

EFFECT OF ITEM REVERSAL AND ANCHOR INTASC-BASED TEACHER EDUCATION PORTFOLIOS AS VIEWED THROUGH THE LENS OF JOHN DEWEY'S EXPERIENCE AND EDUCATION

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This paper examines (1) portfolio research and its convergence with Dewey's education principles as explained in *Experience and Education* and (2) whether an INTASC-based portfolio process adheres to Dewey's principles of education. Portfolio research regarding habits of critical thinking and growth clearly corresponds to Dewey's principle of continuity of experience. Recommendations regarding the objective aspects of scaffolding and recursive experience support Dewey's second principle of interaction. An INTASC-based portfolio promotes a balance of structure and freedom when scaffolding and mentoring take place in a climate that nurtures professional and personal growth through the portfolio experience, all aspects that find congruence with Dewey's philosophy of education.

INTRODUCTION

Portfolios have become commonplace in preservice teacher education programs (Zeichner & Wray, 2001). Portfolio, as a means of candidate assessment, was approved by our faculty in 1988 and was implemented in 1989 with the stated purpose that it would act as an alternative to standardized tests and as indication of preparedness to teach (Hanhan, 1991). Additionally, portfolios were viewed as an assessment consistent with our teacher education program's commitment to Deweyan-based progressive education and as a "process to foster reflective teaching and learning" (Hanhan, 1991, p.5). For the most part, students were told that, in the semester prior to student teaching, they would select and reflect upon representations of their professional growth and development. With such fairly open expectations, students often appeared for the portfolio reviews with collections of work housed in 3 or 4 portfolios, without a clear understanding of what they were expected to demonstrate; their portfolios and the portfolio interviews were unfocused and less reflective than we would have liked.

BACKGROUND

In 2000, we decided to revamp the portfolio process for our secondary education preservice

teacher program by adopting the Interstate New Teacher Assessment and Support Consortium (INTASC) Principles as the framework for the portfolio artifact selections. Our policies, procedures, and process were based on the work of Campbell, Melenyzer, Nettles and Wyman (2000) with a few modifications to fit our program goals.

Adopting these standards was not an easy decision. As a teacher education program that has long laid claim to Deweyan-based educational theory, we wondered whether these values would be sustained throughout all phases of portfolio assessment. What if incongruities existed between our beliefs in progressive education and a standards-based portfolio assessment?

After lengthy discussion and deliberation, we decided that using standards does not mean standardization and that the INTASC principles served to define our expectations for preservice teacher knowledge, skills and dispositions. In fact, the INTASC principles matched the department's existing teacher development goals. Moreover, it seemed to make sense to make these goals known early in the program to teacher candidates, benefiting them and faculty as well.

Our secondary teacher education program at the University of North Dakota is made up of candidates from arts, sciences and applied disciplines with about 60 students applying to the program each year. At three different points in the

program, students select artifacts as evidence of having met the INTASC principles. Each artifact must include a cover sheet describing the artifact, the rationale for choice of the artifact, or how it meets the principle represented, and a self-assessment of one's work within the represented principle. The portfolio must also include a table of contents, a beliefs statement, and a reflective paper. Teacher candidates are provided, in advance, questions they will be asked to address in a student-faculty portfolio review. This paper deals primarily with the introductory portfolio processes and with faculty and student feedback from this initial portfolio phase.

PURPOSE OF THE STUDY

During the implementation of the INTASC-based portfolio assessment, two questions persisted: (1) How do portfolio assessment practices, as suggested in research-based literature, compare to Dewey's education principles? (2) How well did our preservice program's INTASC-based portfolio assessment process match Dewey's education principles?

We attempted to answer our first question by first reviewing Dewey's principles of education as delineated in *Experience and Education* (Dewey, 1963) and then comparing research-based portfolio assessment recommendations to these education principles. The second question served to guide a formative assessment of our new portfolio process by soliciting feedback from faculty and teacher education candidates after a first experience of INTASC-based portfolios. Their comments served to gauge whether the newly defined portfolio process and procedures of our secondary preservice teacher program were consistent with Deweyan educational principles and research-based portfolio recommended practices.

METHODS

Dewey's two interrelated principles of education—Continuity of Experience and Interaction—as explained in *Experience and Education* (Dewey, 1963) were examined and used as the theoretical framework for this study. Like Dewey, we believe

that our practices should be supported by a sound and articulated belief system. When practices are consistent with beliefs, we stand on firmer ground than aimlessly operating in the absence of a guiding philosophy. By comparing Dewey's principles of education to research-based portfolio recommendations, we were able to construct a framework that allowed us to examine both strengths and weaknesses in our new portfolio expectations and process.

We devised a working outline that highlighted Dewey's two principles of education. Aspects associated with each of the two principles, presented in the next section of the paper, were also included on the outline. We then read literature related to preservice teacher education portfolios in order to examine portfolio implementation recommendations and to situate these within the context of Dewey's education principles. We concluded that the most salient portfolio practices recommendations, from a review of research-based portfolio literature, were indeed congruent with Dewey's education principles. On our working outline, we matched the research-based portfolio recommendations to various aspects of the two principles, also noting the resource information.

Through open-ended questions, we solicited feedback from seventeen teacher education volunteers following their introductory portfolio review and from 11 faculty who had been involved with these portfolio reviews. Their perspectives on benefits and drawbacks associated with their experiences of the INTASC-based portfolio assessment helped us to see the matches and the mismatches between their perceptions and our intent for the portfolio process within the context of Deweyan-based education principles. Any suggestions that they could provide us to improve the process were also solicited. The faculty and student interview information was used formatively to bolster portfolio strengths and to ameliorate weaknesses. A cursory examination of this data also served to support our belief that INTASC-based portfolios are congruent with Dewey's education principles and current portfolio literature; therefore, in the paper, the student and faculty feedback is woven into both Dewey's education

principles and portfolio recommendations for purposes of illustration only.

Dewey's (1963) educational principles provide the framework for this paper; they are both the theoretical framework *and* the organizing structure for this conceptual study. By comparing Dewey's educational theory and portfolio assessment literature, we are concerned with presenting links between Dewey's education principles and recommended portfolio policies and processes. As such, the paper is more conceptually framed than it is research based. The student and faculty feedback mainly serves as support for these conceptual hypotheses or serves to highlight features of our portfolio process and procedures that were inconsistent with Dewey's educational principles. A qualitative analysis of our portfolio research data-interviews, surveys, portfolio artifacts, synthesis papers, and reflective cover sheets-is ongoing and will be presented in future papers.

TEACHER EDUCATION PORTFOLIOS IN THE CONTEXT OF JOHN DEWEY'S PRINCIPLES OF EDUCATION: A CONCEPTUALIZATION

What we need and want is education pure and simple, and we shall make surer and faster progress when we devote ourselves to finding out just what education is and what conditions have to be satisfied in order that education may be a reality and not a name or a slogan. It is for this reason alone that I have emphasized the need for a sound philosophy of experience (Dewey, 1963, p. 116).

Dewey's philosophy of education resides in two interrelated principles: Continuity of Experience and Interaction. The first principle deals with the goals of education and the second principle considers the conditions under which these goals are realized. Portfolio research recommendations and student and faculty perspectives acquired from interviews are interwoven into the dominant domains of each of Dewey's two education principles

Continuity of Experience

The first principle of Dewey's (1963) philosophy of education consists of four interrelated

constructs: habit, growth, educative experience, and the democratic ideal. Figure 1 provides an abbreviated overview of these four constructs and how each construct relates to teacher education portfolios and to the use of an INTASC-based portfolio. Related portfolio research reveals the importance of a clearly articulated portfolio purpose that engages students in habits of observation, critical thinking, and self-assessment; focuses on continuity of growth and development through reflection; and strives for a balance between the dual tensions of structure and freedom.

Habit

Habit refers to the development of a moral, emotional, and intellectual attitude toward learning. One wants to learn and wants to use what is learned for both personal growth and for the good of others. Dewey (1963) did not view habit as a mere conquest of simple, procedural steps. Rather, he felt that a teacher or more mature learner must understand the moral and social imperatives of awakening and sustaining, in learners, a habit of appreciation of inquiry and one of continual acquisition of knowledge, skills, and critical thinking all used for worthy individual and societal goals. As regards portfolios, Nona Lyons (1999) wrote,

Teaching portfolios are making their way into today's classrooms in three important ways: as habits of mind that help teachers define good practice; as processes that teachers use for reflecting on their own teaching and learning; and as new teaching strategies that reflect the practices that teachers regularly ask their students to engage in, such as reflecting on their learning (p. 64).

Helen Freidus (1996a) captured the promise of portfolios well when she spoke of them as "a pedagogy of possibility." Other proponents of portfolio assessment in teacher education have reported that portfolio use has the potential for preservice teacher education candidates to gain and grow in habits of critical thinking, and in an ability to self assess and to set goals for addressing areas of concern (Biddle & Lasley, 1991; Borko, Michalec, Timmons & Siddle, 1997; Carroll, Potthoff, & Huber, 1996; Cole, Messner, Swonigan &

Figure 1. *Dewey's Principle of Continuity of Experience and its relationship to values associated with research-based portfolio practices and with INTASC-based portfolios.*

Dewey's Continuity of Experience, Portfolio Research, and INTASC-Based Portfolios				
	Habit	Growth	Educative	Democratic
Dewey's Continuity of Experience	Development of an attitude toward learning <ul style="list-style-type: none"> • Moral • Emotional • Intellectual 	Moral, intellectual, and emotional Progressively linked subject matter Expansive	Experiential continuum Structure and freedom	Authority and responsibility Social function
Portfolio Research	Thoughtful learners <ul style="list-style-type: none"> • Reflection • Critical thinking • Self assessment Means to and end	Build prior knowledge Understanding of knowledge and skills Internal dialogue created Recursive experiences	Clear expectations with autonomy	Student-to-student interaction Student/Faculty interaction
INTASC-Based Portfolios	Clear goals "Whole picture"	Connects expectations and process of learning	Clear goals with choice of evidence	Student choice of evidence

Tillman, 1991; Dutt-Doner & Personett, 1997; McLaughlin, Vogt, Anderson, DuMez, Peter, & Hunter, 1998; Morin, 1995; Rearick, 1997; Wade & Yarbrough, 1996).

The INTASC principles help students develop an awareness of what teachers should know and be able to do. This knowledge helps them in setting goals for professional growth and development and serves to prompt them to seek possible beneficial experiences on their own. One student noted, "INTASC makes it really clear what the expectations are ... I know where I stand and what I still have to accomplish."

When sifting through portfolio artifacts and selecting demonstrations of the principles, students assessed and reflected upon their work and they examined their beliefs about teaching and about their knowledge of learning and their attitudes towards learners. One student remarked,

The portfolio is...really bringing me into focus and helping me think about how I can be maybe a better teacher, how I can develop a process like this that I could continue after I start teaching. So, it's keeping me both

short-term focused and long-term focused. I'm thinking right now for the immediate needs, the portfolio requirement, but I also think that it will keep me maybe thinking about improving the teaching process.

Just as the students saw habit-forming benefits associated with this portfolio process, the faculty, too, felt that the INTASC principles made preservice teachers aware of the whole picture of their preparation. One faculty member said that this awareness of this big picture "opens student eyes to the job of teaching...also, students learn to evaluate, assess, and reflect." Faculty members also felt that an INTASC-based portfolio process provided preservice teachers with a strong sense of purpose, created an environment for reflection, and fostered habits of inquiry. One faculty member said that the portfolio review "had the students all thinking about what kind of teachers they're going to be...[that it] already had them thinking like a teacher." Another faculty member stated that the new INTASC-based portfolio process has the potential to create habits of critical thinking and reflectivity about teaching and learning.

Growth

Growth, Dewey (1963) said, must move in a positive direction, emotionally, morally, and intellectually. He said that continuity of progressively-linked subject matter should lead to further growth that is more universal, than specialized, in nature. That is, growth should be thought of as expansive rather than narrowly restricted.

Freidus (1996b) wrote, "The theory behind portfolios meshes with a basic Deweyan idea that learning involves an experiential continuum in which new knowledge is built upon and mediated by prior knowledge" (p. 6). Freidus continued, "Portfolios will allow students to build on their own educational vision through active engagement with content" (p. 6). Arter, Spandel and Culham (1995) said that portfolio assessment should be a part of the regular operation of the classroom. They felt that, "The real value of portfolios lies not in any single approach, but rather in the mindset that assessment is ongoing, and that periodic visits to the portfolio by the teacher and student are instructionally sound" (p. 24). Subsequently, recursive portfolio procedures can help students track the growth of their knowledge, skills, and dispositions over time.

Many students said that the portfolio experience helped them to analyze the work they had done which enabled them to note the progress that they had made within just one semester of teacher preparation work. Students also saw the INTASC-based portfolio as a tool that helps them track their professional growth. One student remarked, "It opened my eyes to all the responsibilities of teachers and how you use the knowledge that we're getting now...it's an ongoing thing."

The portfolio also helped to make students aware of their strengths. Awareness of the INTASC standards also showed them "gaps" in their experience. The preservice teachers did not view this as a weakness, but just an indication that they had not had the experience and that their expectation was the faculty would see to it that this gap would be addressed in the program with future courses and field experience.

Portfolios are both product and process for growth, but just reading through a student's portfolio is insufficient, according to Niles and Bruneau

(1994). These authors feel that an interview is imperative in finding "more in-depth information regarding [students'] purposes and thinking than was apparent in simply reading the product. It is imperative that we attend to the process as well as the product if we are to fully understand the meaning of the product to the student" (p. 13).

Both faculty and preservice teachers agreed that the interview aspect of the portfolio process was a valuable tool for growth. The review format with three students interviewed by three faculty made it possible to listen to and respond to others' views. Commenting on the interaction among the three preservice teachers, a student said, "One starts talking, then you can elaborate on his or her ideas." These preservice teachers found value in having to articulate and communicate teaching and learning beliefs and the connections between the INTASC standards and their professional program work. One student stated, "You want to be prepared because...you want your answers to be as rich and detailed as possible". One student who described himself as poor at communicating his ideas said that putting himself on the spot was good: "I like it. I felt that was where I could finally express what I had written down."

Faculty found that the interview aspect of the portfolio review brought more depth than just the portfolio by itself, that the student could bring meaning to the product. The interview, one faculty said, serves a formative function. He explained by providing sample interview questions, "Given what you've learned, what does that imply or encourage you to think about?" He cautioned that the interview is about mentoring and listening; it is not about the professor. This interviewee said that faculty conducting the interviews should "listen for language, clarity [and by doing so] you get a sense of a personalized viewpoint." Another faculty member said that what is evident at the review session is the beginning of seeing students as teachers, as professionals and that "their perspectives differ, but they are still accurate."

In a constructivist-based program, such as ours, we want students to use their prior knowledge, acquired through years of being a student, but to grow beyond an "apprenticeship of observation" (Lortie, 1975) to broader, conceptual under-

standings of education. Such growth occurs over time; thus, several portfolio reviews conducted with faculty, as well as ongoing classroom discussions, are implied for professional development. Lyons (1998) summarized the growth aspect of continuity of experience, as viewed through portfolio assessment, nicely. "The reflective, interpretive activity can result in the surety of realization, 'Yes, I am ready to take responsibility for a class'" (p. 5).

Educative

Educative experience is grounded in the aspects of habit and growth and supported by providing a balance between the coexisting tensions of structure and freedom (Dewey, 1963). Dewey said that without structure, the goals for learning are unclear and growth is obstructed and habit is compromised. The INTASC principles structure the expectations for development of teaching knowledge, skills, and dispositions (Alban, Proffitt, & SySantos, 1998; Blackwell, 1997; Weiss & Weiss, 1998). However, Dewey (1963) cautioned that without freedom, the learner's potential for taking initiative for one's own learning is obstructed.

Various studies (Arter, Spandel & Culham, 1995; Rafferty, 1994; Winsor & Ellefson, 1995; Lyons, 1998) report that the efficacy of portfolio assessment rests upon communicating clear performance categories to students of what they should know and demonstrate. Blackwell (1997) said, "There is no quibbling with these [INTASC] standards. They represent the best of what we know scientifically about what teachers should know and be able to do" (p. 4). Yet, there is a tension that arises between teacher control and student independence.

Many students felt that the INTASC principles provided a way to see and make sense of what they were learning from courses and field experiences. However, there were various levels of confidence during the selection process. Some students struggled with the language of the principles and wondered whether an artifact used to represent a principle was truly a good choice. For example, one student said, "I kind of guessed. I was like maybe this works...maybe this will fit here." On

the other hand, there were also students who felt that the INTASC language allowed for flexibility in their artifact selections; these students could see that one artifact might match several different standards.

Carroll et al. (1996) raised the question, "Will a structured outline of required elements that shape the portfolio cause portfolios to be alike in contents and shape?" (p. 260). One of secondary program faculty members considered this possibility. She said that "as the students understand the standards better that you will see more uniqueness, too." In other words, with understanding of the structure comes freedom.

The freedom to choose portfolio representations, within a structure of expectations, makes it more likely that students will be personally vested in the portfolio leading to deeper levels of reflectivity and creativity (Niles & Bruneau, 1994; Rafferty, 1994; Wade and Yarborough, 1996). Freidus (1996a) positioned the dual tensions of structure and freedom this way:

The goal of the portfolio process is...for students to be the authors of their own learning. In this process, the roles of expert and novice become blurred. The faculty member has greater understanding of the professional world and the theoretical constructs embedded in it. However, the student possesses expertise on his or her own journey and the meaning he or she makes of it. Where the private and the professional merge, as they are intended to do in the portfolio process, the possession of expertise becomes murky (p.10).

Portfolio expectations should guide but not dictate the selections. If the portfolio requirements are too close-ended or prescriptive, students become angry (Wade & Yarborough, 1996). The goal is "to provide a balance between guidance for content and structure...and flexibility and choice" (Borko et al, 1997, p. 347).

Portfolios, in order to meet the educative construct of the Continuity of Experience principle (Dewey, 1963), must maintain a balance of structure and freedom. The reflective and self-assessment aspects of portfolio are achieved by providing clear statements of purpose and expecta-

tions to students. With these understood, students then have a great deal of freedom to choose evidence of meeting the INTASC principles or goals, to describe and analyze their work, and to set goals for future professional and personal development.

Miseducative

Although, *miseducative* is not one of the four constructs of the Continuity of Experience Principle, Dewey (1963) takes time to explain experiences that are not educative. Figure 2 provides an overview of various dimensions of this aspect—miseducative, scatterbrained, and artificiality—and shows relationships of these three aspects to teacher education portfolios and to the use of the INTASC principles. Through his explanations of miseducative, Dewey (1963) provided an examination of what not to do:

Any experience is miseducative that has the effective of arresting or distorting the growth of further experience (p. 25).

Miseducative. Dewey believed that experience alone is not educative, and that some experiences may not be educative at all. Portfolio research has presented such aspects. For example, portfolios as a collection of one's work - only a collection - are not educative, as the candidates are not asked to

analyze and evaluate their work, what it means and what it might mean for further work, study, and improvement. The potential for growth goes unrealized. When our department's earlier portfolio expectations were too open, students often amassed quantities of evidence, but failed to reflect on their professional growth through a few, well-chosen representative pieces of their knowledge and skills.

Even though a professional appearance is important, Dewey might caution against student attempts to make a paper portfolio or an e-portfolio seem valuable due to a patina of artistic flare. Such efforts are miseducative if critical thinking about one's work is aborted in favor of colorful paper or razzle-dazzle technology. Kilbane and Milman (2003), who support digital portfolios, cautioned, "When too much emphasis is placed on the high-tech 'bells and whistles,' or when too much information is included, or when insufficient emphasis is placed on the actual content, the artifacts and reflections demonstrating teachers' accomplishments can be overshadowed" (p. 11). The same can be said of paper portfolios

Scatterbrained. Experience is also miseducative when it is "scatterbrained," by which Dewey

Figure 2. *The miseducative aspects of education as examined through research-based portfolio practices and potential INTASC-based portfolio uses.*

Miseducative, Portfolio Research, and INTASC-Based Portfolios			
	Miseducative	Scatterbrained	Artificiality
Miseducative (Dewey)	Arrests or distorts growth	Progressive continuum ignored	Disconnect between academic and teaching realities
Portfolio Research	Collection: Scrapbook Absence of reflection Appearance over substance	Purpose is not clear nor educative Lack of "scaffolding"	Loss of purpose perhaps due to: <ul style="list-style-type: none"> • Technology • External accrediting • Standardized portfolio assessment • Focus on job portfolio
INTASC-Based Portfolios	Focus on grading discrete pieces	Lack of purpose Lack of focus <ul style="list-style-type: none"> • Portfolio • Program 	Not used to connect to work in schools

(1963) meant that a progressive continuum of experience is ignored or not planned. Studies (Borko et al., 1997; Rafferty, 1994; Niles & Bruneau, 1994) reinforced Dewey's educative concern by referring to the necessity of "scaffolding." Time, help, modeling, consultations, explanatory materials, and portfolio exemplars, together, provide a platform for understanding and attaining the required expectations. Without this foundational support, students are left to their own devices of trying to figure out what faculty expect. Scaffolding is something that we have done much better after the first semester of acquainting students with the revised portfolio process. When we first introduced the INTASC-based portfolio expectations to the preservice teachers, we met with them for two hours and explained the entire process! Student interviewees told us that they would prefer progressive explanations over time rather than all at once. Of course, we should have known this. The mistake that we made was to concentrate more on the end product than on the process of getting the students to understand the purpose and to know how to develop the portfolio. We now introduce the portfolio process in stages: clarify the purpose and expectations, and check that the portfolio structure is organized with divisions for the Table of Contents, the Belief Statement, each of the 10 INTASC principles, field experience reports, review reports, and the portfolio reflection/synthesis papers. We show examples of portfolios and provide in-class time for explanation of cover sheets with opportunities for practice and teacher feedback. We also provide in-class time for peers to practice asking interview questions of each other. With this progressively planned instruction, the introductory Phase I portfolio proceeds much more smoothly than that first semester. Students are confident in their understanding of the expectations, the artifact selections and reflections, and their interview preparation.

Artificiality is another indication of miseducative experience. There needs to be a relationship that is real and dynamic between academic experience and the realities of teaching (Dewey, 1963). An INTASC-based portfolio creates a connection between what goes on at the university and what goes on when teacher candidates have experiences

in schools. Unfortunately, the authentic life of portfolio assessment may prove to be a brief one.

The trend to use portfolios for high-stakes assessment for accreditation or licensing purposes, has led some institutions and states to standardize a process that, ironically, grew out of concerns about standardized teacher tests (Shulman, 1988).

Snyder, Lippincott, and Bower (1998) found that portfolios are increasingly used to "evaluate a candidate's ability to meet licensure standards. Thus, portfolio assessment is being used to both support learning and to evaluate it-as a transformational tool and as a technical tool" (p. 123). They also reported that, for their students, a high-stakes assessment results in a "disgruntled subtext" to teacher preparation when it is "being defined from afar" (p. 128). If portfolios are to be numerically assessed, students may come to feel used by the institution for accreditation purposes rather than seeing the value of the portfolio as a tool for professional and personal growth.

As early as 1990, Arter et al. (1990) raised concerns about potential conflicts when the portfolio serves as both a tool for reflective practice and for large-scale assessment, and asked whether the instructional value of the portfolio along with individual freedom would be jeopardized. Others (Blackwell, 1997; Tierney, 1993) also cautioned against the high-stakes assessment purpose of teacher education portfolios. Lyons (1998) warned against "trivialization as well as mindless standardization" (p. 5) of portfolio work. She did concede that a fundamental tension exists in teacher education portfolios, as on the one hand, they are to be instruments of professional and personal development, but on the other hand, faculty also review portfolios as evidence of professional readiness. In short, a focus on the growth potential of the candidate through portfolio assessment competes against a high stakes evaluation and vice versa. Viewing the portfolio as a tool to acquire a job also detracts from its inherent educative orientation. This is addressed in the section on Interaction.

One faculty member was concerned about outside agencies undermining the value and potential of teacher candidates' portfolios; she said that we should guard against prescriptive and

standardized portfolio assessment that she had seen at other institutions.

Democratic

The democratic ideal, the fourth aspect of Dewey's (1963) principle of continuity of experience, must be infused within all aspects and dimensions of education. Dewey said that democracy as a system of schooling integrates structure, freedom, authority, and responsibility. The "educative" section of this paper explores these aspects. Dewey stressed that a democratic form of educating is not static, but one that operates as a result of careful planning for instruction, thoughtful selection of the methods of instruction, authentic assessments of learning, and in the hearing and valuing of students' experiences and voices.

In his book *Democracy and Education*, Dewey (1966) further stated that education is a social function wherein the learner gains direction and development through participation in the group. He wrote, "...education will vary with the quality of life which prevails in the group" (p. 81). In order to uphold the democratic principles with portfolio assessment, it seems that Dewey would suggest the following conditions: open communication among members of the group, opportunities for the pursuit and development of individual interests, participation in decisions, and examination of issues that affect the education of children.

Portfolio peer reviews during class time provide opportunities for communication about not just the portfolio product but also for the meaning behind portfolio selections and candidates' emerging professionalism. Our portfolio interview, held with three students and three faculty, widens the circle of participation. A student commented, "The interview was set up comfortably...it was conversational...there was interaction between the interviewers and interviewees." A faculty member characterized the portfolio interview as a hospitable environment for faculty and student interaction:

What I experienced, I was delighted about, in fact a little surprised about. Instead of an instructor-professor/student conversation, it was colleague to colleague... I have a set of experiences and perspective

on this stuff and they were sharing theirs. And frequently there would be differences, but we had a common point where I could engage in a conversation.

Similarly, students felt that their perspectives mattered to their peers and to the faculty. Peer reviews during class time support communication among students and the portfolio interview conversations among students and faculty promote democratic ideals that Dewey would value, leading directly to his second principle of education: interaction..

Interaction

Interaction, the second principle of John Dewey's (1963) theory of experience and education, is the interplay between objective conditions and internal conditions which together form a situation. Figure 3 provides an abbreviated overview of these two constructs and how each construct relates to portfolios and to the use of INTASC-based portfolios. When experienced by the learner, objective conditions, or those elements influenced and controlled by the teacher, "evoke a certain quality of response in individuals" (p. 45) which Dewey names the "internal conditions." Both objective conditions and internal conditions affect each other. Similarly, both need to be attended to for an educational experience to occur.

In regards to portfolio assessment, objective conditions are those explanations and demonstrations by faculty of the what, why and how of portfolios, aspects that we have explained and detailed in the previous section. The structure and expectations must be balanced with attention to students' affective, internal conditions. Paulson, Paulson, and Meyer (1991) said that "portfolios are done by the student, not to the student" (p. 61). Faculty are responsible for creating the conditions that invite student participation in recognizing and striving for growth opportunities. As noted in the section on *miseducative*, we learned from student interviews that we needed to change and improve the objective conditions in order to instill in students an internal appreciation of the growth value of their teacher education portfolio experience. The potential of portfolio for professional development rests on

Figure 3. *Dewey's Principle of Interaction as examined through research-based portfolio practices, and INTASC-based portfolios.*

Dewey's Principle of Interaction, Portfolio Research, and INTASC-Based Portfolios		
	Objective conditions	Internal conditions
Dewey's Principle of Interaction	Teacher-controlled elements	<div style="border: 1px solid black; display: inline-block; padding: 2px;">Situation</div> Quality of response by students to external conditions
Portfolio Research	Faculty explanations <ul style="list-style-type: none"> • Purpose • Expectations Faculty support <ul style="list-style-type: none"> • Scaffolds • Environment 	Student understanding Student response
INTASC-Based Portfolios	Clear goals <ul style="list-style-type: none"> • On-campus faculty • Field experience faculty Faculty assessment of students <ul style="list-style-type: none"> • Formative • Summative Program improvement <ul style="list-style-type: none"> • Connect academics • Field experience 	Clear goals throughout preparation Self assessment according to 10 principles

planning and implementing those external conditions that will engage students in internal reflection and self-evaluation.

The most important attitude that can be formed is a desire to go on learning. If impetus in this direction is weakened instead of being intensified something much more than lack of preparation takes place. The pupil is actually robbed of native capacities which otherwise would enable him to cope with the circumstances that he meets in the course of his life. (Dewey, 1963, p. 48)

Together, according to Dewey (1963), internal and objective conditions form a "situation" for educative experience that is important in the *present*, in the active formation of habits of moral and intellectual experience in a continuum of learning; however, from student interviews, we found a glaring contradiction to Dewey's position. Students perceived that the purpose of the portfolio as an employment tool superceded any

worth they saw in it as a means for ongoing professional development. One student, for example explained it this way:

The portfolio is something that all education majors do. There are 10 standards that the national education association [*sic*] wants us to be able to meet and to show that we meet these standards....we put it together and we take this out to whomever we are interviewed by, for jobs when we're done.

The above comment captures what most students believed was, if not the purpose, at least the value of the portfolio to them. Even some faculty sensed that the portfolio found its value as a future employment tool. One graduate teaching assistant, for example, said, "It's going to be nice...they're going to be able to hand this to people and...look really good for jobs."

However, Dewey (1963) said that the situation does not gather importance from the perspective that it may have some value at some point in

the future; he said that education is *not* to be viewed as something that is valuable from a preparation standpoint. He wrote, "There is no such thing as educational value in the abstract" (p. 46), that "education as growth and maturing should be an ever-present process" (p. 50). We find this aspect of Dewey's philosophy consistent with our beliefs that education is a process for acquiring and using knowledge, for critical thinking, and for participation in the society, all of which have value in the present. As such, it is of critical importance to concentrate on development of internal conditions, as these affect the student's formation of habits of inquiry and lifelong learning. The view that the portfolio has value for "getting a job" detracts from its potential for as a tool for reflection, goal setting, and continuing growth. This has implications for establishing the purpose of the portfolio up front and for doing a better job with the objective conditions in order to create an internal desire for lifelong learning.

SUMMARY

We have found that the use of the INTASC principles as the basis for portfolio assessment is a good match with Dewey's two interrelated education principles, Continuity of Experience and Interaction, as viewed through the lens of his philosophy of education in *Experience and Education*. An INTASC-based portfolio meets the first principle in that it provides a focus for what preservice students will be working on in preparation to teach and, orchestrated with a Deweyan focus on continuum of experience, fosters habits of mind and supports professional growth in an educative manner. Doing this in a democratic manner hinges on faculty finding a balance between the dual tensions of authority and autonomy.

Dewey's second educational principle of interaction is also met through an INTASC-based portfolio assessment. Although we experienced a bumpy start during the first experience of the newly revised portfolio process, we found that once we addressed the objective conditions-aspects controlled by faculty such as explanations, timing, models, and mentoring-that students' affective, internal conditions improved. They moved from a stance of reluctance and bewilderment to seeing

the portfolio as a tool for examining and reflecting on their knowledge, skills and dispositions. Current state and national trends to turn a developmental and formative assessment into an externally controlled, high stakes, summative and quantitative evaluation need to be examined against sound educational principles. We believe that John Dewey would say that such treatment of the portfolio obstructs the student's native capacities for learning, that the democratic aspect of education is violated, and that an artificial imposition of standardization is miseducative.

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