



Employing Audio Feedback to Transform Assessment and Revision of Technical Writing

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INTRODUCTION

- Inaccurate or inappropriate technical or professional writing can have significant detrimental effects if not completed proficiently and accurately
- Examples of technical writing include handwritten medical documentation or electronic documentation within a medical record among other examples
- For example, incomplete or inaccurate medical documentation could result in life threatening medical errors, inefficient care or payment denials
- Technical professional writing has fundamental differences as compared to other forms of narrative writing including structure, flow, logic and technical and formatting requirements
- Students often have only limited exposure to this form of writing as much of the training in writing in high school and prerequisite college courses in writing may be more focused on rhetoric, prose, debates and plot-driven writing tasks

PURPOSE

1. Participants will be able to outline and apply methods for providing audio feedback
2. Participants will be able to identify opportunities to optimize student feedback for written assignments without appreciable increase in grading workload.
3. Participants will be able to leverage current resources within their institution to successfully implement audio feedback during grading written assignments

METHODS

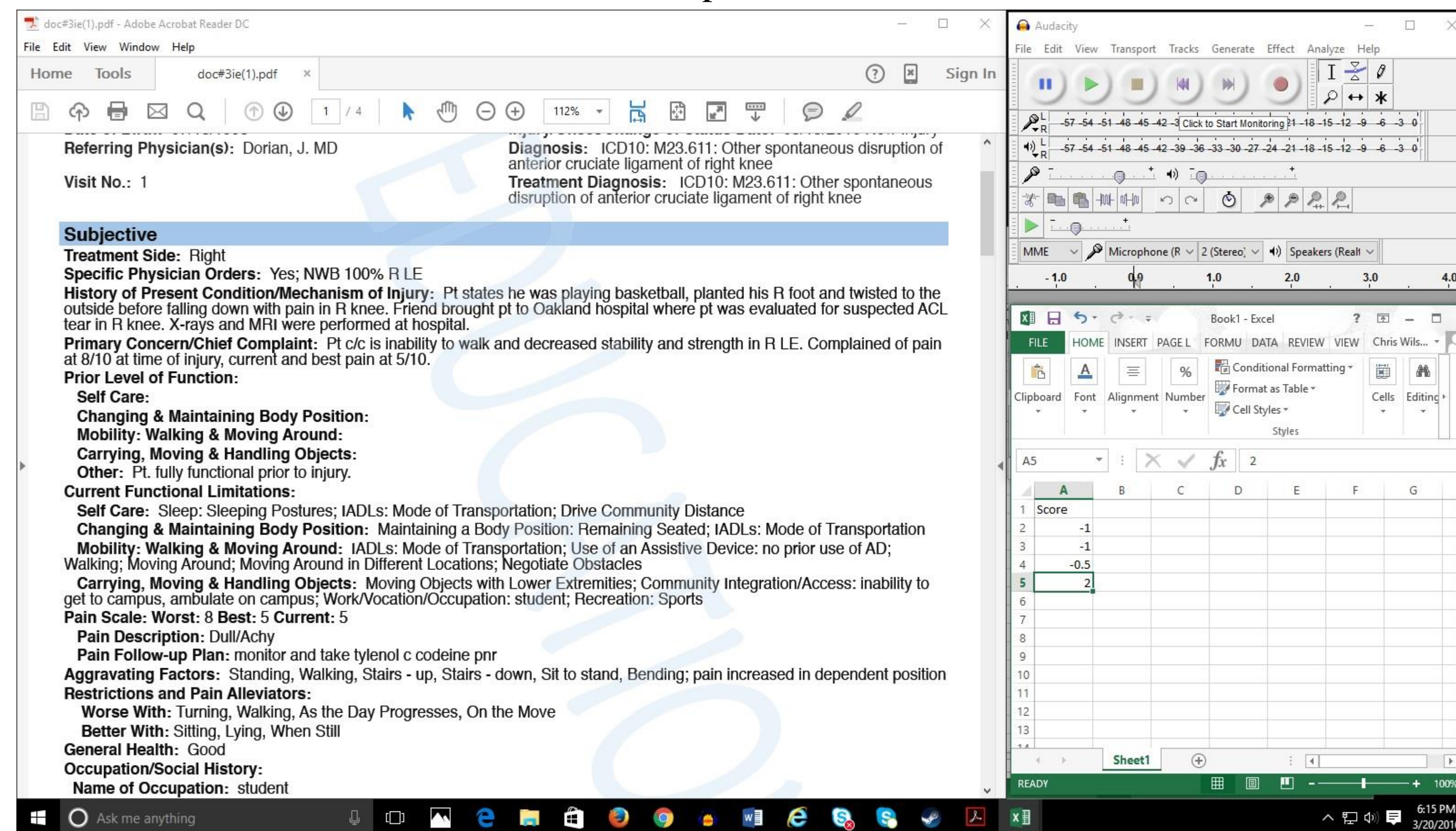
- In the second semester of the first professional year of the Oakland University Doctor of Physical Therapy (DPT) program, students are introduced to the concepts of reading, writing and interacting with the medical record in a handwritten and electronic format
- Over the semester, students complete four different clinical documentation assignments with progressive complexity and clinical relevance
- Instead of providing only a definitive grade for the completed assignment, the students are required to revise each assignment until it meets professional and regulatory standards
- In order for the student to accomplish this proficiency, a high level of detailed feedback is required as to why certain flow, phrasing, or content is necessary
- With prior iterations of assignment grading, providing this level of detail in written feedback consistently required ~20 minutes per paper
- 20 mins per assignment x 36 DPT students = 720 minutes x 4 assignments = 2,880 minutes = 48 hours per semester
- In 2013, a pilot program was implemented to evaluate the feasibility of using an alternative method to reduce grading time while providing a high level of fidelity

MATERIALS

- Personal computer with internet access (wide screen recommended)
- Microphone and headset
 - Laptop microphone not recommended due to ambient noise
- Audacity audio recording software (or similar)
 - Audacity is open source and FREE
- A smartphone voice memo application may work as well but may require the added step of transferring file to computer to upload to online learning platform

RECORDING AND UPLOADING AUDIO FEEDBACK

1. Student uploads electronic files to online learning platform (Moodle at Oakland University) under the appropriate assignment
2. Instructor opens electronic file and opens up Audacity voice recording program
3. Have both programs visible via the dual-window option of the computer's operating system
4. Utilize a sheet of paper or Microsoft Excel to tally up points deducted or awarded points via the grading criteria/rubric
5. Start recording and provide positive feedback and constructive feedback. Attempt to utilize specific subsections of the note to orient the student to where your comments apply i.e. "Under Subjective in the home environment section, -1 points for not documenting number of steps required to enter the home."
6. Tally up missed points on the sheet of paper to provide the student a total score after grading is complete
7. Either using the verbal feedback file or in written format, if the student has not achieved sufficient performance, provide a reasonable deadline for submission of revisions
8. Stop recording and save the file as an *.mp3 as this is the most popular format and will not require the student to download anything to listen to the feedback
9. Upload the file to online learning platform with the associated grade earned for the student to listen to the feedback and provide revisions



RESULTS

- Results of grading duration was reduced to a mean of 10 minutes per grading assignment (n = 108) without a qualitative loss of detail or amount of feedback provided
- This reduction in grading time resulted in a total savings in instructor productivity by 24 hours per semester for the class in question

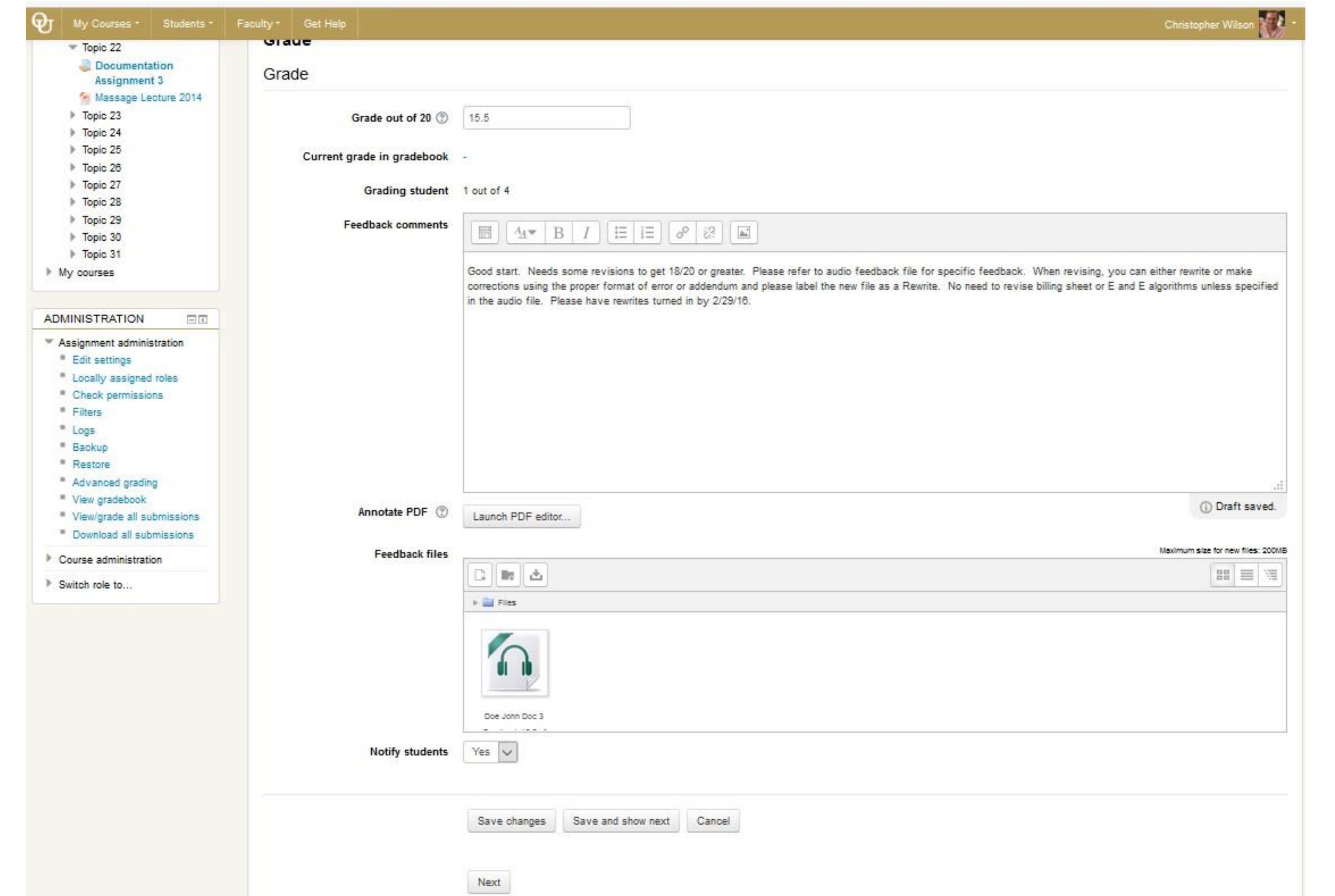
Sample Student feedback on Audio Feedback:

"The files were helpful because I could really hear the clinical rationale why the way I wrote something was not the best way."

"The audio feedback allowed me to better understand the implications of the way I wrote things and how it might cause problems when trying to get reimbursed by an insurance company for PT."

"When listening to the file, I could really hear the emotion and tone when {the instructor} was talking to me which helped me to figure out what information was really important vs. just 'fine tuning'."

UPLOADING AUDIO FILE TO ONLINE LEARNING PLATFORM



DISCUSSION

- Providing audio feedback may be able to transform grading of technical writing by improving student learning without increasing time workload of grading instructor
- When practicing technical writing for a profession, only providing handwritten feedback and points deducted is likely not enough to provide deep, transformative learning or translation to professional practice
- In preparation for student success and career success, students must clearly understand the nuances of "why" they should write certain things in a specific manner
- This assessment method is in congruence with adult learning concepts^{1,2,3} including:
 1. Adults want some control or responsibility over their own learning
 2. They bring prior experiences to the learning environment
 3. They are most ready to learn when topics are related to their social role
 4. They learn most when there is a need and when immediate application is necessary
 5. They possess internal motivation to learn
 6. They need to know why they are required to learn a particular topic
- The grading method presented has the potential to transform grading and revision processes to be more detailed, useful, and applicable and also helps to foster relationships between the instructor and the student through verbal feedback

CONCLUSIONS

- Audio feedback has been successfully implemented in the Doctor of Physical Therapy program over the last 3 years
- Student feedback of audio grading is positive and clinical sites compliment DPT students on clinical documentation
- Providing audio feedback may be able to transform grading of technical writing by improving student learning without increasing time workload of grading instructor

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Audacity

The Audacity Team

audacity.sourceforge.net/download/

