TEACHER ATTITUDE AND NEEDS ASSESSMENT CONCERNING THE USE OF STUDENT PORTFOLIO ASSESSMENT IN THAILAND'S EDUCATIONAL REFORM PROCESS

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Abstract. *Background.* Education reform in Thailand includes curriculum reform, teaching and learning reform, and assessment reform. Regarding the assessment reform, a new student learning assessment method including portfolio assessment is introduced. However, teachers did not change student learning assessment methods and student achievement in the five main subjects remained at a low level in the first decade of educational reform. This provides a good opportunity to study how teachers view the use of and how they see a need for student portfolio assessment. *Purpose.* The purposes of the present study were (a) to examine teachers' attitude towards the use of student portfolio assessment in the educational reform process, and (b) to examine teachers' needs concerning the use of student portfolio assessment in the educational reform process. *Material and Methods.* Two hundred and forty two elementary school teachers participated in this study. Questionnaires were sent out to collect data. *Results.* Results indicated that, overall, teachers had positive attitude towards the use of student portfolio assessment but they also had needs in all of the steps of using student portfolio assessment. Teachers had most critical needs in the use of student portfolio assessment in the step of selecting products and reflecting on the selected products, followed by the step of revising and evaluating products, and the step of utilizing portfolio assessment results, respectively. *Conclusions*. Workshop training sessions on the use of student portfolio assessment should be provided for teachers. The step of selecting products and reflecting on the selected products, the step of revising and evaluating products, as well as the step of utilizing portfolio assessment results should be heavily emphasized in the training sessions.

Keywords: Portfolio, Attitude, Needs Assessment, Education Reform.

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Since the enactment of the National Education Act of 1999, education reform in various aspects has been implemented. The first decade of the reform covers from 1999 to 2009. This first decade includes curriculum reform, teaching and learning reform, and assessment reform (Bhumirat, 2011). Regarding the assessment reform, the Act introduced a new student learning assessment method, shifting from using merely traditional tests (e.g., true-false, multiple-choice, fill-in, short-answer, and essay) to implementing a variety of assessment methods including an authentic assessment (Office of the National Education Commission, 2003). It is recommended that an assessment be implemented during the instruction, not separately done after the instruction finishes (Office of the Basic Education Commission, 2009). In addition, student learning assessment should be holistically performed under the active participation of various parties, e.g., students themselves, their peers, their teachers, and their parents.

Traditional tests have failed to allow students to demonstrate the multidimensional aspects of what they have learned (Cole, Ryan, Kick, & Mathies, 2000). Moreover, students are viewed as subjects of the testing rather than partners in the testing tests. Therefore, many teachers have refused to accept this one-shot formalized instrument as a tool to assess student learning (Cole et al., 2000). In contrast to the traditional tests, an authentic assessment is more similar to a real-life task rather than a test that appears rigid and static (Cole et al., 2000; Lustig, 1996). Portfolio, which is one of the authentic assessment methods, has been used by educators in addition to traditional tests.

A portfolio is potentially an authentic assessment tool to assess student learning, which could be applied in a complex real-world situation (Benson & Barnett, 1999; Tangdhanakanond, 2006; Tangdhanakanond, Pitiyanuwat, & Archwamety, 2006a). Portfolio is an organized purposeful collection of evidences accumulated on a student's academic progress, achievements, skills, characteristics, and attitudes over time. Moreover, it is evidenced that the process of making a portfolio is also a learning tool that promotes students' improvement in academic achievement, achievement motivation, critical thinking, self-directed learning, self-confidence, and creative thinking (Chinnawong, 2000; Elango, Jutti, & Lee, 2005; Koraneekid, 2007; Marianne & Denise, 2010; Sootthipong, 2000;

Sujarittanarugse, 2005; Tangdhanakanond, Pitiyanuwat, & Archwamety, 2006b; Wiengkamol, 1999).

Portfolios reflect many aspects of student performances, namely individual abilities and characteristics, as well as growth and progress, as seen through their created products or artifacts (Aschbacher, 1990; Ater & Paulson, 1991; Birenbaum, 1996; Burke, Forgerty, & Belgrad, 1994; Lustig, 1996; Moonkum, 2000; Morin, 1995; Poowipadawat, 2001; Prawarnpruek, 1997; Punngam, 2000; Saereerat, 1997; Siladech, 1997). Using a portfolio as a source of information about a student can also increase parents' awareness of their child's abilities and needs (Kingore, 1995). Apart from being excellent learning tools as mentioned earlier, portfolios could help students improve their communication skills, as well as reflect on their learning process and products (Elango, Jutti, & Lee, 2005; Wiengkamol, 1999), due to the fact that during the process of organizing the portfolios, students become highly engaged in their learning through the steps of product selection and reflection (Danielson & Abrutyn, 1997; Tangdhanakanond, Pitiyanuwat, & Archwamety, 2005). Students can then further assess and revise their products. Moreover, portfolios could help students become aware of their strengths and weaknesses (Priest & Robert, 1998 as cited in McMullan, 2006).

Literature suggests different steps in making a portfolio, depending on the learning environment and the portfolio purpose. This makes the portfolio process flexible. However, from analyzing the related literature (Burke, Forgerty, & Belgrad, 1994; Epstein, 2001; Educational Technique Department, 1996; Fina, 1992; Moonkum, 2000; Morin, 1995; Pearson Education Development Group, 2001; Poowipadawat, 2001; Prawarnpruek, 1997; Punngam, 2000; Saereerat, 1997; Siladech, 1997), there are five common essential steps in making a portfolio, i.e., planning for portfolio assessment, collecting created products, selecting products and reflecting on selected products, revising and evaluating products, as well as utilizing portfolio assessment results.

In Thailand, student portfolio assessment was formally introduced after the enactment of the National Education Act of 1999. It became widely used, in addition to the use of traditional tests, during the first decade of the educational reform. This is because the Ministry of

Education tried to encourage school teachers to use portfolio assessment by requiring schools to send representative teachers to attend a portfolio assessment training session. Generally, rationale of portfolio assessment, portfolio process, as well as advantages and limitations of portfolio assessment were taught and discussed in the training session. Teachers attending the training session also learn about holistic and analytical scoring rubrics for the portfolio assessment. The representative teachers were subsequently expected to share what they had learned from the training session with the other teachers in their schools. However, Wongwanich and Wiratchai (2005)'s study revealed that teachers did not change student learning assessment methods and student achievement in the five main subjects (i.e., mathematics, Thai language, science, social study, and English) remained at a low level in the first decade of educational reform. This provides a good opportunity to study how teachers view the use of and how they see a need for student portfolio assessment. This study could help related public sectors and personnel such as teacher trainers from Universities and the Ministry of Education to understand teachers' views on the issue. Moreover, as we begin the second decade of educational reform, the five steps of student portfolio assessment should be considered in this study – (a) planning for portfolio assessment, (b) collecting created products, (c) selecting products and reflecting on selected products, (d) revising and evaluating products, and (e) utilizing portfolio assessment results. Information about the current and the desired performance of teachers on the use of student portfolio assessment, as well as the gap between the two types of the performance,would also be very helpful for the Thai educational authorities to (a) consider what steps of portfolio assessment teachers need to improve and (b) provide suitable programs that would help to improve teachers' skills in using student portfolio assessment.

The purposes of this study, therefore, were (a) to examine teachers' attitudes towards the use of student portfolio assessment in the educational reform process, and (b) to examine teachers' needs concerning the use of student portfolio assessment in the educational reform process.

METHOD

Participants

The participants included in this research were 242 elementary school teachers (29 male and 213 female teachers) from all regions (northern, middle, northeastern and southern parts) of Thailand selected by multi-stage random sampling. Participants included 110 Thai language teachers, 120 mathematics teachers, 74 sciences teachers, 53 career and technology teachers, 46 art teachers, 74 social study teachers, 50 English language teachers, and 38 physical education teachers. Ninety participants taught in the lower elementary school levels (i.e., grade 1 to grade 3), whereas 152 participants taught in the upper elementary school levels (i.e., grade 4 to grade 6). In these numbers of participants, 131 teachers had 20 years of teaching experience or less, while 111 teachers had more than 20 years of teaching experience. One hundred and thirty-two participants had attended the training sessions related to student portfolio assessment. The Thai language teachers, mathematics teachers, sciences teachers, social study teachers, and English teachers in this study mostly utilize portfolio assessment in the formative evaluation of their students' learning, while career and technology teachers, art teachers, and physical education mostly utilize portfolio assessment in the summative evaluation of their students' learning.

Instrument

A survey questionnaire as shown in the appendix was used in this research study. The survey was divided into three parts. In part one teacher gender, education level, as well as grades and subjects the respondents taught in schools were asked as the respondents' demographic information. In part two, the respondents were asked to rate their feeling about using portfolios to assess students' learning on a seven-point semantic differential scale. In part three, a five-point rating scale was employed to ask the respondents' perception on the current and desired performance on the use of student portfolio assessment. The use of student portfolio assessment was divided into 4 main steps, i.e.,

(a) planning for portfolio assessment, (b) collecting created products, (c) selecting products and reflecting on selected products, (d) revising and evaluating products, and (e) utilizing portfolio assessment results (Burke et al., 1994; Educational Technique Department, 1996; Epstein, 2001; Fina, 1992; Moonkum, 2000; Morin, 1995; Pearson Education Development Group, 2001; Poowipadawat, 2001; Prawarnpruek, 1997; Punngam, 2000; Saereerat, 1997; Siladech, 1997). The reliability of this questionnaire was 0.95 as determined by the Cronbach's alpha coefficient.

Procedure

The questionnaires were randomly distributed to school teachers in all regions (northern, middle, northeastern and southern parts) of Thailand. Mean and standard deviation were employed to analyze teachers' attitudes towards the use of student portfolio assessment, whereas dependent-sample t-test between the desired and the current performance of the use of student portfolio assessment was used to determine teachers' needs on the use of student portfolio assessment. In addition, the Priority Needs Index (PNI_{mod}) was used to arrange the teachers' needs on the use of student portfolio assessment in priority order. The PNI_{mod} was calculated by the following formula (Wongwanich, 2005):

$$PNI_{modified} = (I - D)/D$$

where I = Importance or desired performance
D = Degree of success or current performance

The PNI_{mod} values of 0.3 or higher were considered critical (Wongwanich, 2005).

Since the semantic differential scales are normally considered interval scales (Heise, 2010). Therefore, the use of non-parametric approach is appropriate. As for the p-value, setting the minimum significance level at .01 (rather than .05) is a way to handle the problem of multiple t-tests.

RESULTS

Teachers' Attitude Towards the Use of Student Portfolio Assessment

Teachers' attitude towards implementing portfolio assessment as a tool to assess student learning, measured by using the seven-point semantic differential scale, hown in Table 1. Overall, teachers (lower and upper elementary school levels combined) had positive attitude on the use of student portfolio assessment (M = 5.64, SD = 0.90). Their attitude was most positive towards the interest in the use of using portfolio assessment (M = 6.27, SD = 1.32), followed by the usefulness of using portfolio assessment (M = 6.26, SD = 1.17), and the appropriateness of the use of portfolio assessment (M = 6.23, SD = 1.10). On the other hand, their attitude was least positive towards the clearness and time in using student portfolio assessment (M = 4.43, SD = 2.20 and M = 4.43, SD = 2.16, respectively).

Table 1. *Teachers' Attitude Towards the Use of Student Portfolio Assessment*

Bipolar Pair	Lower Elem (n = 90)		Upper Elem (n = 152)		Combined (n = 242)	
	M	SD	M	SD	M	SD
1. Difficult – Easy	6.08	1.30	5.97	1.31	6.01	1.31
2. Useless – Useful	6.34	1.02	6.22	1.24	6.26	1.17
3. Time consuming – Time saving	4.42	2.23	4.43	2.13	4.43	2.16
4. Burdensome – Unburdensome	5.76	1.31	5.51	1.49	5.60	1.43
5. Indispensable – Dispensable	6.37	1.07	5.95	1.75	6.11	1.54
6. Substantial – Insubstantial	6.24	0.89	6.12	1.45	6.17	1.27
7. Inappropriate – Appropriate	6.26	0.87	6.22	1.22	6.23	1.10
8. Boring – Interesting	6.28	1.24	6.27	1.37	6.27	1.32
9. Economical – Wasteful	5.08	2.07	4.78	1.92	4.89	1.98
10. Ambiguous – Clear	4.43	2.35	4.43	2.12	4.43	2.20
Total	5.73	0.81	5.59	0.95	5.64	0.90

Needs Assessment of Teachers about the Use of Student Portfolio Assessment

Teachers' rating on the desired and current performance on the use of student portfolio assessment, as well as the results of teachers' needs

assessment on the use of student portfolio assessment are as shown in Table 2. It was found that overall (lower and upper elementary school levels combined) the difference between the desired and current performance of teachers on the use of student portfolio assessment in all of the steps (i.e., planning for portfolio assessment, collecting created products, selecting products and reflecting on selected products, revising and evaluating products, and utilizing portfolio assessment results) were statistically significant ($p < .01$). In the current performance on the use of student portfolio assessment, it was found that teachers rated planning for portfolio assessment, as the best step being performed ($M = 3.14$, $SD = 0.75$), followed by collecting created products ($M = 3.07$, $SD = 0.85$), utilizing portfolio assessment results ($M = 2.93$, $SD = 0.80$), revising and evaluating products ($M = 2.81$, $SD = 0.77$), and selecting products and reflecting on selected products ($M = 2.78$, $SD = 0.78$), respectively.

In the desired performance on the use of student portfolio assessment, it was revealed that teachers rated utilizing portfolio assessment results as the most desired step ($M = 3.92$, $SD = 0.81$), followed by selecting products and reflecting on selected products ($M = 3.91$, $SD = 0.70$), revising and evaluating products at the most desired step ($M = 3.90$, $SD = 0.69$), planning for portfolio assessment ($M = 3.86$, $SD = 0.68$), and collecting created products ($M = 3.76$, $SD = 0.78$), respectively.

In addition, teachers' needs concerning the use of student portfolio assessment were arranged in priority order by using the Modified Priority Needs Index (PNI_{mod}) as shown in Table 3. As a whole (lower and upper elementary school levels combined), teachers had most critical needs in the use of student portfolio assessment in the step of selecting products and reflecting on the selected products ($PNI_{mod} = 0.41$), followed by the step of revising and evaluating products ($PNI_{mod} = 0.39$), and the step of utilizing portfolio assessment results ($PNI_{mod} = 0.34$), respectively.

In the step of planning for portfolio assessment, as well as collecting created products, it was found that there were no teachers' critical needs on the use of student portfolio assessment ($PNI_{mod} = 0.23$ and $PNI_{mod} = 0.22$, respectively).

Table 2 . *Mean Teacher's Ratings on the Expected and Current States of the Use of Student Portfolio Assessment*

Portfolio Process	Lower Elem (n = 90)					Upper Elem (n = 152)					Combined (n = 242)				
	Desired		Current		t	Desired		Current		t	Desired		Current		t
	M	SD	M	SD		M	SD	M	SD		M	SD	M	SD	
1. Planning for portfolio assessment	3.98	0.69	3.29	0.74	9.95**	3.79	0.66	3.06	0.75	12.72**	3.86	0.68	3.14	0.75	16.16**
2. Collecting created products	3.86	0.81	3.09	0.76	9.84**	3.71	0.76	3.06	0.90	9.29**	3.76	0.78	3.07	0.85	13.18**
3. Selecting products and reflecting on selected products	4.06	0.67	2.99	0.65	15.12**	3.82	0.70	2.66	0.82	18.49**	3.91	0.70	2.78	0.78	23.78**
4. Revising and evaluating products	4.06	0.66	3.04	0.66	13.07**	3.80	0.70	2.68	0.80	16.84**	3.90	0.69	2.81	0.77	21.30**
5. Utilizing portfolio assessment results	4.07	0.78	3.09	0.77	12.24**	3.84	0.81	2.84	0.80	15.29**	3.92	0.81	2.93	0.80	19.60**

Table 3. *Modified Priority Needs Index of the Use of Student Portfolio Assessment of Teachers*

Portfolio Process	Lower Elem (n = 90)				Upper Elem (n = 152)				Combined (n = 242)			
	Desired (I)	Current (D)	PNImod (I-D)/D	Priority Order	Desired (I)	Current (D)	PNImod (I-D)/D	Priority Order	Desired (I)	Current (D)	PNImod (I-D)/D	Priority Order
1. Planning	3.98	3.29	0.21	5	3.79	3.06	0.24	4	3.86	3.14	0.23	4
2. Collecting	3.86	3.09	0.25	4	3.71	3.06	0.21	5	3.76	3.07	0.22	5
3. Selecting and reflecting	4.06	2.99	0.36	1	3.82	2.66	0.44	1	3.91	2.78	0.41	1
4. Revising and evaluating	4.06	3.04	0.34	2	3.80	2.68	0.42	2	3.90	2.81	0.39	2
5. Utilizing	4.07	3.09	0.32	3	3.84	2.84	0.35	3	3.92	2.93	0.34	3

DISCUSSION

Teachers' Attitude Towards the Use of Student Portfolio Assessment

The result of this study indicated, that, overall teachers were found to have positive attitudes on the use of student portfolios. Their attitude was most positive on the interest in the use of portfolio assessment. On the other hand, their attitude was least positive on the clearness and time in using student portfolio assessment. This is consistent with other previous research studies. Samnaingdee (2003)'s study found that teachers with different teaching experience had positive attitudes toward the use of portfolio assessment. Moreover, Khantong (2000) revealed that teachers had positive attitudes toward the use of portfolio assessment in all subjects. The finding of the present study that teachers, in this second decade of educational reform, have a positive attitude towards the use of student portfolio assessment provides good opportunities for school administrators and other educational authorities in further improving teacher performance in this regard. Moreover, a positive attitude on the use of portfolio assessment could also help teachers deal with any problems in using student portfolio assessment since research shows that a positive attitude helps people cope with troubles more easily (Sasson, 2007).

Needs Assessment of Teachers concerning the Use of Student Portfolio Assessment

The results, which show there is a statistically significant difference between the desired and current performance of teachers on the use of student portfolio assessment in all of the steps (i.e., planning for portfolio assessment, collecting created products, selecting products and reflecting on selected products, revising and evaluating products, and utilizing portfolio assessment results), indicated that teachers had needs with the use of student(s) portfolios in all of the steps of student portfolio assessment. Similar findings were found in the previous research study of Kornketkamon (2001) which found that teachers had problems in the use of portfolio assessment, especially encouraging students to organize their artifacts in the portfolios, giving students as well as parents a chance to express their opinion on students' artifacts, and utilizing the students' portfolios as a means to evaluate the success of teachers' instruction. In addition, this research findings are also consistent with Srirod

(2002) which found that teachers has some difficulties in guiding students in selecting the products in their portfolios, encouraging students to reflect on their products, as well as guiding students to evaluate their products and learning. The findings of this present study show that the effort of the Ministry of Education to encourage school teachers to use portfolio assessment in the first decade of educational reform had a successful impact on teachers' attitude towards the use of student portfolio assessment. However, it was not successful in a practical way. Teachers still needed help in utilizing all steps of student portfolio assessment. That may be because in the first decade of educational reform teachers concentrated more on teaching methods rather than assessment methods (Wongwanich & Wiratchai, 2005).

However, as determined by the PNI_{mod} value, it was found in this study that, as a whole, there were no teachers' critical needs on the use of student portfolio assessment in the step of planning for portfolio assessment, as well as the step of collecting created products. On the other hand, it was found that teachers had most critical needs in the use of student portfolio assessment in the step of selecting products and reflecting on the selected products, followed by the step of revising and evaluating products, as well as the step of utilizing portfolio assessment results, respectively. That may be due to the fact that planning for portfolio assessment and collecting created products are rather straightforward (Pearson Education Development Group, 2001) compared to other steps in the portfolio process. This may account for the present study's finding that teachers had critical needs in the use of student portfolio assessment in the step of selecting products and reflecting on the selected products, the step of revising and evaluating products, as well as the step of utilizing portfolio assessment results.

The findings of this study provide valuable guidelines and implications for educational authorities in Thailand in order to help teachers meet their needs and develop their performance on the use of student portfolio assessment. Workshop training sessions on the use of student portfolio assessment should be provided for teachers. The step of selecting products and reflecting on the selected products, the step of revising and evaluating products, as well as the step of utilizing portfolio assessment results should be incorporated and heavily emphasized in the training sessions. Besides, in order to make teachers understand the process of student portfolio assessment more clearly, the workshop

sessions should be in hands-on format so that teachers will have opportunities to practice using student portfolio assessment step by step.

Further Consideration

In this study, only elementary school teachers were studied. If middle and high school teachers were included in future studies, it would be interesting to find out their attitude towards the use of student portfolio assessment, as well as their needs on the use of student portfolio assessment. Also, as mentioned earlier, we are currently in the second decade of education reform in Thailand. It would be interesting, as well, to track the changing attitudes and needs concerning the use of student portfolio assessment after the second decade of educational reform process. The findings of these further studies would be helpful for Thai educational authorities in planning strategies to further improve teacher attitude and performance in the use of student portfolio assessment as they approach the third decade of educational reform.

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MOKYTOJŲ NUOSTATŲ IR POREIKIŲ, SUSIJUSIŲ SU *PORTFOLIO* METODO TAIKYMU MOKINIŲ PASIEKIMAMS VERTINTI, ANALIZĖ TAILANDO ŠVIETIMO REFORMOS PROCESE

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Santrauka. *Problema.* Tailande vykdoma švietimo reforma siekia reformuoti mokymo turinį, mokymo ir mokymosi bei mokymosi pasiekimų įvertinimo metodus. *Portfolio* metodas siūlomas kaip vienas iš galimų mokinių pasiekimų įvertinimo būdų. Tačiau mokytojai nenoriai keičia įprastus mokinių įvertinimo būdus naujais, nors dešimtmetį vykdomos reformos pagrindinių penkių mokymosi dalykų rezultatai išlieka žemi. Todėl verta gilintis, kaip mokytojai vertina *portfolio* metodą ir kaip supranta tokio vertinimo poreikį. *Tikslas*. Šiuo tyrimu keliami tikslai: a) įvertinti mokytojų nuostatas į *portfolio* metodo taikymą mokinių mokymosi pasiekimams vertinti vykstančios švietimo reformos kontekste; b) įvertinti mokytojų poreikius, susijusius su *portfolio* metodo taikymu mokinių mokymosi pasiekimams vertinti. *Metodikos.* Tyrime dalyvavo 242 pradinės mokyklos mokytojų. Duomenims rinkti pasitelkti klausimynai. *Rezultatai.* Tyrimo rezultatai parodė, kad mokytojai bendrai teigiamai vertina *portfolio* metodo taikymą mokinių pasiekimams vertinti, bet jiems reikia pagalbos įgyvendinant atskirus šio metodo etapus. Mokytojams reikia pagalbos įvertinti, kokią mokinių produkciją įtraukti į *portfolio* vertinimą bei kaip ją reflektuoti, kaip pasirinktus produktus koreguoti ir vertinti bei kaip panaudoti *portfolio* įvertinimo rezultatus. *Išvados.* Tyrimas parodė, kad mokytojams turi būti organizuojami seminarai, kuriuose būtų mokoma tinkamai taikyti *portfolio* įvertinimo metodą. Mokymų metu turėtų būti suteikiamos žinios, kaip tinkamai pasirinkti vertinimo produktus ir juos reflektuoti, kaip peržiūrėti ir vertinti bei kaip prasmingai panaudoti *portfolio* metodu gautus įvertinimo rezultatus.

Pagrindiniai žodžiai: *Portfolio*, nuostatos, poreikių įvertinimas, švietimo reforma.

APPENDIX

Survey on Teacher Attitude and Needs Assessment concerning the Use of Student Portfolio Assessment in Thailand's Educational Reform Process

Part 1. Demographic Information

Direction. Please mark "P" in ❑ with specific regards to your personal information.

1. Gender	❑ Male	❑ Female	
2. Level of education degree	❑ Bachelor degree	❑ Master degree	❑ Doctoral
3. Teaching experience	❑ less than 5 years	❑ 5-10 years	❑ 11-15 years
	❑ 16-20 years	❑ 21-25 years	❑ 26-30 years
	❑ more than 30 years		
4. Grade taught	❑ Lower elementary	❑ Upper elementary	
5. Subject taught	❑ Thai language	❑ Mathematics	❑ Sciences
	❑ Career and technology	❑ Art	❑ Social study
	❑ English language	❑ Physical education	

Part 2. Teacher Attitude concerning the Use of Student Portfolio Assessment in Thailand's Educational Reform Process

Direction. Please complete the following questionnaire with specific regards to your personal information by pressing "P" in the appropriate box.

Using portfolio in an evaluation of students' learning is ……………..

	Strongly Agree	Agree	Somewhat Agree	Neutral	Somewhat Agree	Agree	Strongly Agree	
Easy	1	2	3	4	5	6	7	Difficult
Useful	1	2	3	4	5	6	7	Useless
Time saving	1	2	3	4	5	6	7	Time consuming
Unburdensome	1	2	3	4	5	6	7	Burdensome
Indispensable	1	2	3	4	5	6	7	Dispensable
Substantial	1	2	3	4	5	6	7	Insubstantial
Appropriate	1	2	3	4	5	6	7	Inappropriate
Boring	1	2	3	4	5	6	7	Interesting
Wasteful	1	2	3	4	5	6	7	Economical
Clear	1	2	3	4	5	6	7	Ambiguous

Part 3. Needs Assessment concerning the Use of Student Portfolio Assessment in Thailand's Educational Reform Process

Direction. Please rate each item (1 = low, 5 = high) according to your perception on the current and desired performance on the use of student portfolio assessment.

Use of portfolio assessment	Current performance					Desired performance				
	1	2	3	4	5	1	2	3	4	5
1. Planning for portfolio assessment										
1.1. Informing students at the beginning of the courses about the use of student portfolio assessment.										
1.2. Allowing students to participate in setting the purposes of creating portfolios.										
1.3. Informing students at the beginning of the courses about numbers and attributes of products required to be produced.										
1.4. Informing students at the beginning of the courses about portfolio process.										
1.5. Explaining how to use evaluation forms in the portfolio process to students at the beginning of the courses.										
2. Collecting created products										
2.1. Encouraging students to collect their created products in their working folders.										
2.2. Encouraging students to make a record whenever they collect their learning evidences in their working folders.										
2.3. Providing students with opportunities to organize products or evidences in their portfolios to be consistent with learning objectives.										
3. Selecting products and reflecting on selected products										
3.1. Providing students with opportunities to select the created products from their working folders to be kept in their portfolios.										
3.2. Encouraging students to use the evaluation criteria or scoring rubrics as a guideline for selecting the qualified products in their working folders to be kept in their portfolios.										
3.3. Providing students with opportunities to put new selected products / evidences in their portfolios and take some earlier selected products out from their portfolios.										
3.4. Encouraging students to write down their opinions on the selected products in their portfolios.										
3.5. Encouraging students to make plans for revising products in their portfolios.										

Use of portfolio assessment	Current performance					Desired performance				
	1	2	3	4	5	1	2	3	4	5
4. Revising and evaluating products										
4.1. Providing students with opportunities to revise or improve the products / evidences in their working folders.										
4.2. Providing students with opportunities to revise or improve the products / evidences in their portfolios.										
4.3. Providing students with a self-evaluation in evaluating their products.										
4.4. Providing students with a peer-evaluation in evaluating their products.										
4.5. Providing students with a teacher-evaluation in evaluating their products.										
4.6. Providing students with a parent-evaluation in evaluating their products.										
5. Utilizing portfolio assessment results										
5.1. Utilizing portfolio assessment results as a feedback for improving their instruction.										
5.2. Utilizing portfolio assessment results as part of the grading in the taught subjects.										
5.3. Utilizing portfolio assessment results as a feedback for improving students' learning.										