Documentation and assessment are important elements in securing continuity, progress, and flexibility in the teaching and learning of young children. This article explores the first year of portfolio assessment in a kindergarten in Finland, asking such questions as: (1) What are portfolios and why are Taija (one particular student), her peers, teachers, and parents so enthusiastic about them? (2) How do children's portfolios reflect their individual growth, development and learning? (3) What is their influence on the children's self-knowledge? (4) Do the portfolio activities enhance a holistic learning environment? The article begins by defining "portfolio," which is a purposeful documentation and selection of a child's work that demonstrates progress over time. It discusses the advantages of portfolios, including their flexibility and individuality, and then provides some examples of information which may be included in a student's portfolio. It then provides a table listing the many functions served by this kindergarten's "albums of growth," including self-knowledge, interaction among children, parental participation, and teacher knowledge of students, especially during the transition from kindergarten to elementary school. The remainder of the article presents examples of these various functions at work within this classroom, including quotes from students. Contains seven references. (EV)
What is the meaning of this folder?

Err... album of growth. There are all kinds of papers... a portrait of myself. It says Portrait of Taija as a preschooler. This is my portrait. We looked in the mirror. I was looking at myself in the mirror. I had then ear rings like these... I lost the other one... then I had this dress... there is something written, I couldn't do it well...

Taija is one of the first-graders in Nissniki primary school in Kirkkonummi, Finland, who, together with their teachers in the kindergarten, started to document and assess their growth and learning during their kindergarten years by means of the portfolios. When going to the primary school the children took their portfolios with them and the process of documenting and assessing was continued there. The portfolios were seen as a bridge from kindergarten to school.

This case-study into assessment from the child's perspective is part of a research project on flexible school-beginning. Bridging kindergarten and
school with portfolios was one way of bringing flexibility and continuity to the years from five to eight. Other forms of co-operation between kindergarten and school are examined by action research in different local development projects. Co-operation in different learning environments is seen through ecological approach (Bronfenbrenner 1979). In this ecological model different settings are related one with the other within the wider environment. The starting point in this study is in how young children experience their learning environment and how they take part in building their different environments.

In this article I focus on the following questions with reference to one kindergarten's and school's approach to self-assessment: What are the portfolios and why Taija, her peers, teachers and parents are so enthusiastic about them? How do children's portfolios reflect their individual growth, development and learning? What is their influence on the children's self-knowledge? Do the portfolio activities enhance the holistic learning environment?

What is a portfolio?

"If your ultimate aim in education is to develop independent learners, there are few better ways than the use of portfolios." (Clemmons et al. 1993, 62)

Documentation and assessment are important elements in securing continuity, progress and flexibility in the teaching and learning of young children. The overall process of documenting and assessing provides a basis for the planning of the following stages in the child's learning. This process should involve all significant people in the child's learning environment: the child, teacher, parents and peers.

Through self-assessment the child's awareness of his or her learning and growth develops. This awareness and involvement in learning and assessment in turn benefits the child's learning (Kohonen 1992). Self-assessment is emphasized in the portfolio assessment which is a promising approach for securing quality and authenticity in assessment.

The portfolio can be defined as a purposeful documentation and selection of a child's work. It offers opportunities to exhibit the child's performance and growth over time. The selection should include the child's own description of the learning context, his or her personal goals and criteria. The portfolio should also contain the child's own reflection and assessment of the selected work and the process of learning and development. (Paulson et al. 1991, 60; Tierney et al. 1991, 41-43; Linnakylä 1994, 10.)

Portfolio assessment offers various opportunities for both the child and the teacher (De Fina 1992, Linnakylä 1994):
- to develop a sense of process in work and learning
- to create means for the child's self-assessment and self-evaluation
- to help children and teachers to determine and set individual goals
- to individualize teaching and learning
- to place assessment in an authentic learning environment
- to develop a sense of ownership in a child's work and learning
- to communicate and develop the curriculum

However, there is no single right way to do portfolios; every folder is individual and different and hopefully represents its owner. Also the functions and meaning of the folder vary from one child, group and teacher to the other. There is no set format either for the concrete portfolio where to store the information. It is, indeed, a matter of personal choice and there can be variation for example from a folder to a video or a tape or even a box full of important and valuable things. The format of the children's portfolios in my case-study was A4 folders. To make the folder individual and to emphasize ownership, every child made the cover to look his or her very own.

This 7-year-old boy wanted to present his portrait. On the front cover was his face and on the back cover the back of his head. And inside the portfolio, I hope, was his whole school world.

The albums of growth

In this case-study the portfolios are called 'the albums of growth'. They are a composite of information collected to reflect positively the children's achievements. The album of growth can be described as a portrait of the child, his or her skills, abilities and interests. It reflects the child's individual growth, development and learning. Through it the child from a very early age is involved in self-assessment as part of co-operative learning.

The most essential task of portfolios in the early years in this study is to promote the child's self-knowledge. The contents of the portfolios reflect children's everyday life and the learning and growth processes. Their portfolios grow together with their personal development and progress from kindergarten to school.
What should then go into the portfolio? After the first term of the experimentation with the portfolios we looked through the children's folders to find it out. Here are some examples from the folders:

- personal data (e.g. the child's own page)
- samples of the child's work:
  - drawings, paintings (how the child's pictorial expression develops at the age of 1-6)
  - children's own texts: tales, stories, chats, plays
- details of different events, celebrations and excursions in kindergarten as experienced by the child
- information about the things the child enjoys (for example a pleasing song, a rhyme, a book)
- information about the child's daily life in kindergarten: what he or she does, plays, learns, what he or she is interested in
- photos of different activities
- children's narrative comments and assessments of their work
- self-assessments and self-reflections (summaries of the activities)

We also looked for the different functions of these albums of growth. The table gives examples of the different functions from four different points of view: the child, the kindergarten: teacher and peers, parents and the future school.

Table 1. Functions of the albums of growth in the kindergarten.

<table>
<thead>
<tr>
<th>Child</th>
<th>Kindergarten</th>
<th>Parents</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-knowledge</td>
<td>Interaction among children</td>
<td>Parental participation</td>
<td>Student knowledge</td>
</tr>
<tr>
<td>This is how I grow,</td>
<td>Teaching</td>
<td>What is my child</td>
<td>- abilities</td>
</tr>
<tr>
<td>develop and learn</td>
<td></td>
<td>doing in kindergarten?</td>
<td>- interests</td>
</tr>
<tr>
<td>physical growth</td>
<td></td>
<td>How is my child</td>
<td>- what does he or she think of</td>
</tr>
<tr>
<td>social growth</td>
<td></td>
<td>developing?</td>
<td>learning and</td>
</tr>
<tr>
<td>cognitive learning</td>
<td></td>
<td>What is the child</td>
<td>school</td>
</tr>
<tr>
<td>speech development</td>
<td>to follow child's</td>
<td>interested in?</td>
<td>How should I continue with the</td>
</tr>
<tr>
<td>pictorial expression</td>
<td>development</td>
<td></td>
<td>child?</td>
</tr>
<tr>
<td>beginning literacy</td>
<td>a closer view on children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>narration</td>
<td>planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>self-concept</td>
<td>communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>courage</td>
<td>with home, other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-assessment</td>
<td>groups, etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Naturally, these functions will vary and change over time and in different learning environments. If, for example, I wrote this table again after the first year of the experimentation in the school, there might be differences due to changes e.g. in emphasis in curriculum.
Self-knowledge - this is how I grow and develop

Through the album of growth it is possible to give a many-sided portrait of the child and exhibit different areas of the child’s development and learning. Some examples of these areas are physical and social growth, beginning literacy and cognitive learning (see Table 1, first column).

6-year-old Teemu wanted to document his own literacy project in his portfolio. As his project he wanted to collect the names of all the children in the kindergarten (at that time over 70 children). He began by writing the names of his own group. That was quite easy. But then to get the other names he needed other children’s help and co-operation. He wandered around the whole kindergarten asking the names - at the same time he was able to get to know children in the kindergarten. What a large amount of social interaction!

A selection of work from different areas is not, of course, enough to make a folder a portfolio. It should always include the child’s descriptions and reflections on the work samples, summaries of the activities and self-assessments. Children’s self-reflections on growing and learning are also an important part of building their self-knowledge. Last spring children made summaries of the previous autumn together with their teachers. Here are Jesse’s (a 6-year-old-boy) choices for the most important events in the autumn and his descriptions of them and his learning:

What did you learn last autumn?

(photograph of Jesse skating) I learned how to skate, ’cause last winter I used to trip and stumble on the ice. It has become a bit better, ’cause it is such fun ... it’s really great. Except sometimes when you don’t feel like going.

What would you like to learn?

I would also like to learn to read ’cause that might be fun. ’Cause I always have to watch programs with text ... so mom and dad needn’t always read the text. It really makes me sad ’cause I can’t even read.

What was the most exciting thing?

(drawing of a snow castle) We were building a snow castle Tomi and I. That was good when we had to carry that big snowball just the two of us. We couldn’t carry it. Then I tried it alone and then it just moved and I got it over. Almost everyone wanted to come inside. I drove them away. We made a gate. We played and stayed there. Tomi made a snow chair. Once I jumped over the wall head first. It was the best!

What would you do otherwise?

(Sami’s report of the football match) I would have done differently in the football match. You see, it felt so strange to hover about with that ball and all the time they were winning. I would do that differently!
Children making their choices

Most children in the kindergarten assess themselves and describe their work orally, some children also in writing. Although the portfolio is regarded as the child’s property, teachers have an extremely important role in the assessment process. They are listeners and they encourage the children to reflect by asking questions like the following ones:

- What does the folder tell about you as a learner?
- What have you learned?
- How have you changed?
- What is the most important piece of work for you?
- Why? How did you do it? What does it tell you? What happened then?
- Which one do you like best?
- Why? etc.
- What is the funniest / nicest piece of work?
- What would you like to improve?
- What would you like to do next?

The younger the child, the more central the teacher’s role is. However, from a very early age children are interested in their folders and enjoy going through them with their teachers over and over again.

In the kindergarten children themselves made their choices for the portfolio and teachers asked them to explain the selection of work. The reasons for the children’s choices were recorded either on the work, on a separate paper or form. After learning to write children will write the reasons themselves.

Children selected work in different ways and also the reasons for selection varied. Sometimes their selections and reasons can greatly surprise an adult. The reasons can be related to the outcome, appearance or process of work, or the meaning of the events linked with a specific piece of work.

In one of her first choices, Taija emphasized her satisfaction with the outcome:
Which one of these came out best?

T: (humming and looking through her folder) this one I haven't done myself this one!

Why do you think it came out right?

It is so beautiful.

What makes it beautiful?

'Cause these are dandelions.

How did you do it?

These have been painted with water-colours and these with ink. First black and then water-colors. I know how dandelions look like. We had seen them.

The highlight of the previous autumn for 6-year-old Sami was when he prepared a report of a football match. The match between Finland and Sweden was organized in the kindergarten. Sami chose making the report the most exciting event of the previous autumn:

The first goal came when Jesse didn't notice the ball and it went into the goal and then it was 1-0 for Sweden. In 2-0 situation Milla didn't notice the ball when it was kicked into the goal for Sweden. We were in high spirits after the match. The Finnish team didn't have a good feeling. But two players of the Finnish team got medals. Sami and Teemu had been in a good pressure. They didn't let any goals for Finland.

Sami described his choice as follows:

This football report 'cause I could report on goals and all that. When Jesse didn't notice when one of us shot 1-0 for Sweden and Milla didn't see that Sweden shot 2-0. That goal situation was exciting.

Sami also chose this report to exhibit what he had learned in the autumn.

It was good when I learned to do that report, that football report. Otherwise I wouldn't have such a fine picture in my folder. (Sami is showing the picture he had made of the football match). That was neat.

In the above situations Sami's report and assessments were written by his teacher. However, in his summary of the previous autumn he hoped to learn to write:

I would like to learn how to write. 'Cause it always turns out badly or so.

Interaction among children

Portfolios can also be important when children introduce themselves to other children, teachers and parents. Thus they are able to give a comprehensive picture of themselves to people surrounding them. When I visited the preschool and the primary school the children always wanted to show their work samples to me. They were extremely proud of their albums of growth.
To follow the child's development

What is the meaning of the albums of growth for teachers? Through them they can follow children's growth and development. Teachers learn to know individual children better in their groups. Children's portfolios can also be vehicles for future planning. Furthermore, they have been used in situations where there is a need to pass on information from the kindergarten to homes or from one kindergarten group to another.

Parental participation

An important element in the portfolio process is the parents' involvement in assessment. And not just in receiving or sharing information about their children, but also in contributing to the recording of their achievements. In that way the ownership of portfolios is partly extended to parents and the portfolio process is seen as a dialogue between parents, teachers and children.

In this case-study parents were interested in using the portfolios. Through them they acquired more information about their children's life, interests, activities and curriculum in the kindergarten and school. The parents took actively part in the development and assessment of the portfolios as well. The portfolios were shared with the child, parents and teacher in discussions in order to have a common basis for future learning activities.

During the summer before their children went to school, parents helped their children to select pieces of work from the kindergarten for the portfolios to be taken to school the following autumn.

From pre-school to school

In the co-operation between the preschool and the primary school portfolios created continuity in the learning and teaching. During their last spring in the kindergarten children had opportunities to get to know their future school and teacher. They visited the school with their kindergarten teacher and introduced themselves to their new teacher through portfolios.

On the important first school day the school-beginners were extremely proud of having their albums of growth in their backpacks. Working with portfolios was also continued in school. In the primary school there are six groups, and all the teachers in this school wanted to experiment with portfolio assessment. Another new thing in this school was that they had just changed their old grouping into non-graded groups. This meant that in every group there were children from grades one to three. This was particularly important for the school-beginners coming from Kpas kindergarten - port-
Folio assessment was something totally new for the other students and teachers in the school.

What were the children's first choices for their school portfolios? In her first choice Taija wanted to show her enthusiasm for the beginning of the school. She had written and drawn different school words. And what about the reasons - simply because she was satisfied with the appearance of the backpack and the chair. In the kindergarten Sami was already very interested in numbers and counting. So, it wasn't surprising that his first choice in the school was a page from a mathematics book. He gave the following reasons for his choice: "It is so good, because it was from mathematics. Mathematics is nice."

**Conclusions**

In this article I have mainly described the experiences from the first year of the experimentation with portfolios in the kindergarten as a means of self-assessment in the early years. Portfolios were a child-centered method of documentation and assessment bringing out the children's ideas and opinions. Activities in the kindergarten and school were documented and assessed by the children through portfolios. Portfolios were primarily regarded as the children's property. The focus on the children's ideas seemed to strengthen their self-esteem and offer opportunities to develop self-knowledge. It helped children make and show their own choices and to reflect on their development and learning.

Although the focus is on the children's self-assessment and reflective thinking, according to the ecological approach, all those involved in the children's learning should also be involved in the assessment. The ownership was thus extended to significant others in the child's environments. Teachers learned new ways to follow and assess children's development. Portfolios gave also insights to future planning. Furthermore, portfolios increased parents' active participation. Parents were seen as important contributors to the assessment process of their children.

One of our central goals was to create a bridge from the kindergarten to school through portfolios. Children passed themselves information of their development and learning to the next stage of learning. Portfolios were warmly welcomed in the school and they continued to grow and develop there together with the children. In that way it was possible to enhance flexibility and continuity in the children's lives in their different learning environments.
References
