Asks open-ended questions that create greater clarity, possibility, or new learning.
- Asks 'strengths-based' or appreciative inquiry questions to help students identify hidden assets or opportunities.
- Asks questions that help the student move toward a plan to address perceived challenges.

Facilitates New Learning

Coaches demonstrate the ability to lead students to new learning opportunities by applying the concepts from the Master Adaptive Learner framework (planning, learning, assessing, adjusting).

Planning - Ability to develop and maintain an effective growth plan with the student based on student knowledge and clinical competence gaps.

- Ensures the student uses multiple data points for self-assessment of knowledge and clinical competence (e.g., Calibrate formative assessment results, clerkship feedback).
- Supports the process of development of goals with the student that address concerns and major areas for learning and development.
- Co-creates with the student a plan with attainable, measurable, specific results, and target dates.

Learning - Ability to support and guide the learner to find appropriate learning resources.

- Supports the student in identifying and accessing different resources for learning (e.g., Aquifer cases, tools, articles, clinical options).

Assessing and Adjusting

- Encourages plan adjustments as warranted by reviewing the process and outcomes.
- Ensures that the student identifies early successes that are important to the student to build momentum.

Fosters Accountability

Coaches demonstrate strategies to ensure student accountability

Managing Progress and Accountability—Ability to hold attention to what is important for the student and leave responsibility with the student to take action. For example, apply the concept of a 'confidence rule' by asking a student to restate their goals and affirm their ability to achieve them, their confidence and accountability are increased.

Demonstrates Professionalism

Coaches demonstrate professional conduct and serve as role models by participating actively in coaching sessions and demonstrating accountability by managing absences by planning coverage and communicating clearly with students.

Engages in Continuous Improvement
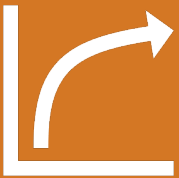
Coaches are curious in the face of uncertainty or ambiguity, identify their knowledge or skills gaps, seek opportunities to fill those gaps, set personal improvement goals, stay updated on resources that students use, attend professional development, and reflect on feedback to improve practice.

Appendix C: Questions to Evoke Awareness

The first step in effective coaching is developing the ability to Evoke Awareness. This tool will support you as you guide your coachees or learners through gaining insight into their strengths, challenges, and goals. Choose 1-2 questions from each category, as listed below. For example, you can ask a Prompting question, followed by a Clarifying Question, followed by a question to Interrogate an Assumption. The five categories are:

- **Prompting Questions**: Establish rapport with the learner, and set the stage for meaningful self-reflection and dialogue.
- **Clarifying Questions**: Encourage learners to provide more detail and context, allowing them to explore their thoughts and feelings more deeply.
- **Reflective Statements**: Convey that you are actively listening and allow the learner to confirm your understanding or offer additional insights.
- **Interrogating Assumptions**: Challenge your learner to reflect on underlying assumptions that influence their beliefs, perspectives, and actions. Foster critical thinking and self-awareness
- **General Evocative Questions**: Inspire learners to think creatively and explore new possibilities. Promote personal growth and development.

As you practice using these questions in your coaching sessions, remember that the key to effective coaching lies in your ability to listen actively, empathize, and ask thought-provoking questions that resonate with your learner's unique experiences and goals. When you feel tempted to try to "answer" a question or "tell" your learner how to resolve an issue, remind yourself that to be an effective coach, you must guide your learner toward making their own realizations. Below, you will find each category described in more detail.

Prompting Questions

These questions provide a strong foundation for initiating a coaching conversation. They should help the learner feel comfortable and supported as they share their thoughts, feelings, and aspirations. The five questions below cover important aspects of the learner's goals, strengths, areas for improvement, and expectations for the coaching sessions. Choose at least one question from this category to start your session.

- How would you describe your current goals or aspirations? (Focuses on goals)
- What do you feel are your most significant strengths and areas for improvement? (Encourages self-assessment)
- Based on your recent clinical and academic experiences, what are you noticing regarding your academic strengths (and opportunities)? (Connects to real-world experiences)
- What would you like to achieve through our coaching sessions? (Sets expectations)
- And what else? (Opens the door for deeper exploration and additional insights)

Clarifying Questions

These questions are intended to provide a good balance of encouraging the learner to provide more context, explain their thoughts more deeply, identify the core issue they're facing, and consider their priorities. These questions offer a foundation for understanding the learner's perspective and guiding them toward deeper reflection and personal growth.

- Would you tell me a little more about...? (This question allows the learner to provide more context and details on a specific topic or issue they are discussing.)
- It helps me understand if you'd give me an example of....(By asking for an example, the coach can better grasp the learner's perspective while the learner gains a clearer understanding of their own thoughts and feelings.)
- Tell me what you mean when you...(This question ensures that the coach and learner share a common understanding of the terms used during the conversation, reducing the risk of miscommunication or confusion.)
- What's the real challenge for you here? (This question encourages the learner to reflect on their situation, pinpoint the most pressing concern, and explore the underlying factors contributing to the challenge.)
- How would you prioritize your goals or objectives related to this situation? (By asking the learner to prioritize their goals or objectives, this question helps them focus on what is most important, develop a clearer sense of direction, and create a roadmap for moving forward.)

Reflective Statements

These reflective statements convey active listening and allow the learner to confirm understanding or offer additional insights. Using these prompts, you can build trust and rapport while ensuring clear communication throughout the coaching conversation.

- So, if I understand correctly, you're saying that...
- In other words, ...
- It sounds like your main point is...
- From your perspective, it appears that...
- To summarize what you've shared, you believe that...

Interrogate Assumptions

These questions prompt learners to examine the basis for their beliefs and assumptions, explore alternative viewpoints, and consider the implications of their thought processes. By asking these questions, you can guide learners toward greater self-awareness and more informed decision-making.

- How did you decide (come to that conclusion)...?
- What factors or experiences have influenced your belief or assumption?
- Are there any alternative explanations or perspectives you might consider?
- Can you identify any potential biases that could be shaping your

Interrogate Assumptions

assumptions?
- What evidence or information would you need to revise or challenge your assumptions?

Evocative Questions

These questions encourage learners to think beyond their immediate circumstances and consider new possibilities, approaches, and opportunities. They foster personal growth, self-discovery, and a proactive mindset in pursuing meaningful goals.

- What would it look like if...?
- If you were to envision your ideal outcome or success in this situation, what would that look like?
- What are some potential obstacles you might encounter along the way, and how could you overcome them?
- What resources, support, or strategies might help you progress toward your goals more effectively?
- What lessons or insights from your past experiences could you apply to your current situation or challenge?

Appendix d: Questions to Facilitate Growth
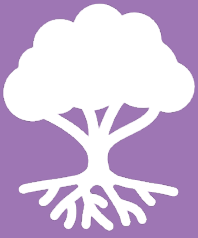
It is important to reinforce study and learning strategies that have been shown to be effective for learning. This reference sheet provides practical tips to help students use effective learning strategies.

Facilitate Growth: These questions encourage students to reflect on their learning strategies, evaluate their progress, and consider implementing new approaches to enhance their learning experiences. By asking these questions, you can support students in becoming more self-aware learners and making more informed decisions about their personal growth.

- Which learning strategies have been most effective for you in the past?
- How can you build on or enhance those strategies?
- How do you evaluate your learning progress and success?
- What kind of impact do you anticipate from implementing [list specific strategy or approach]?
- You've shared several ideas for improving your learning process. How will you determine which one works best for you?
- What steps will you take to test them out?

Appendix E: Effective Learning Strategies

This reference sheet provides practical tips to help students use effective learning strategies during the learning phase.

Plan and Space Your Learning

Create a study plan that spaces your learning over a longer period and incorporates interleaving by alternating between different topics or subjects. This approach has been shown to result in longer-lasting learning and improve retention by enhancing the ability to differentiate between concepts.

Elaborate and Use Concrete Examples

When learning something new, elaborate on the content by explaining how and why it works. Connect your learning to concrete examples from your experience to strengthen your understanding and retention.

Combine Visuals with Words and Self-Explain

Use dual coding by expressing information in words and pictures, such as drawing diagrams and taking notes. As you study, pause periodically to explain the concepts to yourself in your own words, promoting deeper understanding and identifying gaps in your knowledge.

Reinforce by Retrieving and Teaching Others

Practice retrieval by quizzing yourself, writing your own questions, or doing an "Ink Shed" to recall information after learning. Reinforce your understanding by teaching the material to others, which allows you to practice explaining complex ideas and receive feedback.

Here are some learning strategies specifically designed to deepen conceptual knowledge:

Concept Mapping: Create visual representations of the relationships between key concepts and ideas. This process helps organize information, identify connections between concepts, and reveal the underlying structure of the subject matter.

Analogies and Metaphors: Use analogies and metaphors to relate new information to prior knowledge and experiences. These comparisons facilitate the understanding of complex or abstract concepts by making connections to familiar contexts or ideas.

Socratic questioning: Engage in a process of inquiry by asking yourself open-ended, thought-provoking questions about the material. This approach encourages critical thinking, challenges assumptions, and promotes a deeper understanding of the subject.

Compare and contrast: Analyze similarities and differences between concepts, theories, or approaches. This activity promotes a deeper understanding of the nuances and relationships between ideas, as well as the ability to differentiate between them.

Peer discussion and collaboration: Engage in discussions or group activities with peers to explore different perspectives, challenge ideas, and refine your understanding of the material. Collaborative learning provides an opportunity to deepen conceptual knowledge through shared insights and constructive feedback.

Intentional integration: Make a conscious effort to connect new information to prior knowledge across different subjects, experiences, or domains. This integration process fosters a more holistic understanding of the material and strengthens the mental connections between concepts.

Appendix F: Foster Accountability - Principles

In the coaching process, fostering accountability is critical in helping learners achieve their goals. This handout presents six principles to foster accountability among learners. By applying these principles, coaches empower learners to lead, develop self-reliance, and build resilience to overcome challenges and achieve success. Each principle includes a description and a lesson, providing practical guidance for coaches to enhance their coaching practice and maximize the effectiveness of their support.

Principle 1: Establish Clear Timelines

Description: When discussing the next steps in the coaching process, always ask your learner, "By when?" This question prompts them to set specific deadlines for completing their actions or tasks.

Lesson: Establishing clear timelines fosters a sense of agency and commitment, ensuring learners stay on track with their goals. Deadlines provide a measurable way to evaluate progress and promote a proactive mindset in achieving desired outcomes.

Principle 2: Encourage Learner-led Account-ability

Description: After creating an action plan, ask the learner about their accountability plan. This encourages them to take ownership of their progress and devise a system to hold themselves accountable for their actions.

Lesson: By promoting learner-led accountability, you empower individuals to take responsibility for their own growth and development. This approach helps cultivate self-reliance, self-discipline, and a strong sense of personal agency in achieving their objectives.

Principle 3: Offer Support Without Overstepping

Description: As a coach, it is essential to ask, "How can I help?" while being clear that you are not their personal assistant. Your role is to provide guidance and support, but ultimately, the learner must remain empowered to lead the process.

Lesson: Offering appropriate support without overstepping boundaries allows learners to maintain their autonomy and develop their problem-solving and decision-making skills. This approach fosters resilience, self-confidence, and a sense of ownership over their growth and success.

Principle 4: Regular Check-ins and Progress Reviews

Description: Schedule regular check-ins and progress reviews with your learner to discuss their progress, challenges, and successes. This helps maintain momentum and provides opportunities for course correction if needed.

Lesson: Consistent communication and feedback support the learner's ongoing development, reinforce their commitment to the goals, and allow timely adjustments to their action plan.

Appendix F: Foster Accountability - Principles (Continued)

Principle 5: Celebrate Successes and Learn from Set-Backs

Description: Recognize and celebrate the learner's accomplishments, big and small, while encouraging reflection on setbacks or failures as learning opportunities.

Lesson: By celebrating successes and embracing a growth mindset, coaches foster a positive and supportive environment that nurtures the learner's self-confidence, motivation, and resilience in the face of challenges.

Principle 6: Maintain a Balance Between Support and Challenge

Description: As a coach, strive to balance supporting the learner and challenging them to step outside their comfort zone. Encourage them to take calculated risks and push their boundaries to pursue their goals.

Lesson: Finding the right balance between support and challenge helps learners develop their problem-solving skills, resilience, and adaptability while maintaining a safe space for growth and learning.

Appendix G: Learning Coach Self-Assessment

For each question, medical educators can rate themselves on a scale of 1 to 5 (1 being "strongly disagree" and 5 being "strongly agree"). After completing the self-assessment, educators are encouraged to reflect on their scores to identify areas where they excel and areas needing improvement to strengthen their coaching mindset.

Fostering Positive Relationships and Communication

I invest time in understanding and getting to know students personally, fostering an environment where they feel comfortable sharing their challenges and learning from low-stakes assessments.

I consistently exhibit warmth and empathy in my interactions with students, making them feel comfortable and supported.

I know the balance between dominance and collaboration in my coaching approach, and I ensure students are active participants in their learning.

I encourage open communication, allowing students to express their thoughts, feelings, and concerns without fear of judgment.

I ensure that I use effective coaching strategies to build a strong, trusting relationship with students.

Evoke Awareness

I effectively use prompting questions to set the stage for meaningful dialogue.

I ask open-ended questions encouraging my students to reflect on their strengths, weaknesses, and goals.

I am skilled at asking clarifying questions and encouraging students to provide more detail and context, allowing them to explore their thoughts and feelings.

I consistently ask questions that probe or explore assumptions, challenging students to reflect on the underlying factors influencing their beliefs, perspectives, and actions.

I am adept at crafting evocative questions to inspire students to think creatively, explore new possibilities, and promote personal growth and development.

I maintain a balance among different types of questions to create a safe and supportive space for self-reflection, active listening, and powerful questioning.

I use reflective statements strategically to support self-discovery and confirm or correct my understanding of the student's perspective, ensuring we are on the same page and maintaining effective communication.

Facilitate Growth

I help my students identify and build upon their most effective learning strategies.

I help my students set achievable goals that align with their desired outcomes.

I support my students in establishing criteria to evaluate their learning progress and success, fostering a growth mindset.

I guide my students in anticipating the impact of implementing specific strategies or approaches, ensuring they make informed decisions about their personal growth.

I stay up-to-date with evidence-based learning strategies and actively encourage the learners to explore and adopt them to optimize their learning experiences.

I encourage the students to develop new skills and strategies to enhance their learning and performance.

Fostering Positive Relationships and Communication

I consistently help students establish clear timelines for their goals, ensuring they have a structured plan to guide their progress.

I encourage student-led accountability, empowering them to own their growth and learning journey.

I offer support without overstepping, balancing being a helpful resource and allowing students to navigate their challenges independently.

I conduct regular check-ins and progress reviews, discussing students" achievements and areas for improvement while keeping them motivated and on track.

I celebrate students' successes and help them learn from failures, fostering resilience and a growth mindset in their personal and professional development.

I help students establish clear deadlines and accountability plans to keep them on track and motivated.

Aquifer Peer Trainers

Amanda Allmon, MD

Associate Professor, University of Missouri Department of Family and Community Medicine

Megan Biagi, MPAS, PA-C

Technical Skills Director

Assistant Professor, Physician Assistant Studies Program

Department of Family and Community Medicine

Brande Harris, DO, FACP

Associate Director, Education and Evaluation (Acting)

South Texas Veterans Health Care System (STVHCS)

Corinne Lehmann, MD, MEd

Director of Medical Student Education, Clerkship Director, Department of Pediatrics, UC College of Medicine

Director, Family Care Center for HIV infection

Professor, UC Department of Pediatrics

UC Department of Internal Medicine

Cindy Lord, MHS, PA-C

Associate Professor

Center for Medical Education School of Medicine

Case Western Reserve University School of Medicine

Kim Tartaglia, MD

Professor of Medicine – Clinical

Department of Internal Medicine

Ohio State University College of Medicine