Review Report: Manuscript Review and Recommendations
Title: *Understanding the Role of Origami in Teaching and Applying the Activity Analysis Process in Occupational Therapy Education: A Pilot Study*

Summary
This manuscript presents a creative, occupation-centered pilot study exploring the use of origami to teach the activity analysis process to occupational therapy (OT) and occupational therapy assistant (OTA) students. The concept is well-aligned with the OT profession's emphasis on meaningful, client-centered, and activity-based learning.
While the topic is timely and the instructional method holds promise, the current version of the manuscript requires significant revision. Specifically, the study lacks methodological detail, pedagogical and theoretical framing, and clear application of occupational therapy concepts such as grading, adapting, and linking task demands to client performance components.

Global Writing and Framing Concerns
1. Language Clarity and Redundancy
Issue: The manuscript includes repetitive phrases (e.g., repeated use of "meaningful and purposeful") and underdeveloped or awkward sentence constructions, particularly in the Introduction and Discussion.
Recommendation: Perform a focused edit for clarity, tone, and flow. Reduce redundancy, restructure verbose or circular statements, and ensure concise, natural phrasing throughout.
Response: Corrected
2. Framing of OT Terminology
Issue: Key terms such as "activity analysis," "grading," and "modification" are used without adequate definition or reference to the *Occupational Therapy Practice Framework (OTPF)*.
Recommendation: Define these terms clearly and cite the OTPF directly to help readers—especially those outside of OT - understand how they are being applied.
Response: Corrected-Identified those definitions from AOTA
3. Ethical and Educational Framing
Issue: While IRB approval is mentioned, there is limited discussion of ethical procedures such as consent, confidentiality, or the power dynamics inherent in student-instructor research settings.
Recommendation: Add 1-2 sentences in the methodology to clarify consent procedures, confidentiality protections, and how participation was framed for students (e.g., voluntary, anonymous, non-evaluative).
Response: The research study was approved by the Institutional Review Board at Winston-Salem State University in Winston-Salem, North Carolina. Using a qualitative approach to capture each participant's knowledge of the activity analysis process, what was challenging, beneficial and how did the experience enhance the understanding of the activity analysis process. Informed consent explaining the study's purpose and that participation was voluntary obtained from all participants. Participants were encouraged to participate or not participate without feeling pressure. Participants were informed that threatening penalties for non-participation do not align with the voluntary nature of this study.

Section-by-Section Recommendations

1. Methodology and Research Design

Issues Identified:

- The qualitative design is vague. While "inductive reasoning" is mentioned, no specific qualitative method (e.g., basic interpretive, thematic analysis, phenomenology) is described.
- The pre/post survey instruments are not described in detail. Items, structure, and types of data collected are unclear (i.e. It is unclear how many Likert items were included, what the anchors were [e.g., 1 = strongly disagree, 5 = strongly agree], and whether open-ended responses were analyzed thematically.
- The origami task itself is not described (e.g., model used, duration, level of complexity).
- There is no mention of structured reflection tools or scaffolds provided to guide student analysis (e.g., worksheets, rubrics, or activity analysis forms).

Response: The survey was described in more detail. Researchers added the survey into the paper. Researchers added more details regarding the origami experience, such as time/duration, supplies level of assistance, debriefing and grading the activity.

Recommendations:

- Clearly define the qualitative approach and describe how data were coded and themes generated.
- Include sample survey questions and describe the data collection and analysis process in more detail.
- Describe the origami activity: What model was used? How long did it take? What instructions were given? Was it adapted for student needs?
- Explain whether students were asked to reflect in writing, complete an activity analysis form, or engage in guided debriefing - and how this supported learning outcomes.
- Report basic demographic characteristics of the participants (e.g., number of OT vs. OTA students, age range, prior experience) and clarify how many completed both the pre- and post-surveys.

Response: The origami experience was described in more detail on how themes were coded, the model used during the experience, and student support during the experience. A graph was used to illustrate OT vs OTA . The average age was 24 and 35 students completed the pre-post survey.

2. Pedagogical and Clinical Reasoning Depth

Issues Identified:

- The manuscript lacks detail on how the activity promoted clinical reasoning and understanding of OT performance components (e.g., body functions, performance skills).
- No mention is made of how students were taught to grade or adapt activities - core competencies in OT practice.
- No theoretical educational framework is cited.

Recommendations:

- Integrate references to relevant educational frameworks such as Kolb's experiential learning theory, Bloom's taxonomy, or Knowles' adult learning theory.
- Explain how students were encouraged to consider motor, sensory, cognitive, and psychosocial demands of the activity.

- Add discussion or examples of how the activity could be graded (e.g., simplified or made more complex) or adapted (e.g., for someone with limited vision, reduced dexterity, or cognitive impairments).
- Include a structured example or table aligning components of the origami task with OT domains (e.g., attention, visual-motor integration, bilateral coordination, etc.).

Response: The experience follows Kolb's Experiential Learning Theory (McLeod, 2025). The Concrete Experience Stage included the lecture and making of the crane. The Reflective Observation Stage was encouraged when the students were asked to reflect upon the steps required to complete each stage of the crane and how the activity could be graded up or down. The overall experience was geared to lead students to the Abstract Conceptualization Stage, where they had new learning about the activity analysis process through the origami experience. This new learning could then lead them to the Active Experimentation Stage, where they could implement and apply their new learning in coursework and with clients they worked with.

3. Discussion and Theoretical Integration

Issues Identified:

- The discussion largely reiterates findings without tying them to OT education literature or broader pedagogical implications.
- There is no discussion of how origami could generalize to other courses, practice areas, or instructional strategies in OT education.

Example addition for the Discussion section:
"Although the activity required students to engage in a hands-on task, deeper understanding of the activity analysis process depends on students' ability to link observed performance to therapeutic decision-making. Embedding structured prompts based on the OTPF and encouraging students to analyze motor, sensory, and cognitive demands - and to grade the task accordingly - would enhance the pedagogical effectiveness. This approach aligns with Kolb's experiential learning theory and supports the development of clinical reasoning skills foundational to OT practice."

Recommendations:

- Expand the discussion to explain how occupation-based teaching methods can enhance clinical reasoning, client-centered care, and student engagement.
- Cite relevant literature on instructional design in OT education, active learning, and experiential approaches.
- Relate the activity to broader OT curriculum goals, including development of therapeutic use of self, adaptation, and problem-solving skills.
- Discuss how this activity could be adapted or extended for use in other courses or student populations.

Response: Literature supports the use and development of educational strategies that involve theoretical and practical approaches to facilitate increased student awareness, knowledge, and ability to adapt interventions (Bar & Ratzon, 2016). Activity analysis courses are effective in increasing student knowledge, awareness, sense of competence, and interest in addressing the accessibility needs of individuals with disabilities. (Bar & Ratzon, 2016).

It is often taught as part of foundational courses in which students develop and learn about the concepts of occupational therapy. Other courses within the curriculum build on these concepts to meet course learning objectives. As a beginning course, students learn how to analyze any human and non-human components that are required to fulfill their identity. Occupation is a fundamental human behavior that is explored and analyzed. Students explore the complexity of analyzing occupational engagement and the demands of daily activities on human performance. Understanding the activity analysis requires an examination of physical and cognitive components that impact health and therapeutic outcomes. A complete activity, origami requires focus and perseverance to follow instructions to produce an outcome. Having students engage in an origami activity requires them to actively engage and apply many skills, promoting creativity and problem-solving skills. The student's learning experience of activity analysis improved due to being able to practice and receive feedback. It helped them see how the activity analysis process is used to determine the skills required to complete an activity (e.g., physical, emotional, and. cognitive skills) to determine whether an activity could be of therapeutic value to a client, or to explore where there may be a breakdown between the skills required to successfully complete the activity and the client's abilities. This concept is reinforced throughout the curriculum when discussing evaluations and intervention planning. For example, findings can be used to help develop client-centered goals and treatment plans, and/or to find ways to adapt the activity or environment to facilitative maximal participation.

4. Grading and Adapting Activities

Issues Identified:

- There is no indication that students were taught to grade or adapt the activity - critical aspects of OT clinical reasoning.
- This gap limits the applicability of the activity for students' future fieldwork and practice.

Recommendations:

- If grading/adaptation was part of the activity, describe it in the methods and results.
- If not, acknowledge this as a limitation and include it in the "Implications for Future Research" section, suggesting how the activity could be expanded in the future.

Response: The experience was adapted and modified for each participate to maintain mastery of a crane. To achieve competency, the origamist repeated steps several times. By ensuring correctness of each fold, he continuously checked and provided feedback to participants before moving to another step. Participants were allowed and encouraged to go to the monitor, show their work and ask questions. In addition, members of the research team walked around and provided assistance as needed. During the process of making the crane, students were asked to carefully think about the steps and the physical and cognitive skills required to complete each step. They were asked to reflect on how the activity of making the simple crane could be graded up, graded down, or adapted to meet client needs.

Overall Recommendation: Revise and Resubmit

The manuscript presents a meaningful, creative, and occupation-based teaching strategy. However, revisions are necessary to meet the academic and pedagogical standards expected of published educational research in occupational therapy.

Key Revision Priorities:

- Revise the methodology section to improve clarity and rigor.

- Deepen the pedagogical framing and clinical reasoning connections.
- Define and integrate OT practice terms using OTPF language.
- Include student quotes and/or data tables to substantiate findings.

Once these revisions are addressed, the manuscript has strong potential to contribute to the scholarship of teaching and learning in occupational therapy and allied health professions.