

2018-09-06: How Do We Develop the Master Adaptive Learner?

Listed below are resources shared on the chat last night:

- Adaptive expertise in medical education: Accelerating learning trajectories by fostering self-regulated learning <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1485886>
- Fostering the Development of Master Adaptive Learners: A Conceptual Model to Guide Skill Acquisition in Medical Education <https://www.ncbi.nlm.nih.gov/pubmed/27532867>
- The adaptive medical curriculum: A model for continuous improvement <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484896>
- Surpassing Ourselves: An Inquiry Into the Nature and Implications of Expertise <https://www.amazon.com/Surpassing-Ourselves-Inquiry-Implications-Expertise/dp/0812692055>
- Fostering the Development of Master Adaptive Learners: A Conceptual Model to Guide Skill Acquisition in Medical Education <https://www.ncbi.nlm.nih.gov/m/pubmed/27532867/>
- Free Play: Improvisation in Life and Art <https://www.amazon.com/Free-Play-Improvisation-Life-Art/dp/0874776317>
- 8 Moments of Power in Coaching <https://markcolgate.com/about/books/>
- 5 Stages in the Design Thinking Process <https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process>
- 6 Tips for Growing with an Entrepreneurial Mindset <https://www.forbes.com/sites/theyec/2018/05/25/6-tips-for-growing-with-an-entrepreneurial-mindset/amp/>
- Engineers with an Entrepreneurial Mindset Transform the World <https://engineeringunleashed.com/>
- Personal Best <https://www.newyorker.com/magazine/2011/10/03/personal-best/amp>

Other articles from Medical Teacher, Volume 40, Issue 8, August 2018

- Adaptive medical education research <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1490705>
- Exploring the characteristics and context that allow Master Adaptive Learners to thrive <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484560>
- Accelerating expertise: Perceptual and adaptive learning technology in medical learning <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484897>
- Adaptive expertise in medical decision making <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484898>
- Assessing learning in the adaptive curriculum <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484083>
- Learning to balance efficiency and innovation for optimal adaptive expertise <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1485887>
- Preparing educators for adaptive education (AE) programs <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1487049>
- LectureKeeper: A novel approach to studying in the adaptive curriculum <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484895>
- Crowdsourcing for assessment items to support adaptive learning <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1490704>
- Examining the role of self-regulation and emotion in clinical reasoning: Implications for developing expertise <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484084>
- Bolstering diagnostic reasoning skills with adaptive learning <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484561>
- Twelve tips for designing curricula that support the development of adaptive expertise <https://www.tandfonline.com/doi/full/10.1080/0142159X.2018.1484082>



MedEd Chat @MedEdChat39 minutes ago

Welcome to the Medical Education chat (US) I am your moderator for the next hour, @alliance4clined #meded



MedEd Chat [@MedEdChat38 minutes ago](#)

The topic & questions will be announced in a moment...for now, please introduce yourselves [#meded](#)



Gary Beck Dallaghan [@GLBDallaghan38 minutes ago](#)

[@MedEdChat](#) [#meded](#) Gary here in North Carolina!



MedEd Chat [@MedEdChat37 minutes ago](#)

If you are tuning in to the [#meded](#) chat, remember to use the [#meded](#) hashtag and try to answer with the Topic numbers (T1, T2, T3)



Marty Muntz [@mmteacherdoc37 minutes ago](#)

Hi [#meded](#) - Marty from [@MedicalCollege](#) in Milwaukee here



A.J. Kleinhexel [@AJKleinhex37 minutes ago](#)

[@MedEdChat](#) Good evening! A.J. in Augusta [#MedEd](#)



MedEd Chat [@MedEdChat36 minutes ago](#)

We will assume that all of your tweets are your own during this hour unless otherwise stated [#meded](#)



Larry Hurtubise [@hur2buzy36 minutes ago](#)

Larry Hurtubise here from Columbus Ohio [#meded](#)



MedEd Chat [@MedEdChat36 minutes ago](#)

[@AJKleinhex](#) Welcome! [#MedEd](#)



Khalid Kamal, MD, FAAP [@KamalFAAP36 minutes ago](#)

[@MedEdChat](#) KK from Michigan [@MedEdChat](#) [#MedEd](#)



MedEd Chat [@MedEdChat35 minutes ago](#)

[@mmteacherdoc](#) [@MedicalCollege](#) Welcome! [#meded](#)



MedEd Chat [@MedEdChat35 minutes ago](#)

T1 about to come up in a few moments [#meded](#)



MedEd Chat [@MedEdChat34 minutes ago](#)

Welcome [@hur2buzy](#) & [@KamalFAAP](#) [#meded](#)



MedEd Chat [@MedEdChat34 minutes ago](#)

Topic 1: What does adaptive expertise mean to you? [#MedEd](#)



Gary Beck Dallaghan [@GLBDallaghan33 minutes ago](#)

T1 [#meded](#) I think this sums it up "The adaptive learner shifts into reflective thinking when confronted with complex contextual and situational demands." <https://t.co/qsToD5sSL7>



Nupur Verma [@nverma2132 minutes ago](#)

[@MedEdChat](#) T1 innovation and problem solving "creativity" ..fostering learners to stretch knowledge gained to active-learn in new scenarios [#MedEd](#)



Khalid Kamal, MD, FAAP [@KamalFAAP31 minutes ago](#)

[@MedEdChat](#) The teacher/trainer develops new ways and means to do same things, as compared to classical expertise. [#MedEd](#) [@MedEdChat](#)



MedEd Chat [@MedEdChat31 minutes ago](#)

RT [@nverma21](#): [@MedEdChat](#) T1 innovation and problem solving "creativity" ..fostering learners to stretch knowledge gained to active-learn in...



A.J. Kleinheksel [@AJKleinhex31 minutes ago](#)

T1 Flexible, malleable knowledge constructs that allow for non-linear analytical thinking and creative problem solving (among other things) [#meded](#)



Gary Beck Dallaghan [@GLBDallaghan30 minutes ago](#)

T1 [#meded](#) Do you think [#meded](#) does a good job of fostering this now?



Larry Hurtubise [@hur2buzy29 minutes ago](#)

[#meded](#) A1 and perhaps some skills for gathering information and collaborating when confronted with complex contextual and situational demands



A.J. Kleinheksel [@AJKleinhex29 minutes ago](#)

[@GLBDallaghan](#) [#MedEd](#) <https://t.co/bCV6yZ2092>



MedEd Chat [@MedEdChat28 minutes ago](#)

RT [@hur2buzy](#): [#meded](#) A1 and perhaps some skills for gathering information and collaborating when confronted with complex contextual and si...



Marty Muntz [@mmteacherdoc28 minutes ago](#)

Folks with adaptive expertise look for ways to improve on "the way it has always been done." They ask why, why not, and what am I missing? [#meded](#)



Paul Haidet [@myheroistrane27 minutes ago](#)

T1: the ability to improvise, and improvise well. <https://t.co/goOxr6nLoD> #meded



Larry Hurtubise [@hur2buzy26 minutes ago](#)

#meded It seems like medical educators I work with are creative problem solvers so perhaps it does.



MedEd Chat [@MedEdChat26 minutes ago](#)

RT [@myheroistrane](#): T1: the ability to improvise, and improvise well. <https://t.co/goOxr6nLoD> #meded



MedEd Chat [@MedEdChat26 minutes ago](#)

RT [@mmteacherdoc](#): Folks with adaptive expertise look for ways to improve on “the way it has always been done.” They ask why, why not, and w...



Marty Muntz [@mmteacherdoc24 minutes ago](#)

[@GLBDallaghan](#) Foster it in whom? #MedEd teachers, yes. #MedEd learners, maybe not so much...



A.J. Kleinheksel [@AJKleinhex24 minutes ago](#)

[@hur2buzy](#) Do you think physicians outside of academic medicine are also demonstrating these traits? Educators in general are a special population, so there may be some self-selection going on here. #MedEd



Dink Jardine, MD [@dinkjardine22 minutes ago](#)

RT [@mmteacherdoc](#): Folks with adaptive expertise look for ways to improve on “the way it has always been done.” They ask why, why not, and w...



Gary Beck Dallaghan [@GLBDallaghan21 minutes ago](#)

[@mmteacherdoc](#) T1 #meded Exactly. I meant #medstudents It doesn't feel like this is happening even though it sounds fantastic. Maybe it occurs more in GME.



Marty Muntz [@mmteacherdoc20 minutes ago](#)

[@GLBDallaghan](#) But some like [@BillCutrerMD](#) are doing this well for #MedEd learners: <https://t.co/C5aFCMoCWA>



MedEd Chat [@MedEdChat19 minutes ago](#)

RT [@mmteacherdoc](#): [@GLBDallaghan](#) But some like [@BillCutrerMD](#) are doing this well for #MedEd learners: <https://t.co/C5aFCMoCWA>



Gary Beck Dallaghan [@GLBDallaghan17 minutes ago](#)

[@mmteacherdoc](#) [@BillCutrerMD](#) T1 #meded My question for [@BillCutrerMD](#) is how the culture at [@VUmedicine](#) developed to do such great work?



MedEd Chat @MedEdChat17 minutes ago

RT @GLBDallaghan: @mmteacherdoc @BillCutrerMD T1 #meded My question for @BillCutrerMD is how the culture at @VUmedicine developed to do suc...



Paul Haidet @myheroistrane17 minutes ago

My brother needed surgery, and I asked him how he found his surgeon. He said: "I looked for a surgeon who knows when to stop; who realizes when it's over his head." Yeah. Adaptive expertise. #meded



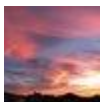
Alliance4ClinEd @Alliance4ClinEd16 minutes ago

RT @myheroistrane: My brother needed surgery, and I asked him how he found his surgeon. He said: "I looked for a surgeon who knows when to...



MedEd Chat @MedEdChat16 minutes ago

Topic 2: Based on recent work, effective learning follows a PDSA cycle. How does that lead to adaptive expertise? #meded



Paul Haidet @myheroistrane14 minutes ago

Like this?: <https://t.co/IESKhvfcaX> #meded



A.J. Kleinheksel @AJKleinhex11 minutes ago

T2 Whether it's a formal PDSA cycle or smaller iterative developments, seeking and integrating feedback for continuous improvement is what facilitates productive and effective change. #meded



Kristina Dzara, PhD, MMSc @kristinadzara11 minutes ago

Hello #Meded chatters! Just stopping in to say hi as I am watching the NFL season opener with @DrSinhaEsq!

Go @Eagles! @hur2buzy@myheroistrane @GLBDallaghan @MedEdChat <https://t.co/hVT8QG9011>



MedEd Chat @MedEdChat10 minutes ago

T2 #meded Good points. This article hits on self-regulated learning as a means of adaptive expertise <https://t.co/TuMTneGMCK>



Larry Hurtubise @hur2buzy7 hours ago

A2 pdsa seems close to the experiential learning cycle and the Action Research process so it seems like a valid model #meded



Marty Muntz @mmteacherdoc7 hours ago

At some point, we have to learn things for ourselves & stop being spoonfed. So PDSA associated with self-directed learning, for example, should facilitate that transition in #MedEd.



Gary Beck Dallaghan @GLBDallaghan7 hours ago

[@hur2buzy](https://t.co/hur2buzy) T2 #meded I agree. Action research fits into that mold quite nicely. Do you think over time experts just go there naturally...or continually be deliberate about reflecting and improving?



A.J. Kleinheksel [@AJKleinhex7 hours ago](#)

[@MedEdChat](#) Exactly! Self-regulated learners are champions at information-seeking, critical evaluation of that information, and self-assessment. [#MedEd](#)



Nupur Verma [@nverma217 hours ago](#)

[@MedEdChat](#) T2: pdsa cycle takes advantage of many tool that spark the learner; i.e. process mapping + keeps a cycle of innovation &re-evaluation going which pushes participants into adaptive mode [@RadiologyACR](#) has used this effectively in [#Radiology](#) PQ&I [#meded](#)



Alliance4ClinEd [@Alliance4ClinEd7 hours ago](#)

RT [@AJKleinhex](#): [@MedEdChat](#) Exactly! Self-regulated learners are champions at information-seeking, critical evaluation of that information,...



Nupur Verma [@nverma217 hours ago](#)

[@MedEdChat](#) T2: pdsa cycle takes advantage of many tools which spark the learner to think beyond; i.e. process mapping. keeps a cycle of innovation &re-evaluation going which pushes participants into adaptive mode [@RadiologyACR](#) has used this effectively in [#Radiology](#) PQ&I [#meded](#)



MedEd Chat [@MedEdChat7 hours ago](#)

RT [@nverma21](#): [@MedEdChat](#) T2: pdsa cycle takes advantage of many tools which spark the learner to think beyond; i.e. process mapping. keeps...



A.J. Kleinheksel [@AJKleinhex7 hours ago](#)

[@EdDesignerSRH](#) Yes! Action research is a great way for practitioners to systematically approach continuous improvement! I'm a big fan. [#MedEd](#)



MedEd Chat [@MedEdChat7 hours ago](#)

Topic 3: Adaptive learning can burden learners. How can coaching play a role in this skill? [#meded](#)



Marty Muntz [@mmteacherdoc7 hours ago](#)

Setting expectations of critical thinking as opposed to rote memorization (classroom) or blind obedience to experts (clinical) is key. All innovators were once students. So give explicit permission & safe spaces to innovate in [#MedEd](#).



A.J. Kleinheksel [@AJKleinhex7 hours ago](#)

T3 And here comes my weekly pitch for simulation! Structured debriefing promotes both learning and metacognition. Cases can also be run for cognitive coaching for remediation. [#meded](#)



Nupur Verma [@nverma217 hours ago](#)

[@MedEdChat](#) T3 coaching encourages exploration as OK even if not efficient at first, it is okay to follow dead ends in search of new thoughts/creativity.. which can ultimately lead to efficiency in future prob solving by >>training in adaptive learning [#MedEd](#)



Gary Beck Dallaghan [@GLBDallaghan7 hours ago](#)

[@MedEdChat](#) T3 [#meded](#) I'm a huge fan of coaching as it goes well beyond feeble attempts at feedback. [@mark_colgate](#) wrote one of the best books on this topic <https://t.co/FGmcGVBpJo>



Lisa Educational Designer [@EdDesignerSRH7 hours ago](#)

[@hur2buzy](#) Hi Larry...loved the bit in your profile about modelling joy in curiosity. Was just talking about creativity and curiosity in [#MedEd](#) yesterday. What's your secret sauce? Could you list some ways you've been able to model your curiosity? Would love to know! Lisa



Gary Beck Dallaghan [@GLBDallaghan7 hours ago](#)

RT [@nverma21](#): [@MedEdChat](#) T3 coaching encourages exploration as OK even if not efficient at first, it is okay to follow dead ends in search...



Alliance4ClinEd [@Alliance4ClinEd7 hours ago](#)

RT [@AJKleinhex](#): T3 And here comes my weekly pitch for simulation! Structured debriefing promotes both learning and metacognition. Cases can...



Alliance4ClinEd [@Alliance4ClinEd7 hours ago](#)

RT [@nverma21](#): [@MedEdChat](#) T3 coaching encourages exploration as OK even if not efficient at first, it is okay to follow dead ends in search...



Nupur Verma [@nverma217 hours ago](#)

[@MedEdChat](#) T3 coaching pulls in diverse thoughts 4rm groups of learners who are co-solving, i.e: Why did Dr.A try this approach with case X first? What did you learn from case A that made you realize case B was different? Open?s can get engines going in adaptive learning [#MedEd](#)



MedEd Chat [@MedEdChat7 hours ago](#)

RT [@nverma21](#): [@MedEdChat](#) T3 coaching pulls in diverse thoughts 4rm groups of learners who are co-solving, i.e: Why did Dr.A try this approa...



Marty Muntz [@mmteacherdoc7 hours ago](#)

We have encouraged the entrepreneurial mindset and use of design thinking in [#MedEd](#) [@MCW_Kern](#) <https://t.co/LqI2K4OVKp><https://t.co/BXEhRMUnhA> <https://t.co/sBiVyDftMY>



Terry Kind, MD MPH [@Kind4Kids7 hours ago](#)

The coach in the operating room <https://t.co/JFWASdesLT> [@Atul_Gawande](#) [#meded](#) [@MedEdChat](#) And in medical education?



Marty Muntz [@mmteacherdoc7 hours ago](#)

<https://t.co/sBiVyDftMY> [#meded](#)



Marty Muntz [@mmteacherdoc7 hours ago](#)
<https://t.co/Lql2K4OVKp> #meded



MedEd Chat [@MedEdChat7 hours ago](#)
RT [@mmteacherdoc](#): We have encouraged the entrepreneurial mindset and use of design thinking in [#MedEd @MCW Kern](#)<https://t.co/Lql2K4OVKp> htt...



MedEd Chat [@MedEdChat7 hours ago](#)
RT [@Kind4Kids](#): The coach in the operating room <https://t.co/JFWASdesLT> [@Atul Gawande](#) [#meded @MedEdChat](#) And in medical education?



MedEd Chat [@MedEdChat7 hours ago](#)
RT [@mmteacherdoc](#): <https://t.co/Lql2K4OVKp> #meded



Alliance4ClinEd [@Alliance4ClinEd7 hours ago](#)
RT [@Kind4Kids](#): The coach in the operating room <https://t.co/JFWASdesLT> [@Atul Gawande](#) [#meded @MedEdChat](#) And in medical education?



Alliance4ClinEd [@Alliance4ClinEd7 hours ago](#)
RT [@nverma21](#): [@MedEdChat](#) T3 coaching pulls in diverse thoughts 4rm groups of learners who are co-solving, i.e: Why did Dr.A try this appoa...



MedEd Chat [@MedEdChat7 hours ago](#)
We have about 5 more minutes left in our discussion. Please feel free to give some final thoughts [#meded](#)



Gary Beck Dallaghan [@GLBDallaghan7 hours ago](#)
[@MedEdChat](#) Final Thoughts: There is a themed issues of [@MedTeachJournal](#) on adaptive learning (Medical Teacher, Volume 40, Issue 8, August 2018) [#meded](#)



Vishesh Jain [@lifeofsmilez7 hours ago](#)
[@MedEdChat](#) T3 [#meded](#) Coaches can also aid in the self-assessment and reflective parts of adaptive learning, ensuring/modeling critical thinking during integration and use of feedback



MedEd Chat [@MedEdChat7 hours ago](#)
RT [@GLBDallaghan](#): [@MedEdChat](#) Final Thoughts: There is a themed issues of [@MedTeachJournal](#) on adaptive learning (Medical Teacher, Volume 40,...



A.J. Kleinheksel [@AJKleinhex7 hours ago](#)
[@MedEdChat](#) Great [#MedEd](#) chat tonight! <https://t.co/utzOjRBr6K>



MedEd Chat [@MedEdChat7 hours ago](#)

RT [@lifeofsmilez](#): [@MedEdChat](#) T3 [#meded](#) Coaches can also aid in the self-assessment and reflective parts of adaptive learning, ensuring/mode...



MedEd Chat [@MedEdChat7 hours ago](#)

Join us again next week at 9 pm Thursday. Don't forget to suggest topics by DM or email [#meded](#)



MedEd Chat [@MedEdChat7 hours ago](#)

That's a wrap...I will be posting the transcript tomorrow morning on <https://t.co/mJivoKroXx> on the Resources page. Thanks everyone for participating! [#meded](#)



MedEd Chat [@MedEdChat7 hours ago](#)

[#meded](#) chat participants....hashtag "meded" has become so ubiquitous I would like to start using [#mededchat](#) beginning in Oct. This will eliminate noise during our chats. Let me know which hashtag you prefer!



Vishesh Jain [@lifeofsmilez7 hours ago](#)

[@MedEdChat](#)

Replying late to this, but as a student: 1) Student involvement in curricular dev 2) High investment in faculty resources for trained reliable feedback 3) Integration of metacognition, reflection, and self-assessment across all 4 years, including didactics, discussion, practice



PR Geisler, EdD, ATC

[@BomberATDoc](#)

Replying to [@lifeofsmilez](#) [@MedEdChat](#) and 4 others

Item #3 is the KEY, to me...integration, "adaptive expertise" based pedagogy "across the curriculum", didactic, lab and clinical