ABSTRACT
This paper examines the use of student portfolios for assessment at the college level. Portfolios, which have recently been used extensively on the elementary and middle school levels, are collections of artifacts gathered to represent a student's work. After describing current dissatisfaction with the dominant standardized testing student assessment format, the paper discusses precursors to portfolios in earlier educational practice which often involved student demonstration of achievement through public actions or actual products. The next section describes the ways in which portfolio efforts should advance student skills in work planning, task prioritizing, and logical thought as well as having an overall student enabling quality. A section on types of portfolios describes the portfolio as a "purposeful" collection of student work organized in one of three common formats, the "best work" portfolio, the developmental portfolio, and the lab or workshop model. A following section lists reasons why teachers are enthusiastic about portfolios. A section on selecting portfolio content offers 13 abstract guidelines and concepts to assist artifact selection and 15 concrete guidelines. A section on judging portfolios offers suggestions and cautions. A discussion of the place of portfolios at the college level explores challenges to their introduction and suggests seven standards for evaluation: introduction, positive appearance, organization, mediation, significant meanings, position papers, and originality. Contains 23 references. (JB)
"COLLEGE ENTRIES INTO PORTFOLIO ASSESSMENT - WHY, HOW, AND WHAT TO WATCH OUT FOR

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COLLEGE ENTRIES INTO PORTFOLIO ASSESSMENT -  
WHY, HOW, AND WHAT TO WATCH OUT FOR

Portfolio Foundations and Context

The faculties of several academic disciplines, including Education, at St. Norbert College, in De Pere, Wisconsin, are searching for alternative student assessment models. The quest involves more creative and consequential ways to assess breadth and depth of student learning and thinking. Portfolios, as an option to standardized and teacher composed tests is on the increase and part of a larger movement variously called "True Testing" or "Authentic (alternative) Assessment" (Wiggins, 1989, 1993). Use of portfolios at elementary and middle school levels is already a fact and continues to grow. Less well established, and still in doubt, is portfolio assessment in high school and college curriculums.

Portfolios encourage students to demonstrate many kinds of talent by their creating and collecting artifacts meant to represent effective thinking skills, positive value states and additional accomplishments. A special target of true testing, including portfolios, is standardized testing begun early in the twentieth century and still alive, kicking and profitable, to educational testing and publishing industries. But discontent with such impersonal and "inconsequential" assessment procedures (Sternberg, 1984) can be condensed into the following areas of concern (Winograd and Denese, 1992).

1) Traditional tests of what it means to be literate are seriously flawed. The view of literacy as knowledge memorized or understood in the abstract has become suspect in lieu of newer descriptions. Recent views represent literacy as a complex of functional talents applied to real, important and "in-context" problems (Wiggins, 1989, 1992). Traditional assessments are criticized for testing esoteric skills out of real learning and thinking contexts, and ignoring the existing interests, talents and motivations of students (Wixson and Peters, 1987).

2) Traditional tests antagonize rather than motivate students. "When success in school is reduced to gaining high
scores on paper-and-pencil tests, students compete against one another and the losers experience increased anxiety, low self-esteem, cynicism about teachers and school, and devaluation of education." (Paris, Lawton, and Turner, 1993) Too much loosing on such tests creates and underclass of uncaring and unsuccessful student aliens.

3) "Traditional tests often provide results of limited use to teachers; and are subject to misuse and misinterpretation by policy makers." (Winograd, Paris, and Bridge, 1991)

**Portfolio Precursors**

Prior to the "mass testing movement" American schools, back to the Colonial Period, depended more on student "performances and exhibitions" than scored test results. School Board citizens counted on real student demonstrations of ability to assist their judgements of school and teacher worth (McDonald, Joseph, et. al, 1993).

"...an occasion for public inspection (was) when some substantial portion of a school's constituency might show up to hear students recite, declaim, or otherwise perform. The point was to satisfy this constituency that the year's public funds or tuitions had been well spent and that some cohort of young scholars was now ready to move on or out." (McDonald, Joseph, et. al., 1993)

Having students perform acts of intellect, passion, and talent was a way for schools to be accountable to the public. Student actions and products were not scored part by part, but as fully demonstrated to a public in a start-to-finish context. Such student work could be abstract and concrete, but most importantly, it was holistic. In contemporary American schools, a growing cadre of educators are coming to view such holistic work as more effectively represented in portfolio artifacts than in the array of find-and-write-the-answer efforts still assigned in public schools and colleges around the country (Wiggins, 1989).

"Standardized tests that require only short answers present a situation that does not exist outside the school; life does not present itself in multiple-choice formats. Outside the school, individuals mostly carry out projects; either projects assigned to them or projects that they have had a hand in fashioning. I favor an education that features many projects in which students are engaged for significant periods of time and which lead to genuine products. (Gardner, 1994)
Portfolios as "Enabling Work"

Various portfolio efforts should advance student skills in areas of work planning, task prioritizing and logical thought. Such mental activities "enable" students beyond strictly academic endeavors because they are needed and exercised in real world careers and social settings (Sternberg, 1984). "Enabling work" is:

"...designing and carrying out experiments, working with other students to accomplish tasks; demonstrating proficiency in using a piece of equipment or a technique; building models; developing, interpreting and using maps; making collections; giving speeches; participating in oral examinations; developing portfolios; developing athletic skills or routines, etc." (Allen, 1994)

Enabling work in classrooms is work that is important in out-of-classroom jobs and careers. The following are conceptual descriptions of enabling work that can occur in the process of portfolio creation:

- relevant work or work perceived by students as being important ("consequential") and worth doing because it will need to be done well in their future out-of-classroom lives.

- in-context work, or student work perceived as being part of something larger and more important than itself. This means that traditional in-classroom work and homework would be contextual and holistic instead of insulated and fragmented.

- self-evaluative work, or student work perceived as shaped by students' own scrutinies and criticisms. This seems superior to the more static practice of students routinely submitting work, then waiting for teacher criticisms.

- metacognitive work, or student work carefully monitored by themselves and requiring sharp decision-making consciousness. During teacher or peer interviews, or as written compositions, students might be asked to describe work attitude, states-of mind, planning, and time allocation.

- peer-Collaborative work or student work accomplished through interactive planning and labor ventures. Small and large group communication and physical work energies are necessary for such work to be successful.

- engaged Work or student work selected because of a perceived personal dimension or connection. For example, a portfolio should motivate intense and extended student work efforts because of the personal reflection devoted to it. Such work would be defined by extended dedication and perseverance.
over weeks, months and even years. During teacher or peer interviews, students might be asked to describe their efforts, successful or not, as they assembled portfolios.

- **self-directed** work or student work guided by self-initiated goals, time allocations, material selections, and completion plans. Arbitrary teacher management is significantly reduced.

- **affectively-motivated** work or student work energized by sustained enthusiasm and positive feelings that the work and its purposes are attractive and self-enhancing.

Some describe the above examples of "enabling" work as those which should occur in classrooms more than they presently do (Wiggins, 1989, 1992). Enabling work will become more apparent and frequent when teachers at every level come to understand and create consequential and useful kinds of classroom work (Wiggins, 1989, 1992, Sternberg, 1994, and Gardner, 1994).

Portfolios, as one form of enabling work, are becoming the alternative assessment choice for a multitude of elementary and middle school teachers (Camp, R. and Levine, D., 1991). These teachers perceive portfolio planning and creation as involving students in a rich variety of cognitive, affective and pragmatic work opportunities. Conversion to portfolios among elementary and middle school teachers is also spurred by national professional journals and organizations including, Educational Leadership (ASCD) and The Kappan (Phi Delta Kappa) which strongly promote portfolio virtues. Though acceptance among high school and college teachers has been less apparent and publicized, logic suggests that change toward portfolios, at those levels, may increase due to the increasing population of portfolio-shaped students now moving into secondary and higher education.

**Portfolio Descriptions**

"Portfolios provide opportunities for students to show what they know and what they can understand. If understanding is not revealed in the works collected in a portfolio, I would conclude that a student is not really understanding." (Gardner, 1994)

"...a portfolio is more than a folder stuffed with student papers, video tapes, progress reports, or related materials. It must be a purposeful collection of student work that tells the story of a student’s efforts, progress, or achievement in a given period of time. If it is to be useful, specific design criteria also must be used to create and maintain a portfolio system." (Allen, 1994)
"Portfolios are a powerful means of assessment for teachers because they provide a way for teachers to systematically gather multiple measures on individual children across time, tasks, and contexts." (Winograd, P. and Jones, D., 1992)

Portfolios can be final collections of student work, selected and managed by the students for purposes of self-evaluation or self-representation to other evaluators. Such portfolio efforts are best-work portfolios. They contain final draft or product entries meant to portray the best academic, experiential, and preprofessional work signifying right of graduation, certification, or employment readiness. Only "best pieces of work" (Hauser 1993) should be included in this prototype.

"Developmental Portfolios" or the assembling of a "... large collection of materials, documents, pictures, papers, letters, certificates, lesson plans, projects, student work samples, audio and/or video tapes..." have gained increasing acceptance by educators (Uphoff, 1989). The belief is that such artifact collections holistically portray student journeys toward various competencies. It is normally recommended that such diffuse collections will eventually be reduced and shaped into less hefty and more focused best-work portfolios. Also suggested is that such artifact collections should be continued well into professional employment (Uphoff, 1989).

A third portfolio variation is the "Lab or Workshop Model" where students seek assistance and evaluation from peers or peer tutors. This approach speaks to certain doubts raised about portfolios, including, how such lengthy and complex products will be efficiently judged. The purpose of lab portfolios is to enter work in folders and seek feedback and correction from other lab peers prior to teacher input. Lab portfolios are the developmental portfolios submitted to peer scrutiny prior to teacher review. Suggestions by peers are applied, then submitted to teacher evaluators. Use of lab evaluation may decrease teacher evaluation time in that certain corrections and improvements will have already been made by student peers. This may be good news to high school and college faculty hesitant to adopt portfolio assessment from concern about additional time and energy burdens.

"The portfolio requirement insures that students work at the lab on a weekly basis. Our students’ papers and revisions must be placed in their portfolios in the lab by the dates specified on returned papers. This means students must make appointments with tutors to discuss and revise their work. No papers are filed unless lab tutors have gone over revisions with students; then the original and all drafts are placed in the portfolio. (Hileman and Case, 1991)
Portfolio Enthusiasms

Interpretations of why teachers are eagerly embracing portfolios represent intuitive estimates by this writer and should not be portrayed as research derived principles. I believe that growing teacher enthusiasm for portfolio assessment exists for a potpourri of reasons, among them being that portfolios:

- offer students a free yet structured form of self-expression. Portfolios are carefully planned and even scripted by students, yet will have widely varied contents and appearances that uniquely represent student creators.

encourage consequential student efforts that make student creators intensely conscious of a work process that collection of and reflection about artifacts will produce. Metacognitive energies occur.

- motivate students' head, heart, and hand work. To express it more academically, portfolios engage cognitive, affective, and psychomotoric student efforts. Psychomotoric? Yes, in that students go through a very sophisticated artifact inclusion process which gradually produces a visually attractive product with cognitive and physical heft. Through portfolios students sentiently express themselves.

- stimulate purposeful student analysis and learning reinforcement. As portfolio creators search for appropriate artifacts to represent various gains in appreciation and comprehension, they revisit and rethink facts and concepts of discipline areas while deciding on appropriate artifact inclusions.

- stimulate full-bodied productions that contain selected writing samples (i.e. cover letters and position papers) graphics, published journal or newspaper articles, descriptions and photos of creative devices, samples of best-work transparencies, videotapes, and an array of other artifacts. Portfolios can portray students as complex and effective classroom, school, campus and community citizens. Students as curricular and co-curricular participants are powerfully represented in portfolios.

- represent students' "habits of mind." (Wiggins, 1989) Qualities of inquiry, curiosity, imagination and creativity are on display in portfolios. Skills of artifact selection, sequencing, and display are individually show-cased in each portfolio.

- predict or suggest students' future successes because the habits of mind on display are necessary for success in real job
and career worlds. Being good at reflection, planning, selecting, prioritizing, envisioning and self-critiquing are as necessary out of school as they are within.

- generate effort and perseverance because students view them as very important and having both intrinsic and extrinsic value. Portfolios' intrinsic attractiveness is that they can become positively addictive, i.e. once started, students feel compelled to continue them. Extrinsic attractiveness pertains to the many employers who now consider portfolios as important predictors of job and career success.

- sharpen students' self-evaluation and goal-setting skills. Most of the artifact generation and selection is exercised by the student. The student is critic of one's own portfolio growth. Decisions about what to keep or not are exercised repeatedly by students. This differs from the traditional work submission of student to teacher followed by waiting time(by students) for teacher scoring and return of work.

- sharpen teachers' evaluation of students' work. Student portfolios represent them in multiple and consequential ways. Review of portfolios reveals student skills beyond sit-in-a-desk content efforts and comprehensions. Portfolios indicate knowledge competencies in settings beyond, as well as within, classrooms and academic courses. Additional breadth of evaluation offered by portfolios enhances teachers' abilities to fairly judge many and various student abilities.

- enhances peer collaborations and mutual feedback, especially when students are encouraged to critique each others' portfolios as they are planned and compiled. Portfolio labs or workshops at designated times and meeting places should provide settings and motivations for such peer communications.

- direct student attention to past and present work. Selected portfolio artifacts represent a developmental journey covering years of learning and thinking products. Selection of best artifacts for inclusion in best-work portfolios demands student revisiting of efforts and productions over extended time periods.

**Selecting Portfolio Content**

**Abstract Guidelines**

A crucial student decision involves inclusion of artifacts. What talents and efforts do students want to make known and what portfolio artifacts will effectively represent them (Hauser, 1993)?
Guidance in selection of artifacts should be provided at abstract and concrete levels. In the abstract, each student should reflect on the question of what learning skills, character qualities, achievement talents, life and school experiences and habits of mind should be apparent to the portfolio observer. The artifacts selected should clearly portray and, if possible, concretize, guidelines represented in the abstract. Some guiding concepts to assist artifact selections are:

- Portrayals of **professional knowledge**, or inclusion of references to pedagogical techniques and issues.

- Portrayals of **communication literacy** or inclusion of book reviews, academic papers, point/counterpoint essays, and oral expression tapes.

- Portrayals of **knowledge integration**, or inclusion of artifacts that reveal interdisciplinary talents and immersions.

- Portrayals of **technical mastery**, or inclusion of artifacts that reveal sophistication with statistics, media, and educational technology.

- Portrayals of **career reflection and focus**, or inclusion of a curriculum vita and career goals essay.

- Portrayals of **critical thinking skills**, or inclusion of carefully written position or analysis papers.

- Portrayals of **creative thinking talent**, or inclusion of artifacts representing new perspectives or intriguing questions.

- Portrayals of **affective qualities**, or descriptions of deeply felt values, convictions and commitments.

- Portrayals of **community endeavors**, or inclusion of letters from co-workers and persons or organizations.

- Portrayals of **self-assessment skills**, or critiques of one’s work by others and oneself.

- Portrayals of **aesthetic talent** as expressed in the very design and content organization of the portfolio, including the displays within. Also photos of displays and related visual arrangements could be included.

- Portrayals of **additional miscellaneous accomplishments** through inclusion of certificates or newspaper articles describing such endeavors.

- Portrayals of **high regard and respect by others**, or inclusion of testimonial letters from respected community
professionals (Hauser, 1992, unpublished letter to a colleague at St. Norbert College).

Concrete Guidelines

"I've been guiding Education majors toward best work portfolios that are multisensory and thought provoking portrayals of themselves. To accomplish this they are encouraged to include resumes, printed testimonials, samples of lesson and unit plans and bibliographies, photos of themselves (at work in schools and classrooms), photos of classroom displays, position papers, and short essays that detail special college, school, and community contributions." (Hauser, 1992, unpublished letter to a colleague at St Norbert College)

The nature and variety of portfolio artifacts (displayed items) are so numerous that compendiums, several pages in length, can be created. The following is an incomplete listing of specific artifacts that an effective portfolio of a Teacher Education Major might contain:

- a resume.
- clinical experience reports.
- standardized test results.
- letters of recommendation.
- student created projects, maps, games, puzzles, study guides.
- test and quiz models constructed during interning or student teaching.
- descriptions of simulations, skits, and group work designs.
- critical incident reports.
- co-curricular participations and contribution descriptions.
- a best college course paper
- two or three position papers on specific and important Education topics.
- Analysis of a current issue.
- videotape recordings of a teaching event.
- Printed or recorded critique of a video tape performance (Uphoff, 1989).
- a cover letter to introduce the portfolio and provide observers with a real and perceived sense of advance organization.

Judging Portfolios - Cautions, and Suggestions

A report featured in The Council Chronicle of the National Council of Teachers of English (1993) described portfolio use as an assessment phenomena that gathered momentum in the mid-eighties and has since "...gained tremendous popularity in school
districts throughout the country." Robert Calfee, one of the speakers, noted that teachers had become "...outrageously enthusiastic about portfolios." (1993) This commitment seemed especially true if portfolio use was not system or administrator mandated, but picked up by teachers on their own at various workshops. Given that condition, teachers will "...put enormous energy and time in exploring the possibilities." (Calfee, 1993)

Calfee also noted lack of validity and reliability rigor applied to evaluation of portfolio outcomes. In other words, teachers are using portfolios before they know how and whether they produce beneficial outcomes. A movement to halt the rush to portfolios may be in the making, but rather than halt such efforts, the better caution may be to scrutinize the procedures and outcomes with more rigor. This means that educators should initiate portfolio assessment with clear perceptions of how it will assist students and how such assistance will be verified.

A consultant with the Vermont Writing Project indicates that quantitative evaluation of portfolio outcomes contradicts the intrinsic nature of portfolio advantages (Hewitt, 1993). He alludes to the "...very personal, very idiosyncratic, very anecdotal exchange (between teacher and student) that the portfolio provides so well for..." which may be lost if those subjective outcomes are represented with competitive grades. Student portfolios need to remain low-takes endeavors, cautions Hewitt. The more we try to quantify what portfolio outcomes should be, the more threatening portfolios may become. Scoring may cause students to consider portfolios as coercive requirements meant to sort and select them into or out of programs.

There are not convenient solutions when it comes to issues of formal scoring of student portfolios. Certain students, conditioned to being measured against others, may prefer having portfolios scored. If portfolios are major pieces in programmatic assessment, then certainly GPA driven high school and college systems would rather accommodate scored than non-scored portfolios. But doesn't external scoring diminish student freedom and feelings of empowerment? The compromise might be that if portfolio scoring is necessary, then equally important is clear student understanding of the scoring standards and adequate opportunity for students to seek good guidance throughout the portfolio process.

"Ideally, institutionalized portfolios might operate the way they do in the classroom. As part of portfolio planning (and probably even before that), students would be made aware of all the ways in which their work would be judged." (Case, S., 1994)

Also deserving additional research is the quality of interrater reliability. If portfolios are scored, are the
scoring standards strong enough to enable several teachers to agree on final scores for single portfolios? Research indicates that scoring outcomes range from poor to fairly good interrater reliability (Herman, J. and Winters, L., 1994). One key to achieving high portfolio rater reliability is "...when experienced scorers use well-honed rubrics." (Herman et al., 1993). The additional challenge of scoring stability over time is more effectively met when the raters agree on acceptable rating rubrics and are sufficiently practiced in portfolio examination (Case, S., 1994).

**Portfolios at the College Level?**

Will college professors embrace programmatic portfolio assessment? The right and duty to ask tough questions, anticipate obstacles, and ponder less-than-perfect scenarios should not be avoided. Responsible thinkers should anticipate difficulties - the better to forge durable and positive outcomes. Portfolio assessment is challenging for many reasons. The following are only a few.

- Portfolios are nontraditional evidence of student mastery and expertise. The traditional reverence for college as an ascent to wisdom and a deemphasis on vulgar and secular distractions is still tacitly defended in academe. What could more directly challenge that ivory tower perception than having students value, collect and prominently display concrete and real-life artifacts in a portfolio form?

- To explain artifact selection to students, college departments and schools will need to clearly advise what should go into portfolios and convey reasons for those recommended artifacts. Inclusion of appropriate artifacts will vary across disciplines. This will mean being able to conceive of appropriate artifact content, explain it, then reference it to clear course and program goals. Faculty members will have to agree on which artifacts are valuable and which are probably not. This is rough and tricky labor. What if professors are unsure of course goals? Or what if professors believe that their goals can’t be expressed with portfolio artifacts? To initiate portfolios with concrete artifacts, requires strong command of foundations and goals by all involved. Cohesive faculties may be able to accomplish this, but less cohesive faculties may agonize over that task and even give up on it.

- Orientation of students to portfolio assessment won’t be accomplished quickly, such as over a half day or weekend. Multiple presentations and dialogue sessions will have to be planned over lengthier time spans so that eventually students will become more secure about the meaning and value of artifacts they have discovered and want to submit.
- What will the organizational structure of portfolios be? When will students begin them? Freshman year; first semester or second? Will one administrative coordinator direct and monitor all portfolios? Will such a "counselor's" already existing responsibilities be reduced? Will various department or division faculty professors share equal student guidance responsibilities on top of time-and-effort labors already necessary for academic advising?

- Will portfolio guidance be individualized for each student or will a series of large-group meetings, spread across several semesters, be created to provide ongoing guidance for students at various stages of portfolio sophistication? Or will portfolio guidance combine both of the above?

- Will timelines for portfolio development be imposed? Will they be housed with students or will professors have easier access to them? The latter could require the keeping of portfolios at a central location such as a department or division office.

- Will the portfolios be scored? If so, by who and by what means? If not, will the portfolio efforts be judged as intrinsically valuable enough endeavors, to be sustained by students and professors? Without scoring, which would necessitate ongoing scrutiny, levels of student and professor commitment might vary greatly.

"If portfolios are to be evaluated, the evaluation standards should be establised before the portfolio system is establised, '...portfolios can be evaluated in terms of standards of excellence or on growth demonstrated within an individual portfolio, rather than comparisons made among different students' work.'" (Allen, 1994, Vavrus, 1990)

- If specific portfolio scoring, based on standards, is preferred, what standards of excellence will be taught and resorted to during the scoring process? Various authors refer to such standards as rating "rubrics" or growth "benchmarks." (Winograd, P. and Jones, D., 1992). If the decision is to rate or score portfolios, the following standards might provide further guidance or discourse avenues.

**Introduction**: Students would be urged to include an introduction or opening commentary page-some call it a cover letter (Case, 1994)—that clearly introduces themselves and the content. This would serve as a preface for readers.

**Positive Appearance**: Neatness and visual attractiveness throughout the document would be expected by evaluators.
Organization: Logical arrangement and presentation of content would be expected. A sense of right order and sequence would be apparent to evaluators. Success with this standard would demonstrate good student critical thinking skills and even qualities of perseverance.

Mediations: Occasional author commentaries that provide background or special information about specific portfolio inclusions should be inserted throughout. The sense of the author as being in touch with portfolio evaluators would be advanced by effective mediations.

Significant Meanings: The contents would clarify how the student is succeeding in academic and career preparations. If tapes, chart, photos, etc. are included, evaluators would know how and why such artifacts suggest present curriculum mastery and advancing career readiness.

Position Papers: These indicate the range of professional knowledge and literacy skills. Questions as to whether the student is well read, able to express convictions, and literate enough to successfully represent them in print can be explored by evaluators while they refer to the papers. Specific skills of spelling, sentence/paragraph construction, and vocabulary power would also be revealed to evaluators.

Originality: This standard might be applied only to very unique efforts. In other words, the subjective judgements of evaluators might identify most portfolios as being good, but not unusually creative. But certain productions might be sufficiently attractive or surprising that additional points or credit would be attached. Points would not be deducted from portfolios judged as strong, but not exceptionally creative.

Such standards, represented above, are far from complete or crystallized. Standards will vary, but they should be valid, meaning that the discipline competencies and career purposes can be revealed through appropriate artifact inclusions. Students should understand the evaluation standards, then create and select artifacts that reflect such standards. Advisors can facilitate clarity of standards through clear introductory and follow-up meetings, augmented by additional small-group question and critique sessions. Excellent student and assessor dialogue should advance students' understanding of standards, appropriate artifacts, and rating rubrics.

Summation and Personal Denouement

College faculties may begin to express assessment dissatisfactions which reflect earlier expressions by teachers at elementary, middle and high school levels. An alternative some are experimenting with is student portfolios. Also of interest
should be the probability that increasing numbers of students will enter college from high schools where portfolio products have been successfully implemented.

Portfolio assessment represents application of philosophical concepts variously referred to as alternative, authentic or true testing. Their common goals include teachers' investigation and observation of students' habits of mind and use of enabling tasks to assist the exercise of students' thinking and valuing habits. Replacing fact memorization and fragmented requirements with pursuit of real-world skills which enable students in social, emotional, and physical workplaces, has become the articulated goal of true testing educators.

Descriptions of portfolio purposes abound as do suggested examples of artifacts that portfolios might contain. Selection of appropriate portfolio artifacts is a central task for students to learn and appropriate guidance must be provided by teachers. Abstract and concrete guidelines for portfolio design and artifact inclusion are presented in these pages.

The question of whether college teachers, departments or entire faculties will adopt portfolio assessment is addressed through descriptions of challenges that such assessment may present. Provisional guidance, related to scoring rubrics, is also offered for college teacher reflection.

Portfolios may represent a powerful alternative to traditional curriculum tasks and tests. They may, arguably, represent a challenging tool for better student work and assessment. They may also seem faddish, subversive and threatening to groups of college teachers and assessment professionals. College teachers and students, who experiment with them, should have substantial guidance and motivation to "...design, manage, and interpret portfolios." (Winograd and Jones, 1992)

I've had students construct portfolios for a specific course over several years and they enjoyed doing them. As their portfolios grew in artifact content and sophistication, they became prouder and more motivated to continue. I recall one student describing her portfolio energies as "...self-conscious, in a good sense, and even at times meditative." As a college professor who maintains a best work portfolio of his own, I share that student's view and add that portfolios are exciting indulgences in critical and creative thinking which, years later, become sources of sweet professional life recollections.
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