

Enhancing Physician Assistant/Associate (PA) Education Through Third-Party Tutoring Services: A Strategic Solution for Faculty and Student Success

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Abstract:

PA education is increasingly demanding for both students and faculty, with rising expectations for academic performance, standardized testing, and clinical competency. However, not all institutions offer robust student support services, leaving learners at risk of falling behind and faculty overwhelmed with the dual responsibilities of teaching and mentoring. Third-party tutoring services have emerged as a cost-effective and impactful solution, providing tailored support to students while alleviating workload burdens on faculty.

This study explored the value of third-party tutoring services in medical and surgical education, focusing on the following key areas: (1) efficient use of faculty time, enabling educators to focus on high-impact teaching and research activities, (2) measurable progress of students through personalized instruction, (3) workload offloading for faculty, particularly in institutions with limited student success services, and (4) cost efficiency in bridging institutional resource gaps.

Research results showed the high-value return of third-party tutoring, including significant improvements in standardized test scores (e.g., EOR, EOC, PACKRAT, PANCE) and overall academic performance. Evidence-based examples demonstrated how individualized support fosters a deeper understanding of complex clinical concepts, better preparing students for both examinations and real-world practice. Additionally, case studies from institutions that have implemented third-party tutoring will showcase the impact on student retention, faculty satisfaction, and institutional success metrics.

The goal of this study is to arm educators with actionable strategies to integrate third-party tutoring into their curricula, making medical education more inclusive, effective, and sustainable for students and faculty alike.

1. Introduction

• Overview of Challenges in Medical Education:

- Rising number of programs (and “spots” to fill) insure greater number of students in need of academic support
- Increasing complexity of medical curricula.
- Resource constraints at many institutions.

- Faculty burnout due to teaching, mentoring, and research demands.
- **Introduction to Third-Party Tutoring Services:**
 - Role in supplementing institutional efforts.
 - Focus on personalized, high-yield support for students.

2. The Value Proposition of Third-Party Tutoring Services

- **Efficient Use of Faculty Time:**
 - Delegating repetitive, individualized teaching tasks to tutors.
 - Allowing faculty to focus on innovative curriculum development and research.
- **Student Progress and Performance:**
 - Research showing improved exam scores and clinical skill acquisition.
 - Enhanced understanding of complex medical and surgical concepts.
 - Increased student confidence and reduced test anxiety.
- **Workload Offloading for Faculty:**
 - Reducing the demand for one-on-one mentoring.
 - Streamlining feedback and academic support processes.
- **Cost Efficiency:**
 - Affordable solution compared to building full-scale support programs.
 - Scalable for institutions of varying sizes and budgets.

3. Research Evidence

- **Improved Academic Performance:**
 - Data linking third-party tutoring with higher pass rates and exam scores (e.g., USMLE Step 1, PANCE).
 - Enhanced clinical performance metrics in rotations.
- **Student Retention and Satisfaction:**
 - Increased retention rates for at-risk students.
 - Positive feedback from students regarding personalized support.
- **Faculty Outcomes:**
 - Reduced burnout and improved job satisfaction.

4. Case Studies

- **Successful Implementation:**
 - Examples from universities utilizing third-party tutoring.
 - Quantitative and qualitative outcomes.

5. Recommendations for Educators

- **Integrating Third-Party Tutoring:**
 - Identifying gaps in existing institutional support.
 - Collaborating with tutoring providers for seamless integration.
- **Ensuring Alignment with Curricula:**
 - Customizing tutoring services to meet institutional goals.
 - Monitoring and evaluating the impact on student outcomes.

6. Conclusion

- Recap of benefits: improved student outcomes, reduced faculty burden, and cost-effective educational enhancement.
- Call to action: Embrace third-party tutoring as a strategic partner in medical education.

Summary of Research:

Impact of 1:1 and Small Group Tutoring on Medical Student Outcomes

Introduction

- This research evaluates the effectiveness of a 6-week structured tutoring program on medical students' performance, focusing on end-of-rotation exams and PANCE outcomes.
- The study involved 38 students who received individualized and small-group tutoring, addressing key areas of clinical knowledge, test-taking strategies, and critical thinking.

Methodology

- **Participants:**
 - 38 PA students and graduates
 - Identified as at-risk or self-seeking improved performance
- **Intervention:**
 - **Duration:** 6 weeks of tutoring
 - **Format:**
 - **1:1 Tutoring:** Weekly sessions tailored to individual learning gaps.
 - **Small Group Tutoring:** Twice-weekly sessions focusing on collaborative learning and peer discussion.

- Both sessions covered clinical medicine, surgery topics, and exam preparation strategies.
- **Assessment Metrics:**
 - End-of-rotation exams (pre- and post-intervention scores).
 - PANCE practice exam scores before and after tutoring.
 - Final PANCE scores.

Results

1. End-of-Rotation Exam Performance:

- **Average Pre-Tutoring Normed Score:** 68% (below passing threshold for many institutions).
- **Average Post-Tutoring Normed Score:** 84% (statistically significant improvement).
- **Percentage Improvement:** +16% ($p < 0.01$).

2. PANCE Practice Exam Scores: (PANCE scale - minimum 200, maximum of 800, and passing score = 350)

- **Average Pre-Tutoring Score:** 336 (individual fail up to 4 times)
- **Average Post-Tutoring Score:** 418
- **Percentage Improvement:** +24.4% score improvement ($p < 0.01$)

Discussion

- **Key Findings:**
 - Targeted 1:1 and small-group tutoring significantly improved knowledge retention and test-taking ability.
 - Students exhibited better performance in clinical problem-solving and applied concepts in exams.
- **Qualitative Feedback:**
 - 92% of participants reported increased confidence in clinical knowledge.
 - 88% felt better prepared for real-world clinical decision-making.
- **Time Efficiency:**
 - Weekly sessions were sufficient to achieve measurable improvements, demonstrating the value of structured tutoring over extended periods.

Conclusion

- **Impact:**
 - This study provides compelling evidence that a 6-week tutoring program can significantly enhance medical students' academic and clinical performance.
 - Improvements in end-of-rotation and PANCE scores suggest the potential for higher rates of professional success and preparedness.
- **Recommendations:**
 - Incorporate structured tutoring programs for at-risk students.
 - Consider integrating 1:1 and small-group sessions as a routine academic support strategy in medical education.

This research highlights the transformative potential of personalized tutoring for medical students, offering both immediate and long-term benefits for academic success.

Benefits of Tutoring Services in Medical Education

Tutoring services in medical education provide a wide range of benefits to both students and faculty. These services address academic, emotional, and logistical challenges, enhancing the overall educational experience and fostering success in a demanding field.

Benefits to Students

1. Personalized Learning Support

- **Tailored Instruction:** Tutors adapt teaching methods to individual learning styles, filling gaps in knowledge and addressing specific weaknesses.
- **Self-Paced Learning:** Students can revisit challenging concepts without the time constraints of traditional classroom settings.

2. Improved Academic Performance

- **Higher Exam Scores:** Regular tutoring correlates with improved performance on end-of-rotation exams, standardized tests (e.g., USMLE, PANCE), and clinical evaluations.

- **Enhanced Knowledge Retention:** Tutors focus on core topics and integrate high-yield review techniques that aid long-term retention.

3. Development of Clinical Competency

- **Skill Refinement:** Tutors help students master clinical reasoning, diagnostic skills, and practical procedures.
- **Preparation for Clinical Rotations:** Targeted tutoring ensures students are well-prepared for clinical scenarios and assessments.

4. Boosted Confidence and Reduced Anxiety

- **Safe Learning Environment:** Students feel comfortable asking questions and making mistakes in a low-pressure setting.
- **Test-Taking Strategies:** Tutors provide guidance on managing time, interpreting questions, and eliminating incorrect answers.

5. Greater Accessibility to Resources

- **Supplement to Institutional Gaps:** Students at institutions lacking robust support services benefit from access to expert tutors.
- **Convenient Scheduling:** Flexible tutoring hours accommodate the demanding schedules of medical students.

6. Enhanced Peer Collaboration and Networking

- **Small-Group Learning:** Collaborative tutoring sessions foster peer discussion and shared problem-solving.
- **Mentorship Opportunities:** Tutors often act as role models, offering guidance on career paths and professional development.

Benefits to Faculty

1. Reduced Workload

- **Offloading Remedial Teaching:** Tutors handle individualized instruction for struggling students, allowing faculty to focus on core teaching responsibilities.
- **Streamlined Support:** Tutoring services reduce the demand for one-on-one mentoring, especially in large classes or resource-limited programs.

2. Improved Student Outcomes

- **Higher Pass Rates:** Tutored students are more likely to pass rotations, standardized exams, and clinical evaluations, reflecting positively on faculty efforts.
- **Stronger Knowledge Base:** Faculty can build on a more solid foundation of student understanding during lectures and clinical teaching.

3. Enhanced Faculty Efficiency

- **Focused Instruction:** With tutoring services handling foundational learning gaps, faculty can dedicate time to advanced teaching and research.
- **Decreased Need for Remediation:** Tutors address student weaknesses early, reducing the need for faculty-led remediation programs.

4. Increased Student Engagement

- **Motivated Learners:** Tutored students tend to be more engaged in class, prepared to participate actively in discussions and clinical rounds.
- **Improved Class Dynamics:** A higher baseline of student knowledge creates a more interactive and stimulating learning environment.

5. Faculty Satisfaction

- **Less Burnout:** Delegating some of the mentoring responsibilities allows faculty to balance teaching, research, and administrative duties more effectively.
- **Higher Impact Teaching:** Faculty experience the satisfaction of seeing students achieve academic and clinical milestones.

Shared Benefits to Institutions

- **Higher Program Reputation:** Better student performance and higher exam pass rates enhance the institution's prestige and competitiveness.
- **Increased Student Retention:** Tutoring services reduce attrition rates by supporting at-risk students.
- **Cost-Effective Solutions:** Third-party tutoring services provide high-value academic support without the expense of expanding faculty or building new programs.

Tutoring services bridge the gap between institutional resources and individual needs, making them an essential component of modern medical education. They empower students to excel academically and professionally while alleviating the challenges faced by faculty.

Tutoring can also address....

Significant Non-Academic Challenges to Physician Assistant/Associate Student Success

PA students face numerous challenges beyond academics that can profoundly impact their success. These non-academic factors affect their mental health, physical well-being, time management, and overall ability to perform optimally. Addressing these challenges is essential for fostering a supportive environment conducive to success.

1. Mental Health Challenges

- **Stress and Burnout:**
 - Demanding workloads, long hours, and high stakes contribute to chronic stress and burnout.
- **Anxiety and Depression:**
 - Fear of failure, imposter syndrome, and the competitive nature of medical school can lead to significant mental health struggles.
- **Stigma Around Seeking Help:**
 - Many students avoid seeking mental health support due to fear of judgment or concerns about future licensure disclosures.

2. Financial Strain

- **High Tuition Costs:**
 - The financial burden of medical education leads to student loan debt and financial anxiety.
- **Living Expenses:**
 - Balancing the costs of housing, transportation, and personal expenses on a tight budget adds to stress.
- **Limited Earning Opportunities:**
 - Demanding schedules leave little time for part-time work or supplementary income sources.

3. Time Management and Work-Life Balance

- **Demanding Schedules:**

- Balancing clinical rotations, studying, research, and personal life is a persistent challenge.
- **Family Responsibilities:**
 - Students with dependents or caregiving roles often struggle to allocate sufficient time to their studies.
- **Lack of Personal Time:**
 - The intensity of medical school can leave students with little time for self-care, hobbies, or relaxation.

4. Social Isolation

- **Relocation:**
 - Moving away from family and friends to attend medical school can lead to feelings of loneliness.
- **Lack of Support Networks:**
 - The competitive and individualistic nature of medical school may hinder the development of meaningful social connections.
- **Cultural or Language Barriers:**
 - International or minority students may experience feelings of alienation in unfamiliar environments.

5. Physical Health Challenges

- **Sleep Deprivation:**
 - Long hours of study and clinical work often lead to insufficient sleep, impairing cognitive function and overall health.
- **Poor Nutrition:**
 - Busy schedules and limited resources can result in unhealthy eating habits.
- **Lack of Exercise:**
 - Sedentary lifestyles due to extended hours spent studying or working can negatively impact physical health.

6. Navigating Professional Expectations

- **Unclear Career Goals:**
 - Pressure to choose a specialty early in training can be overwhelming.
- **Professionalism Challenges:**

- Adapting to the professional expectations of medicine, such as hierarchy and communication standards, can be difficult.
- **Unrealistic Expectations:**
 - Students may face pressure to achieve perfection from faculty, peers, or themselves.

7. External Life Stressors

- **Family Health Issues:**
 - Students often face additional emotional burdens if family members are unwell.
- **Relationship Challenges:**
 - Maintaining romantic relationships or friendships can be difficult given the time demands of medical school.
- **Major Life Events:**
 - Events such as marriages, divorces, or bereavements can disrupt focus and productivity.

8. Institutional and Systemic Challenges

- **Lack of Support Services:**
 - Some institutions lack adequate mental health resources, career counseling, or academic support programs.
- **Systemic Inequities:**
 - Underrepresented minority students may face bias or discrimination, exacerbating feelings of exclusion or unfair treatment.
- **Rigid Curriculum Structures:**
 - Inflexible schedules and policies can make it difficult for students to accommodate personal needs.

9. Decision Fatigue

- **Overwhelming Choices:**
 - Students must constantly make decisions about study schedules, resources, career paths, and personal commitments.
- **Clinical Responsibilities:**
 - During rotations, students face the additional challenge of learning to make critical patient care decisions under supervision.

10. Technological Overload

- **Digital Fatigue:**
 - Prolonged screen time for studying, lectures, and electronic medical records can lead to fatigue and eye strain.
- **Information Overload:**
 - The sheer volume of digital resources, online modules, and practice questions can be overwhelming and counterproductive.

11. Stigma and Imposter Syndrome

- **Self-Doubt:**
 - Many students feel they don't belong or are not as capable as their peers, which can undermine confidence and performance.
- **Fear of Failure:**
 - Perceived pressure to excel academically and clinically exacerbates these feelings.

12. Ethical and Emotional Challenges

- **Patient Interactions:**
 - Exposure to suffering, death, or difficult ethical situations during rotations can cause emotional distress.
- **Moral Distress:**
 - Witnessing systemic inefficiencies or suboptimal care can conflict with students' values and ideals.

Addressing Non-Academic Challenges

PA schools and faculty should recognize and address these non-academic barriers by providing:

- **Comprehensive Student Support:** Mental health resources, financial counseling, tutoring and academic & professional advising.
- **Wellness Programs:** Initiatives promoting work-life balance, healthy living, and stress management.
- **Mentorship Opportunities:** Faculty or peer mentorship to guide students through personal and professional challenges.
- **Inclusive Environments:** Fostering diversity, equity, and belonging within medical institutions.

By tackling these challenges, educators can create a more supportive environment that allows students to thrive both academically and personally.