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EPortfolio: The Scholarly Capstone for the Practice Doctoral Degree in Occupational Therapy

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EPortfolio: The Scholarly Capstone for the Practice Doctoral Degree in Occupational Therapy

Abstract

A critical decision doctoral faculty must make is deciding what is the most appropriate capstone or terminal requirement for the practice doctorate degree that is consistent with the program's curriculum. EPortfolios are a viable option for documenting doctoral students' advanced knowledge and competence. After creating a professional development plan, the students record individual experiences and reflections framed by a self-selected metaphor, provide objective documentation of achievements, and verify advanced competence in a specific area in their ePortfolios. As the students construct their ePortfolios, they must engage in self-directed learning that is grounded in evidence-based and reflective practice, with a focus on developing professional characteristics. The purpose of this article is to describe the rationale and process of using an ePortfolio as the terminal requirement for a practice doctorate degree in occupational therapy.

Keywords

Education, Profession competence, Reflection, Learner-centered education

Cover Page Footnote

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Professional practice doctoral degrees are common in health care professions, such as physical therapy, nursing, and psychology (Willis, Inman, & Valenti, 2010). Many academic programs in occupational therapy are currently developing both entry-level and postprofessional practice doctoral programs. In this article, we present the ePortfolio as the faculty in the New York University Department of Occupational Therapy conceptualized it for a postprofessional practice doctorate. We specifically focus on the structure and rationale that supports our decision to use the ePortfolio as the terminal requirement.

In response to changes in the profession, the New York University Department of Occupational Therapy launched a practice doctoral degree program in 2007. The program's goal was to prepare therapists with the advanced knowledge and skills necessary to provide outstanding and ethical practice. Following the review of several alternatives for the terminal degree requirement (i.e., thesis, dissertation, project), the faculty decided to adopt the ePortfolio, as described by Jensen and Saylor (1994) and Smith and Tillema (2001). The ePortfolio meets our goals of a terminal requirement that promotes students' lifelong learning, enhances their professional development, and documents their competence. Further, this terminal requirement is distinct from the dissertation that we require for our doctorate of philosophy.

EPortfolio

An ePortfolio is a collection of electronic evidence a person presents on a web-based platform that provides support of his or her learning or

ability. It includes a focused collection of digital items that vary from ideas and reflections to specific products (Kardos, Cook, Butson, & Kardos, 2009; McAllister, Hallam, & Harper, 2008). The European Institute for E-Learning has defined the ePortfolio as "a digital collection of authentic and diverse evidence, drawn from a larger archive, that represents what a person . . . has learned over time and on which the person . . . has reflected, designed for presentation to one or more audiences for a particular rhetorical purpose" (Kardos et al., 2009, p.136). Thus, an ePortfolio is a way of thinking through self-reflection that assists therapists in connecting theory and practice (McAllister et al., 2008).

In health professions (Anderson, Gardner, Ramsbotham, & Tones, 2009; Davis, Myers, & Myers, 2010; Maggs & Smith, 2010; Pincombe, McKellar, Weise, Grinter, & Beresford, 2010) and education (Powell & Greenberg, 2009; Ritzhaupt, Singh, Seyferth, & Dedrick, 2008), the ePortfolio is considered a useful and effective method to document a person's performance and achievements using a web-based collection of evidence. Nursing faculty have effectively used ePortfolios in doctoral programs as a repository for academic evidence of advanced competence in documenting advanced leadership, evidence-based practice, and systems management skills (Green, Wyllie, & Jackson, 2014; Haverkamp & Vogt, 2015; Maggs & Smith, 2010; Moriber et al., 2014; Smolowitz & Honig, 2008).

Conceptual Framework

The curriculum of the occupational therapy practice doctoral program at New York University

is based on constructivism (Bruner, 1996) and Knowles' theory of andragogy (Knowles, 1990, 1996; Knowles, Holton, & Swanson, 2012), which proposes that postprofessional occupational therapy students, as adults, personally construct knowledge and skills through self-directed learning. As adult learners, students have prior knowledge and experiences that enhance the educational process. That is, adult students learn best through active learning via iterative, didactic, and experiential activities (Schön, 1987). Based on these beliefs, adult students are ultimately responsible for their own learning and faculty assume a facilitative, mentoring role.

Consistent with a constructivist approach, the ePortfolio reflects the students' contextual understanding of their learning (Ehiyazaryan-White, 2012). Summarizing this process, Dall'Alba and Sandberg (2006) write, "achieving skillful know-how is embeddedness within the situations encountered, which demands experience of those situations" (p. 399). They proposed that knowledge and skills develop from an "understanding of, and in, professional practice . . . promoting development of professional ways-of-being that can deal with the complexities, ambiguities, and dynamic change inherent in professional practice" (p. 401).

As the students construct their ePortfolios, they must continually reflect an ongoing personal narrative of their learning experiences. As summarized by Haverkamp and Vogt (2015), "reflection is a contextual examination of the journey the learner has experienced and encourages

the learner to critically analyze the process, not just the content of the lessons learned" (p. 286). As the students write their reflections, they engage in both summative and formative self-assessments of progress toward the achievement of their goals. These reflections capture the breadth and depth of the students' unique stories (Haverkamp & Vogt, 2015). We discuss reflection as a major component later in this article when we outline the process of developing the ePortfolio.

A scholarly ePortfolio requires faculty to develop a means of interactive communication and iterative feedback (Ewen, Rowles, & Watkins, 2012). Faculty provide ongoing feedback throughout the process and engage the students in activities related to the students' goals. In addition, faculty encourage the students to engage in deeper reflection and ensure the reflections connect to the students' self-identified goals and objectives. These student-faculty dialogues offer opportunities of insight for both the students and the faculty members (Hall, Byszewski, Sutherland, & Stodel, 2012). Finally, faculty use the rubric developed for the final assessment as a formative assessment in providing constructive feedback to the students. Details about the rubric are included in Phase 4, which focuses on assessment.

Constructing an Occupational Therapy EPortfolio

Artifacts and reflections are the two key components of an ePortfolio. EPortfolios verify the students' learner-centered outcomes as well as record ongoing achievements and competence with supporting artifacts. Artifacts illustrate acquired

knowledge with performance observations, case studies, peer ratings, consumer feedback, specialty certification, publication, presentations, products, and other outcomes. Acquired knowledge supporting artifacts must be evidence-based, that is, the students must use best evidence currently available for practice (Law & MacDermind, 2014). Reflections document the students' experiences and their deliberations and contemplations based on critical reasoning. The final ePortfolio is not a scrapbook of achievements, but an organized thematic record that reveals a contextual understanding of a student's learning (Haverkamp & Vogt, 2015).

The students construct their ePortfolios in four overlapping phases. During Phase 1, the students focus on completing a self-analysis of their ambitions and current practices to determine goals consistent with their areas of specialization. They define goals, master the technology, and develop an organizational structure for their ePortfolios. During Phase 2, the students concentrate on the development and collection of artifacts that demonstrate the advancement of knowledge, skills, and abilities gained through the integrated academic coursework in the program and their practice experiences. In Phase 3, the students organize and catalog their artifacts to present a personal narrative of their learning experiences. Finally, in Phase 4, the students assess their ePortfolios and focus on achieving their self-determined goals. They begin by examining their artifacts and reflections to identify associations and points of connection to offer verification of their advanced competence. In

addition, faculty advisors assess whether the students have achieved their learner-centered goals, and whether the ePortfolios authenticate the students' competence in their areas of specialization. The students then submit evidence-based, reflective ePortfolios to a panel for external review.

The students develop their ePortfolios throughout their doctoral coursework, supported by learner-directed ongoing seminars and faculty mentoring, on their own individualized timeline (see Figure 1). Some students spend more time developing their goals and defining their areas of competence. Other students spend more time developing artifacts that are complex. Before beginning the development of their ePortfolios, the students learn about the web-based system and structure of ePortfolios. Considering factors of cost, flexibility, usability, and company support, criteria proposed by Himpsl and Baumgartner (2009), the faculty has selected Taskstream (<https://www1.taskstream.com/>).

Phase 1: Self-Assessment to Prepare a Professional Development Plan

Doctoral students must be self-directed and motivated to develop advanced knowledge and skills relevant to their practice specialization. Accordingly, the students develop their ePortfolios beginning with a self-assessment and a personal examination of their educational goals. As the students identify their personal educational goals, they take into account current knowledge, skills, and performance in light of their future ambitions.

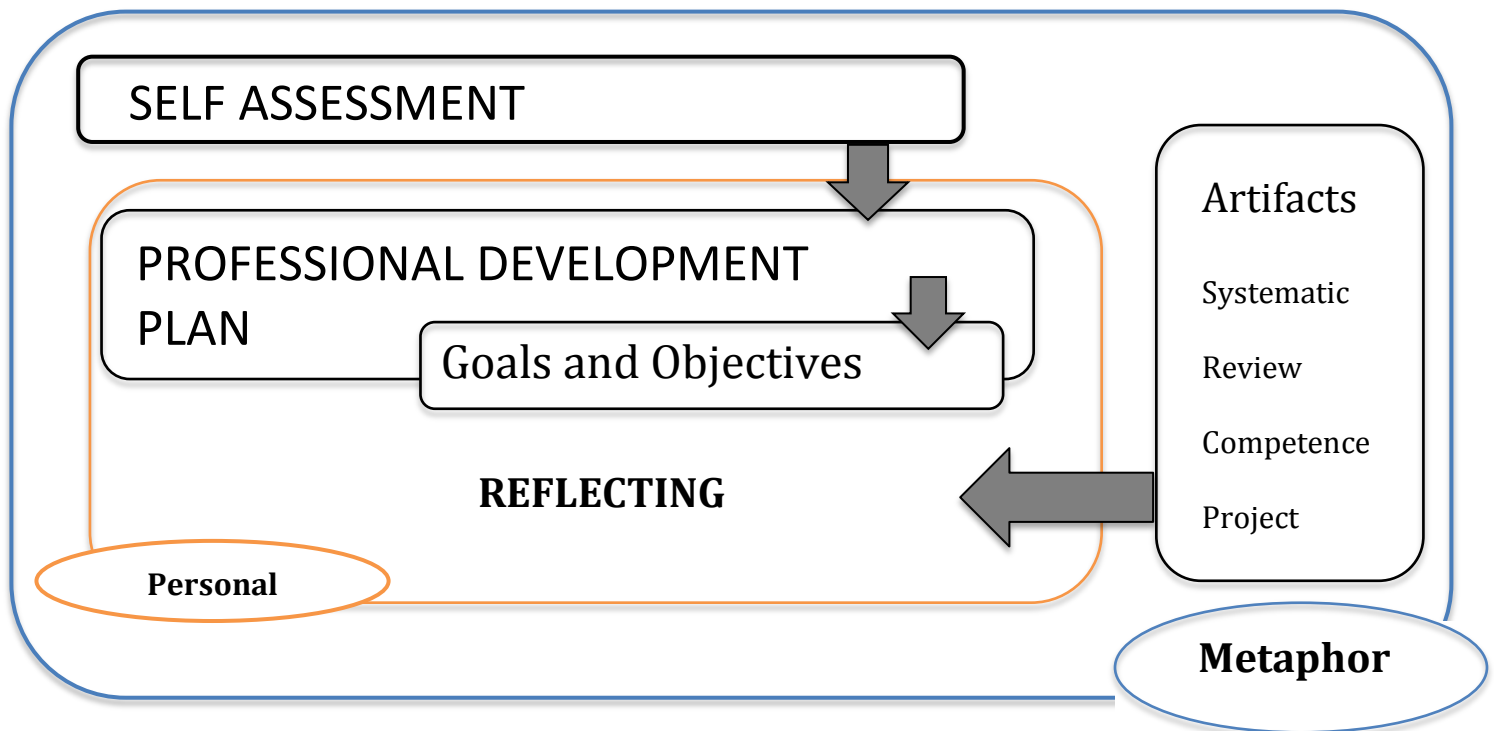


Figure 1. Diagram of ePortfolio process. This diagram illustrates the relationship of the ePortfolio components showing them embedded in the metaphor. Each component is unique, but they are closely linked to each other and grounded in reflection.

Professional Development Tool. The students begin the process of self-analysis by completing a personal self-assessment using the American Occupational Therapy Association's (AOTA) Professional Development Tool (PDT) (AOTA, 2003). The PDT provides therapists with a protocol to self-assess practice in the context of their specific roles and responsibilities (e.g., those of an administrator, manager, educator, clinician, consultant, supervisor, or entrepreneur). Completing the PDT requires therapists to reflect on their practice, identify areas of professional development, review standards and guidelines (e.g., practice guidelines, critical pathways, AOTA standards, code of ethics), examine relevant research, and obtain objective data (e.g., peer reviews, client satisfaction). Specifically while

completing the PDT, the students examine their accomplishments and aspirations using the AOTA *Standards for Continuing Competence* (AOTA, 2010; Hinojosa et al., 2000). The students then prepare a professional development plan based on this information to identify specific competencies and decide what they wish to achieve during their academic coursework of doctoral study.

Setting personal goals. Students must develop goals related to the five standards in the AOTA's *Standards for Continuing Competence*. These five standards are knowledge, critical reasoning, interpersonal skills, performance skills, and ethical practice. In the ePortfolio seminar, doctoral students work on developing their own specific goals related to developing advanced competence in their identified area of specialization.

The students write SMART goals (specific and significant; measurable, motivational, methodological, and meaningful; action oriented, achievable, and attainable; realistic and relevant result-oriented; time bound and tangible) (Kouzes & Posner, 2000; Prather, 2005) that are consistent with the goal-setting theory (Hinojosa, 2012; Locke, 1968). This theory hypothesizes that a person's performance improves when he or she is committed to specifically defined, self-determined quantifiable goals.

After goal setting, the students continue strategic planning and construct professional development plans. The professional development plans serve as blueprints for the ePortfolios. As part of their professional development plans, the students identify strategies they will use and the resources that are available and needed. They also determine possible indicators of success or outcomes. At the completion of the professional development plans, the doctoral program director assigns two faculty members, both with expertise in the specialty area, to serve as advisers. The advisers review the students' professional development plans and provide ongoing feedback. The faculty determine whether the students' professional development plans are appropriate or not based on the following: the plan is relevant and is suitable for a practice doctorate, the plan is organized around a specific competency, the goals are SMART, and the overall plan is logical and comprehensive.

Once the students' faculty advisers approve their professional development plans, the students

transpose the plans into blueprints for their ePortfolios. In the blueprints, the students identify what they want to document and how they plan to organize evidence to document competence and achievement of their educational goals.

A metaphor: Conceptual organization of the ePortfolio. After composing blueprints for their ePortfolios, the students engage in the challenging task of developing a metaphor to title their unique ePortfolios. A metaphor is "a figure of speech in which a term or phrase is applied to something to which it is not literally applicable in order to suggest a resemblance...to represent something else; emblem; symbol" (Dictionary.com, n.d.). The students engage in abstract reasoning to develop a metaphor considering the whole blueprint and label it accordingly (Thibodeau & Boroditsky, 2011). Thibodeau and Boroditsky (2011) argue that the metaphor influences the way we think about complex and abstract ideas and how people solve problems and gather information. People develop a metaphor from personal observations and reflections, and the metaphor is thought to increase knowledge (Baake, 2003). Metaphors in ePortfolios not only promote the students' abstract reasoning, but also provide the students with a vehicle to conceptualize their knowledge structures and ensure content consistency. In addition, the process of developing a metaphor also ensures that the students view their ePortfolios as a whole as they conceptualize the totality of what they plan to achieve in a personal context. In this conceptualization, the students must create a visionary view of their overall educational goals.

The metaphor becomes the title of the ePortfolio and frames its organization.

Phase 2: Artifacts to Support Identified

Competence

In Phase 2, the students use their academic coursework and clinical experience to collect artifacts that demonstrate the advancement of knowledge, skills, and abilities that have been gained through the integrated academic and clinical work in the program. Copies of assignments completed for coursework are not acceptable as artifacts. The students may develop an artifact by restructuring or transforming content they prepared for their coursework to another form. For example, a student's written paper may be restructured into a PowerPoint lecture, or the student may transform a class assignment into a draft position paper that argues key points learned from the assignment. The students learn how to conduct a limited scope systematic review in class. When developing their required systematic reviews as an artifact, the students may use the results from their class assignment as a starting point, but they must expand the review and complete a more in-depth analysis.

Artifacts are the activities, projects, and papers that the students document as evidence to support the accomplishment or achievement of their goals (Jensen & Saylor, 1994). Consistent with constructivism and learner-centered education, the students self-select all artifacts relevant to their identified areas of competence. Further, the students must select and document artifacts that are consistent with their individual SMART goals. For example, if a student works toward a goal of

acquiring knowledge in a specific area, each artifact would have to relate to the knowledge he or she gained. The students in our program must demonstrate the ability to translate research into practice through critiques of existing evidence, evaluation of outcomes, and implementation of projects that contribute to the development of best practice. Thus, the students are required to include a systematic review and verification of the completion of a competence project among the ePortfolio artifacts.

Systematic review artifacts. The students conduct a systematic review as an artifact to support their advanced knowledge in their areas of competence. To complete the systematic review artifact, the students first identify a well-defined question grounded in the practice. They then summarize and synthesize the results after using clearly defined methods to perform a comprehensive search and critical appraisal of individual studies. As an evidence-based perspective review, it will include clear inclusion and exclusion criteria as well as reviewing and ranking the literature. The criteria for ranking levels of evidence in a systematic review are aligned with criteria used for an AOTA evidence-based project (Holm, 2000; Lieberman & Scheer, 2002).

Competence project artifacts. As the students are developing their SMART goals, they must decide what kind of project will verify they have established competence in a specific area. The students then select the competence projects that are most consistent with their goals: (a)

clinically oriented program development, (b) evidence-based clinical practice guideline, (c) product, or (d) theory-based guideline for intervention.

- Clinically oriented program development:
The students develop their ideas into a sustainable and meaningful program that is related to occupational therapy and client needs. The proposal must include, but is not limited to, a need and asset assessment, strategies of implementations, and outcome measures.
- Evidence-based clinical practice guideline:
Based on the best available evidence and all of the relevant issues on a particular topic, the students develop a clear and comprehensive framework to guide clinical practice. The guideline provides comprehensive recommendations across the range of clinical activities required for persons with the identified problems. The guideline must include assessments, prognosis, intervention selection/effectiveness, monitoring, and evaluating the outcomes of clinical management. (MacDermid, 2014)
- Product: The students develop a proposal that substantiates the need for the product and its relationship to occupational therapy. The students can format the product project in any of the following: in-service, curriculum-related product, therapeutic invention, or continuing education video.

- Theory-based guideline for intervention:
The students develop a theory-based guideline for intervention that addresses a specific practice-based problem. The students can present this theory-based guideline for intervention as a frame of reference or as a theoretically based protocol. Each theory-based guideline must include a theoretical base, function/dysfunction continua, objective indicators of function and dysfunction, evaluation, postulates regarding change, and application to practice. (Hinojosa, Kramer, & Luebben, 2010)

Goal related artifacts. Each ePortfolio must include self-selected artifacts that support the specific goals the student has identified (Grant, 2005). Grant (2005) presents a comprehensive list of possible artifacts appropriate for an ePortfolio. For the practice doctorate ePortfolio, the students should follow the rule of parsimony, which instructs the students to carefully select only relevant items that support their competence in the goals that have been identified. Three categories of evidence can be summarized from Grant's (2005) extensive list of appropriate artifacts. First are those that capture the students' involvement or achievement (i.e., qualifications, certificates, licenses, awards, prizes, and other achievements). Second are those activities in which the students have participated or are participating (i.e., volunteer experience, professional or community leadership, and research collaboration). In the third category, the students include assets, objects, or things that they have

created or have put together (i.e., collection of case studies, assistive technological devices, and manuscripts). During their course of study, the students organize and catalog their artifacts and write reflective summaries.

Phase 3: Reflection and a Personal Narrative to Enhance Students' Own Learning

The artifact itself is not adequate for the ePortfolio. Instead, the students must reflect and examine their own learning (Kardos et al., 2009; Parkes, Dredger, & Hicks, 2013; Wang, 2009). Dewey (1933) described key attributes of reflection as thoughtful, deliberate, inspective, and “turning a topic over in various aspects and in various lights so that nothing significant about it shall be overlooked” (p. 57). Kidwai, Johnson, Hsieh, and Hu (2010) further refined Dewey's observation, stating that reflection must be conscious, directed, and purposeful to include the meaning-making process that leads to a deeper understanding of the experience or ideas.

This description of reflection is consistent with Schön's description of reflective conversation (Schön, 1983). This action-reflection assists the students in developing and analyzing effective ways of learning. Reflection leads to problem solving and, as described by Bhattacharya (2001), is a “solution-orientated approach to the learning process” (Abstract). When people reflect, they continuously improve their understanding, knowledge, and practice (Kardos et al., 2009).

Reflection and reflective practice are regarded as important components of professional competence (Hall et al., 2012; Kinsella &

Whiteford, 2009). Thus, reflection is a critical and fundamental aspect of the ePortfolio (Green et al., 2014; Parkes et al., 2013; Pitts & Ruggirello, 2012). Reflection provides an explicit approach to practice for doctoral students to explore their own beliefs, attitudes, and values in the context of integrating the theory and practice. They reflect in their ePortfolios on the compilation of experiences and achievements, they then write reflections to enhance their reflective practices (Schön, 1983, 1987). In this process, they engage thinking in action that involves personal examinations of what would be the best practice. A summary or narrative about a situation is not a reflection.

The ePortfolio includes both formative and summative written reflections. Throughout the development of their ePortfolios, the students must submit confidential formative reflections that they share with the seminar instructor and committee members. As part of the formative reflection, the students are encouraged to share more than their thoughts and experiences and to include ongoing personal analysis (Kardos et al., 2009). Faculty's feedback and input are an essential part of this process.

As a final requirement, doctoral students examine their accomplishments to develop new insights that they can apply to future practice. Considering their collective formative reflections, the students engage in a process of writing summative introspective reflections related to each goal. The students write these concise introspective reflections as they capture what they have learned while in the process of achieving their goals. These

summative introspective reflections include an analysis and critique of what they have done and have learned in the process. The students' summative introspective reflections ultimately inform their perspective of the world and their view of practice.

Phase 4: Assessment to Substantiate Competence and Realization of Goals

Although the students receive ongoing feedback during all phases, assessment is the focus during the final phase. At this phase, both the faculty advisors and the students engage in a review of the final ePortfolio, including its organization, artifacts, and reflections. Assessment consists of two parts: the students' self-evaluations through summative introspective reflections and the faculty's evaluations.

As a part of their final ePortfolios, the students reflect on each goal separately and think about what they learned while achieving that goal. As stated earlier, in these summative introspective reflections, students focus on their learning and competence in the specific areas they have identified. As the students write these introspective reflections, they examine their artifacts and reflections to identify associations and points of connection to offer verification of their advanced competence (Parkes et al., 2013).

Faculty's assessments also focus on whether the students have achieved their learner-centered

goals and whether the ePortfolios documents the students' competence in the specific area. Faculty's comprehensive review of the whole ePortfolio is guided by a rubric with its explicit criteria and expectations.

Rubric to evaluate ePortfolio. Tables 1 and 2 summarize the rubric developed by the faculty and state the specific criteria and levels of expectations related to each required component of the ePortfolio. As faculty review the artifacts, they examine the aspects relative to the extent to which they provide evidence of advanced competence in the specified area. Further, while assessing the overall quality of the ePortfolio, faculty attends to whether the evidence illustrates and interacts with academic coursework. Table 3 lists the rubric's six categories that faculty have decided are essential to the students' learning outcomes. Each category is further broken down into its specific criteria to assess respective learning outcomes in four levels of expectation, which range from exemplary to needs refinement. In developing the rubric, faculty determined the weight of each category depending on the relative value given a total of 100% for the entire ePortfolio. For example, artifacts and reflections are the two major key components of the ePortfolio. Therefore, they weigh heavier than the other categories (78%). Specifically, artifacts are 50% of the ePortfolio and reflection is 28%. Table 3 includes the distribution scores.

Table 1*Structure of ePortfolio*

| Components | Descriptions |
|-------------------------------|--|
| Professional Development Plan | Documents self-assessments, including a completion of the Professional Development Tool; examination of practice and work environment; reflection on personal vision Based on self-assessment, develops a blueprint for professional development Identifies goals and objectives that are consistent with the AOTA <i>Standards for Continuing Competence</i> |
| Self-Introduction | Personal narrative in context with goals and objectives |
| Artifacts | |
| General | Provides supporting artifacts for each identified goal |
| Systematic Review | A report of systematic review in area of specialization |
| Competence Project | Selects a competence project from four options: <ul style="list-style-type: none"> • Clinically oriented program development • Clinical pathways (i.e., single case study, clinical pathways guidelines) • Product (i.e., develop an in-service, product, continuing education video) • Theory-based guideline for intervention (i.e., develop frame of reference or theoretically based protocol) |
| Reflections | Summative reflections to each goal |

Table 2*ePortfolio Assessment Rubrics*

| Grading criteria | | | | |
|---|---|---|---|-------|
| Exemplary (4) | Satisfactory (3) | Sufficient (2) | Needs Refinement (1) | Score |
| GOALS/PURPOSES (5%) | | | | |
| Goals clearly indicate measurable outcomes | 80% of the goals clearly indicate measurable outcomes | 50% of the goals need to have more measurable outcomes | All of the goals need to be revised to include measurable outcomes | |
| FUNDAMENTAL ELEMENTS (10%) | | | | |
| Excellent organization, easy to navigate with layouts that are visually balanced, attention-grabbing, and related to the metaphor | 80% of the layouts are visually balanced, organized, and connect to the metaphor | 50% of the layouts are visually unbalanced due to blank or cluttered space and/or are not connected to the metaphor | Layout is visually unbalanced due to blank or cluttered space and the organization is disjointed and confusing; not related to the metaphor | |
| ARTIFACTS: SYSTEMATIC REVIEW (15%) | | | | |
| The systematic review question follows the PICO/T format, is clear and related to the purpose and need of the review | The systematic review question follows the PICO/T format, and is somewhat related to the need and purpose of the review | The systematic review question does not follow the PICO/T format but makes some sense | The systematic review question is not specific and/or does not have a focus | |
| ARTIFACTS: Competence Project (select one) (25%) Clinically Oriented Program Development | | | | |

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| | | | | |
|--|---|---|---|--|
| Research evidence is clearly integrated into the development of the program addressing key elements (e.g., techniques, duration, frequency) | Research evidence is stated with some links to the development of the program but clarification of different elements (e.g., techniques, duration, frequency) is needed | Research supports the program activities but is not linked to the development of the program | Empirical evidence is limited or poorly integrated into the development of the program | |
| B. Clinical Practice Guideline | | | | |
| Detailed action steps described clearly so that another health care professional could carry them out | Action steps do not include enough details to replicate the actions steps | Action steps are described in fragments | Action steps are vague and lack detail | |
| C. Product | | | | |
| Assessments measure outcomes and clearly reflect the learning objectives of the product | Assessments measure some outcomes but are not comprehensive | Assessments are identified but do not directly relate to the product plan | Assessments identified to determine the products outcomes are limited | |
| D. Theory-Based Guideline for Intervention | | | | |
| Strong theoretical base with clear description of the constant and dynamic theories; clearly identifies occupational therapy's domain of concern | Theoretical base has adequate constant and dynamic theoretical information but organization needs to be refined | Theoretical base includes adequate constant theoretical information but has a weak dynamic theory | Theoretical base is too general and does not relate to the occupational therapy's domain of concern | |
| ARTIFACTS: Supporting Documents (10%) | | | | |
| All artifacts demonstrate appropriate/sufficient accomplishment of the related goal(s) | 80% of the artifacts demonstrate appropriate/sufficient accomplishment of the related goal(s) | 50% of the artifacts demonstrate appropriate/sufficient accomplishment of the related goal(s) | Artifacts do not demonstrate appropriate/sufficient accomplishment of the related goal(s) | |
| REFLECTIONS (28%) | | | | |
| All of the reflections include discussion of professional development related to advanced competence in the identified area | Most of the reflections support the area of competence consistent with a specific standard | Some of the reflections discuss competence generally and are not related to the AOTA's <i>Standards for Continuing Competence</i> | Little or no evidence of self-analysis | |
| RESUME (2%) | | | | |
| Resume includes all major categories and is comprehensive | Resume includes all major categories but one or two categories need clarification | Resume missing one or two major categories and content needs refinement | Resume needs additional information to document the candidates' achievements | |
| PROFESSIONAL PRESENTATION AND WRITING (5%) | | | | |
| Outstanding scientific writing | Writing needs editing to establish clear links between ideas | Writing is accurate but perfunctory | Significant work needed to exemplify good scientific writing | |

Note. One assessment criterion is provided for each category. Categories include goal/purposes, fundamental elements, artifacts (systematic review, competence project, supporting documentation), reflections, resume, professional presentation, and writing.

Table 3*ePortfolio Assessment Rubrics Elements***Elements**

Goals/purposes

Fundamental elements (presentation)

Artifacts

Systematic Review

Competence Project

- Clinically Oriented Program Development
- Clinical Pathway
- Product
- Theory-Based Guideline for Intervention

Supporting Documents

Reflections

Resume

Professional presentation and writing

When reviewing the students' ePortfolios, faculty score all items of specific criteria listed in the six categories. The sum of the scores for each category is calculated, and relative value to the total ePortfolio is then applied to each subcategory. The summation of all relative values of six categories is used to determine the students' eligibility for final oral defense. The students need to obtain 85% of the total sum scores in order to be qualified to apply for final presentation and public defense. Even with the rubric, the faculty assessment of the final document is subjective. Based on the evidence, faculty must determine whether there is sufficient evidence to support the students' advanced competence in the specific area identified. Several authors (Ferns & Zegwaard, 2014; Gibson, 2006; Haldane, 2014; Rhodes, Chen, Watson, & Garrison, 2014) have written about the validity and reliability of assessing ePortfolios. Ferns and Zegwarrrd (2014) endorsed the use of ePortfolios as

validity, reliability, absence of bias, and fairness. They concluded that ePortfolios, through artifacts "demonstrate the developmental nature of skill acquisition in authentic and relevant environments" (p. 181). Thus, ePortfolios are authentic and valid because they are performance-based and verify both what students have learned and their abilities. Research also supports that clear criteria and assessment experience improve reliability (Haldane, 2014).

Public defense. The assessment phase ends with the students publicly defending their ePortfolios as a scholarly professional exposition of their learning and competence. After a student's committee approves the ePortfolio, the student defends his or her ePortfolio to a panel of five people, including two committee members and three experts who have served as readers, in a forum open to other students and members of the community. The experts selected and invited by the student's advisor may be faculty in the department, faculty affiliated with the university, or members from the community with doctoral degrees. This forum offers the student the opportunity to present an evidence-based account of his or her obtained knowledge and competence (Parkes et al., 2013). After the experts ask questions and comment, the forum is opened up to the audience for questions. When the questions end, the panel meets in private to evaluate the student's performance. The readers evaluate whether the ePortfolio is consistent with the evidence-based knowledge in the area of specialization. In addition, they also review the student's professional development plan and assess whether the student achieved his or her SMART

goals. The panel members judge the ePortfolio based on the original professional development plan and its consistency with the evidence-based knowledge in the field of inquiry. After the panel meets, they provide the student with feedback about both the final ePortfolio and about his or her performance during the defense.

Challenges

The successful use of the ePortfolios is dependent on the students discovering the relevance of the curriculum, their response to the curriculum, and their understanding of the importance of being able to document and present evidence of their learning and proficiency (Kardos et al., 2009). Both students and faculty need to recognize that adoption of the processes involved in recording, evaluating, and reflecting on the practice is an integral part of a complex and holistic underpinning to a career in occupational therapy.

Technology and software use raised several challenges for some of the students and faculty. Although software use has improved and is much easier to use with easier access, it does require some advanced skills. In certain situations, some of the students may focus more on the technological aspects of the ePortfolios rather than on their own learning objectives. Other students struggle with technology, and it becomes the major or only focus of their learning.

As with technology, reflections are not automatic or easy to write. Many students write narratives and have difficulty reflecting on their own actions. These students may write interesting summaries or narratives about their experiences

without any deep insight. Thus, this creates challenges for both faculty and students. Faculty need to explore different ways to promote reflection inquiries (Wang, 2009), and the students must devote the time and effort to develop abstract thinking about their own actions.

Reflections include discussions that may identify a person's weakness or confidential personal encounters. Likewise, some of the artifacts may include private information that the students may need to mask before it is posted on a public platform. Thus, confidentiality is a significant concern in each phase of developing an ePortfolio. Faculty and the students have an obligation to respect the privacy and confidentiality of each person. The students must respect information that others share with them and keep it confidential. Faculty must respect information that the students share and not allow it to cloud their judgments or bias their views of a student. For example, a student may learn the most when he or she reveals personal faults during the process of reflection. Faculty must react by not sharing the student's self-disclosed faults with others.

For faculty, using ePortfolios effectively for constructive, student-centered learning can be time consuming. It is also difficult for some faculty to release the responsibility of learning to the learner. In this situation, faculty may over direct and control the student's learning experiences at the expense of the learner being more self-directed and confident. Beyond the time a faculty mentor may spend providing feedback, reading, and responding to reflections and going over artifacts, they have to

focus on facilitating the student's ownership of his or her own learning (Moriber et al., 2014).

Summary

There is an increasing desire among occupational therapists for acquiring enhanced clinical knowledge beyond the professional master's entry-level degree. A practice doctorate in occupational therapy can provide an attractive and intellectually stimulating opportunity for therapists who want advanced knowledge but who do not want careers in research or academe. The described program based on the use of an ePortfolio offers therapists an opportunity to enhance their professional competence in a specialized area with an understanding of evidence-based practice. Graduates have the highest level of practice knowledge and expertise in their specialized area and are able to evaluate the efficacy of the guidelines used for practice. With this knowledge, they are able to further develop and refine occupational therapy practice. In summary, a doctoral program based on an ePortfolio prepares expert therapists with advanced competencies, allowing them to provide higher-level services and add to the profession's applied body of knowledge.

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