

**The Reflective Dancer**  
**ICT Support for Practical Training**

**Äli Leijen**

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**The Reflective Dancer**  
**ICT Support for Practical Training**

De Reflectieve Danser  
ICT Ondersteuning voor Praktische Training  
(met een samenvatting in het Nederlands)

Reflekteeriv tantsija  
IKT tugi praktilises õppes  
(eestikeelse kokkuvõttega)

Proefschrift

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Amersfoort, April 2008



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## Chapter 1

### Introduction

The implementation of ICT (Information and Communication Technology) in education to facilitate teaching and learning is a growing tendency worldwide. De Boer (2004) found that, although traditional learning settings still have important roles in higher education, the general expectation is that ICT will be implemented on a broader basis in higher education in the near future. The reasons for this development are often related to the fact that using web-based ICT applications, e.g., virtual learning environments, gives students and teachers more flexibility in terms of time, content, instructional approach, and resources, as well as course delivery and logistics (Collis, Vingerhoets, & Moonen, 1997; De Boer). In addition, according to Simons (2006), ICT allows students and educators to build contacts with parties outside the educational setting, gives students a more active role in learning through problem-solving, decision making, inquiry and research, and design activities and learning as meaning construction. Moreover, ICT can make students' thinking, learning, and collaboration processes more visible through the on-line analysis of activities and patterns of interaction. Besides being useful for monitoring purposes, the latter facilitates teaching and learning how to learn.

In line with the above, we questioned why these advantages, which are general in nature, are merely applied to supporting the learning of declarative knowledge, intellectual skills, and cognitive strategies, and are not employed in educational programmes which, among other learning outcomes, are aimed at supporting students' physical skills. It seems that a large part of education is neglected in using the possibilities provided by web-based ICT applications. An example of such an educational programme can be found in dance education. Both dance technique and choreography courses in dance education programmes address the development of students' physical skills. In dance technique classes, the development of physical skills is related to enhancing students' skills in specific dance styles and techniques. Choreography classes focus on developing students' skills in dance composition, which entails that students explore how to express their ideas in physical ways. The role and extent of developing physical skills in comparison to other types of learning outcomes varies in technique and choreography classes. For example, choreography classes are more often concerned with

developing students' creativity than are dance technique classes. Although there are differences in pedagogical aims in these classes, the importance of developing physical skills in both allowed us to address both classes as one entity. As learning physical skills is often related to intellectual skills, in practice, physical-skill acquisition should not be viewed in isolation from the other learning aims. For this reason, technique and choreography classes are referred to below as practical dance courses, where *practical* indicates physical-skill acquisition in combination with other types of learning activities.

Based on the above, we decided to focus on exploring how web-based ICT applications can be used to enhance teaching and learning in practical dance classes in tertiary education settings. At the beginning of our research ICT was not used in the educational programmes of tertiary dance education. In 2005 an innovative European project took place in which a web-based ICT application was implemented in an international dance education programme. For all partner institutes in this project, this was the first time a web-based ICT application was used at the institute. We took the opportunity to explore what the dance teachers who taught the e-courses in this programme thought of the possibilities ICT has to offer dance education. Based on the outcomes of informal conversations with the dance teachers, we believe that the format of web-based ICT applications is suitable for dance education. Most of the dance teachers indicated that the possibilities provided by ICT for dance education are related to networking, collaborating, and knowledge exchange between students and teachers. The teachers also referred to the new possibilities for facilitating students' reflection on their learning processes. A teacher explained this as follows:

Choreography students can reflect on their own work or learning process, or the other choreographers'. For example, if they stay with a choreographer, then most of the time they are so into the process that they do not look back. If a choreographer were to film every rehearsal and put it there [online], they could look back..., so for a choreography department, this would be interesting.

Some teachers found that ICT is especially useful for supporting learner-centred pedagogies; a teacher indicated the following:

It opens students up to more bibliography, more research; it helps them to have personal opinions. The role of the teacher is not so dominant; he is

more a guide and that means that students can probably build their own opinions, and that's what we strive for in dance education.

Advantages were also indicated for facilitating theory courses, research, and dance analysis, which according to some teachers gets less attention in the regular programme owing to the large number of technique classes students need to follow. Teachers indicated that ICT can be helpful for finding the balance between the practical and theoretical aspects of dance. An interesting idea was brought up by a teacher: as a result of implementing ICT in dance education, overloaded dance students would get an extra space for learning, which they can use in their own time and in a place of their own choosing. In addition, a teacher indicated that the use of ICT can bring a new audience to dance and raise more interest in dance in society. Finally, the important issue of dancers' short careers was touched on. Teachers found it absolutely necessary for dancers to acquire a level of computer literacy; one reason mentioned for this was the opportunity to master another profession using web-based ICT applications when their dancing careers are over.

The ideas described above illustrate that dance educators saw several advantages of using web-based ICT applications in dance education. We believe that these advantages overlap with the general benefits of ICT in education, like facilitating collaboration with parties outside the educational setting; supporting students in becoming more active in learning; helping students' learning processes to become visible; giving students more flexibility in learning; and facilitating distance learning. We believe, therefore, that it should not be questioned whether web-based ICT applications can benefit practical dance courses; rather, it is necessary to investigate how ICT can be used in these courses, which until now have not made considerable use of ICT. Only a few authors had reported on the use of web-based ICT tools in practical dance education at the time we started our research in 2004. For example, *Research in Dance Education*, a leading journal in the dance education domain, is only now for the first time planning to publish a special issue of *Dance Education and Technology*, in Summer 2008. The most recently available overview of ICT use in dance education is given by Parrish (2007). After first providing descriptions of a number of successful cases, and elaborating on the benefits technology has to offer dance education, Parrish then points out that at present the field-testing of technology use in dance education is limited, and substantial research is needed to investigate its

implications. Based on the above arguments, the central research question of this dissertation was formulated as follows:

*How can web-based ICT applications be used to facilitate teaching and learning in practical dance courses in higher education?*

The central research question was split up into five research questions, which are discussed in the following section.

As indicated, little was known about ICT in dance education at the beginning of the research project. We found an international dance education programme in which a web-based ICT application was used. We aimed to find out how dance students perceived learning in this programme. In particular, we aimed to determine whether the virtual learning environment, which at the time was the most commonly used ICT application in higher education, supported students in completing learning assignments in the dance courses. Moreover, since students' perspectives on the value of technology use in an educational setting are influenced by how and on the basis of what pedagogical purposes it is implemented, we also aimed to find out how students perceived the pedagogy implemented in the e-courses. We formulated the following research questions focusing on the use of a web-based ICT application in dance education:

- 1. How suitable is a virtual learning environment for carrying out learning assignments in dance education?*
- 2. How do pedagogical aspects of the e-courses influence students' satisfaction with their learning processes and outcomes in these e-courses?*

Since we saw technology implementation not as an end goal in itself, but as a means to support pedagogical practices, we decided to investigate which specific pedagogical purposes a web-based ICT application should address in practical dance classes, how it could be used, and what influences it might have on pedagogical practices in dance education. For this reason, we formulated an additional research question, with a focus on dance pedagogy:

- 3. Which specific pedagogical aims should a web-based ICT application facilitate in practical dance classes?*

The results of the studies presented in Chapters 3 and 4 show that supporting students' reflection is an important pedagogical aim in practical dance education. We also found in the studies reported in Chapters 3 and 5 that supporting students' reflection needs further facilitation in practical dance classes. For these reasons, the following research questions were posed to enable us to find out how ICT can be used to facilitate students' reflection in practical dance classes:

4. *How can a web-based ICT application facilitate supporting the processes of students' reflection in practical dance classes?*
5. *In what ways does a web-based ICT application facilitate supporting students in describing, evaluating, and relating processes of reflection in practical dance classes?*

The general structure of and the relationships between the studies reported in the five chapters of this dissertation regarding the five research questions are presented in Figure 1.

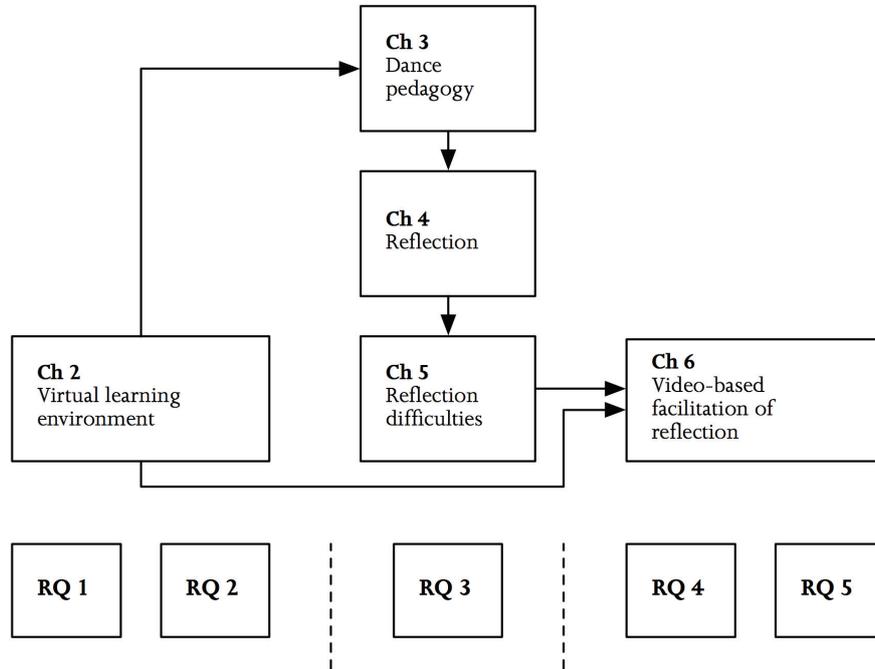


Figure 1. General structure of the five studies.

The main context of the current research was higher professional dance education in the Netherlands (with the exception of the study presented in Chapter 2, which was focused on the international context of tertiary dance education). Below, we introduce the different studies executed, which address the sub-questions of the main research question, explain further how they relate to each other, and describe the research designs adopted in these studies.

The research was started with an exploratory study (Chapter 2). We investigated how 42 dance students participating in an international dance education programme perceived learning in a distance education programme delivered in an e-learning format using the virtual learning environment platform Caroline. The research questions of this study addressed, first, the influence of the pedagogical implications of e-courses on students' satisfaction with their learning processes and outcomes; and, second, the suitability of the virtual learning environment for supporting three broad learning assignments (individual writing assignments, collaborative writing assignments, and individual practical assignments) in an international dance education

programme. The explanatory mixed methods design (Creswell, 2005) was adopted. This design entails that quantitative data are collected first, followed by the collection of qualitative data to explain and elaborate on the quantitative results. The quantitative data collected and the results arising from these present a general picture of the research problem. It is helpful to gain an overview of some general tendencies before collecting and analysing qualitative data, since these can assist in choosing a focus in the abundance of qualitative data. Moreover, qualitative data are useful for refining, extending, or explaining the general picture (Creswell). Therefore, we first collected data from the participants using a questionnaire, in which they were asked to rate different pedagogical implications of all courses they participated in, to describe which aspects of the courses they found most positive and most negative, and to state what needed improvement. Following this, further information about the students' experiences was collected through group interviews, with the aim of extending the quantitative findings. In order to increase the trustworthiness of the findings, two researchers were involved in the qualitative data analysis.

Based on the results of the first study, we decided to investigate more closely the pedagogy in practical dance classes in order to find out which specific pedagogical aims need further facilitation (Chapter 3) in these classes. As in the study reported in Chapter 2, the explanatory mixed methods design (Creswell, 2005) was adopted in this study. First, we reviewed the literature on dance pedagogy to discover the current trends in dance education. Second, based on the trends, we composed a questionnaire in order to collect quantitative data on teaching aims, methods, and assessment in tertiary dance education. By basing the questionnaire items on the literature, we also aimed to increase the construct validity of the questionnaire. The data collected using the questionnaire from 20 practical dance teachers from four dance academies in the Netherlands were aimed at presenting a general picture of pedagogical practices, and showing to what extent the trends reported in the literature are currently applied in dance technique and choreography classes in the Netherlands. Third, to further our understanding of the principles of pedagogy and to find out how teachers have implemented the trends in their teaching practices, we collected qualitative data using semi-structured interviews. In addition, we aimed to specify which of the pedagogical trends applied in both dance technique and choreography classes needed further facilitation in both classes. Each interview was a follow-up of the data presented in the questionnaire about the pedagogy used by an individual

teacher. The interviewees were selected based on the variety of answers presented in the questionnaires, and four institutes were represented in order to enable us to collect data from a wide variety of cases. The data were analysed by one researcher.

Based on the results of the second study, we focused on reflection in practical dance classes (Chapter 4) in the third study. An explorative qualitative design was adopted to explore further the pedagogical practices of reflection in practical dance classes. The data about the pedagogical practices of reflection were collected in two stages. The literature review suggested that there are three different perspectives on reflection in education, embedded in the philosophical traditions of pragmatism, critical social theory, and Kant. Accordingly, the purpose, focus, and process of reflection are different in these traditions. The findings of the literature review were used as sensitising concepts in the first stage of the study, where two researchers analysed again the interviews collected in the study reported in Chapter 3, in order to find out which theoretical notions of reflection can be used to describe supporting students' reflection in practical dance classes. The first stage of the study resulted in a descriptive model of the pedagogical practices of reflection. However, the grouping of reflection activities under more general categories by the researchers does not represent how dance teachers themselves might understand reflection in their classes. For this reason, we considered it necessary to return to these teachers to ask what they thought of our organisation of the reflection activities, whether they recognised encouragement of these in their classes, and whether something important was missing from the descriptive model. For this purpose we conducted a content validation study (Miles & Huberman, 1994). Prior to the interviews in the content validation study, we realised that it might be difficult for the teachers to validate our ideas of their practice; therefore, we sent them the figure of the model, a description of each category of reflection, and specific fragments from their previous interviews to explain and illustrate what we meant with the descriptive model. After conducting the interviews with the seven teachers for the second time, we also aimed to see whether the reflection categories could be recognised by other teachers. For this purpose, six additional teachers were interviewed. As with the previous interviews, we provided the new informants with the supplementary materials about the reflection model in addition to the interview questions before the interview. As in the first stage of the study, several researchers were involved in the data

analysis in the content validation study, in order to increase the trustworthiness of the findings.

Besides focusing on describing the pedagogical aims of reflection and the teaching methods used to support students' reflection, we also investigated the difficulties students usually encounter in carrying out the reflection types (Chapter 5). We adopted an exploratory mixed methods design (Creswell, 2005) to find out to what extent the difficulties related to reflection activities, as reported by teachers about their students, were recognised by the dance students. This type of mixed methods design involves first collecting qualitative data, followed by collection of the quantitative data. In the current study, qualitative data about the difficulties students usually encounter with reflection were collected from 14 dance teachers in the context of the content validation study described in the previous section. The data were analysed following the cross-case analysis procedure (Miles & Huberman, 1994), in which several researchers were involved in order to increase the trustworthiness of the findings. Based on the difficulties reported by the teachers, we designed a questionnaire containing four to six items about each category of reflection difficulties; the questionnaire was completed by 17 second-year dance students from a dance academy. The advantage of this design is that the quantitative data allows the qualitative findings to be refined and extended. We believe that the data collected from the students contributes to the understanding of the challenging nature of reflection in tertiary dance education. Moreover, the data collected from a specific sample of students in this study were important because the same students participated in the following study (Chapter 6).

In the last study, we turned again to ICT, and focused on how ICT applications can be used to support students in carrying out the reflection processes in tertiary dance education (Chapter 6). A video-based learning environment, DiViDU, was used to support students' daily reflection activities in a choreography course and a dance technique course. In response to the difficulties usually encountered by students in carrying out the reflection processes, the following ICT facilitation was applied. Video editing and viewing, supported by the teachers' questions for choosing the focus, were used to support students in describing their practice. Teachers' questions and evaluation criteria were used to support students in evaluating their dance experiences. Peer-feedback activities were used to facilitate learning from multiple perspectives. The ICT facilitation was empirically investigated following the evaluation case study design (Yin, 1993), which focused on the

perceptions of the 15 students and 2 teachers. Two researchers were involved in the data analysis procedure in order to increase the trustworthiness of the findings. The advantage of the evaluation case study design is that interventions are examined in a real-life context. In this case, the ICT facilitation was implemented in two dance courses in the second-year dance studies curriculum. Regarding the research methods used to evaluate the programme theory, we asked participating teachers and students during the interviews whether and how the intervention supported students in carrying out the reflection assignments. The advantage of interviewing participants after completion of the reflection assignments was that we collected data about the influences participants themselves were aware of and found relevant. This is especially important in studies aimed at testing interventions for practical settings. A prerequisite of any ICT implementation in an educational setting is that it is meaningful and relevant to its users.

In Chapter 7 we present the main conclusions of the different studies, reflect on the empirical results, discuss the generalisability of the findings, and elaborate on the practical implications of the research findings. In addition, we reflect on the research methods used in the studies, and offer suggestions for further research.

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## Chapter 2

### **Students' perspectives on e-learning and the use of a virtual learning environment in dance education \***

#### **Abstract**

The aim of the study was to find out how dance students experienced learning in an international distance education programme delivered in an e-learning format using a virtual learning environment platform. In order to organise the students' experiences with the various learning assignments, we focused on three broad categories of learning tasks: individual writing assignments, collaborative assignments, and individual practical assignments. Data were collected from 42 students using a questionnaire and group interviews. Regarding the e-learning format, we found that the most crucial factor for carrying out all learning assignments was the teacher's guidance and feedback on students' work. Regarding the learning platform, we found that in comparison to other learning tasks, carrying out practical assignments was the most limited with the available tools.

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\* Leijen, Ä., Admiraal, W., Wildschut, L., & Simons, P. R. J. (in press). Students' perspectives on e-learning and the use of a virtual learning environment in dance education. *Research in Dance Education*.

## **Introduction**

We elaborate in this paper on how online distance learning was implemented in an international dance education programme, and how students perceived their learning experiences in this programme. Since we do not regard technology implementation as a goal in itself, but rather as means to support the pedagogical practice of a subject matter, we first give an overview of the current trends in dance education pedagogy. We then discuss the prospects for implementing technology in dance education from the pedagogical perspective, and present the research questions for the current study.

### *Dance education pedagogy*

In dance education, one pedagogical aim is the training of students' physical skills to achieve a high performance level of a dance technique. Although this aim is still acknowledged as one of the main goals of dance education, the practice of today's dance education involves more than simply learning to do the steps well. Since the discussions among dance scholars, educators, and practitioners on current pedagogical developments are beyond the scope of this paper, we limit this section to outlining several trends in formal dance education.

Regarding general principles, Green Gilbert (1992) claims that it is not sufficient to train only students' dance skills; it is important for students to develop concepts of dance in relation to their skills. Similarly, Smith-Autard (2002) suggests combining 'open concepts' in movements with defined techniques from the professional dance world. In addition, she emphasises that attention should be paid to knowledge in dance disciplines as well as to growth in the creativity, imagination, and individuality of students. Finally, she identifies a suitable pedagogy of dance teaching, including a combination of a problem-solving teaching approach with a direct teaching method.

There is also a need to increase students' ability to reflect on their learning and develop critical-thinking skills (Lavender, 1996; Warburton, 2004). In order to increase choreography students' ability to think critically, Lavender developed a model of critical evaluation which encourages students to observe, write, reflect, discuss, evaluate, and provide recommendations for revising a dance work in order to develop their aesthetic skills in viewing, creating, and performing dance works. Among other things, this model highlights the need for collaborative learning through discussion and dialogue in dance education.

Bracey (2004), Buckroyd (2000), Fortin, Long, & Lord (2002), and Kauppila (2006) concluded that, besides giving external feedback to students, dance teachers should encourage their students to recognise the feedback provided by their own bodies. In addition to helping students understand how muscles and bones are used in dancing, this includes encouraging students to sense what the movement feels like as it is happening. This experience of movement is one of the main goals of somatic education in dance, and can be achieved by implementing various movement analysis methods, such as the *Feldenkrais Method*, *Alexander Technique*, *Ideokinesis* (Kovich, 1994), and *Body-Mind Centering* (Cohen, 1993). Besides enabling students to discern and evaluate their bodily activities, and providing opportunities for regulating their learning activities, somatic exploration also provides information on the socio-cultural surrounding of an individual (Green, 1999, 2001; Marques, 1998). Addressing the body as a more global source of knowledge enables students to increase their self-awareness. For instance, students can learn about how they relate to other people and life-situations they find themselves in, but also about the political implications which shape the social practices students function in.

All these developments indicate that besides developing physical skills and learning the domain-related knowledge, students should be encouraged to develop their individuality, reflect on their learning, and enhance their creativity and critical-thinking skills. In addition to a direct teaching method, the literature suggests use of an open-ended problem-solving method, collaborative methods, and techniques of somatic education. In this more diverse practice, dance students are expected to take more responsibility for learning in order to become, first and foremost, self-confident professionals, whether in preparation for becoming a dancer or a choreographer. Several dance scholars (e.g., Shapiro, 1998; Stinson, 1997, 1998) have previously called for dance educators to recognise and support the individual agency in their dance students. Susan W. Stinson (1997) pointed out that dance teachers need to give students choice, freedom, and a sense of control in order to motivate their students to find challenging, engaging, and meaningful learning experiences in dance.

#### *Use of ICT in dance education*

Many educational scientists (e.g., Anderson & Ellis, 2005; Herrington, Oliver, & Reeves, 2003; Jonassen, Hernandez-Serrano, & Choi, 2000; Simons, 2006) have claimed that particularly student-centred educational practices can be

supported when possibilities provided by information and communication technology (ICT) tools are used. For example, these offer students and teachers more flexibility in terms of time, place, pace, content, instructional approach and resources, and course delivery and logistics (De Boer, 2004; Collis, Vingerhoets, & Moonen, 1997; Simons). In addition, according to Simons, ICT may give students a more active role in learning through problem-solving, decision making, inquiry and research, design activities, and learning as meaning construction, and make thinking, learning, and collaboration processes more visible through the on-line analysis of activities and patterns of interaction. Besides its usefulness for monitoring purposes, the latter facilitates teaching and learning how to learn. We argue that the above-described possibilities of ICT can also be of interest for dance education programmes, which until now have overlooked the uses of ICT for facilitating teaching and learning. Only a few authors have described the use of ICT for dance education. Popat (2002) described the use of a dynamic website for teaching choreography in an international cooperation project between students from Britain, Portugal, and America. Cherry, Fournier, & Stevens (2003) from the University of Washington showed how a digital video annotation tool can be used to teach dance composition. Kavakli, Bakogianni, Damianakis, Loumou, & Tsatsos (2004) discussed the process in developing a virtual learning environment (WEBDANCE) for teaching traditional Greek and English dances.

Parrish (2007) gives an overview of how different types of technology have been used to enhance learning and teaching dance. Among other topics, Parrish gives a summary of online and internet-based distance learning in dance education. Providing descriptions of a number of successful cases and elaborating on the benefits technology has to offer to dance education, Parrish points out the following:

At present, adequate field-testing of technology-based curriculum is nonexistent in dance. Formal evaluation is greatly needed if we are to learn the issues surrounding technology delivery systems for dance education. (p. 1392)

The study outlined in the current paper was aimed at contributing to this area. We elaborate below on how online distance learning was implemented in an international dance education programme. We focused on

students' perspectives on the e-learning experiences. This is in accord with current developments in dance education, which advocate that dance educators pay more attention to listening to the voices of students and recognising their experiences of learning.

Since the implementation of online distance learning is influenced by the online distance learning format and also by the distance learning platform, we formulated the following research questions. The first research question was, How do pedagogical features influence students' satisfaction with their learning processes and outcomes in an international dance education programme? In order to organise the students' experiences of the various learning assignments offered in the current internet-based distance learning programme, we focused on three broad categories of learning tasks: individual writing assignments, collaborative assignments, and individual practical assignments. The research question was answered for each category of broad learning tasks.

The second research question was, How suitable is the distance learning platform, a virtual learning environment, for carrying out individual writing assignments, collaborative assignments, and individual practical assignments in the international dance education programme? We examined a virtual learning environment because this is a general web-based learning application, which accommodates most of the tools needed to carry out online teaching and learning, such as collaboration and cooperation, archiving, communication, and data sharing.

## **Method**

### *Participants*

Forty-two (3 males and 39 females) of the forty-three international dance students who took part in the e-courses of an international collaboration programme (see Table 1) participated in the study. Not one participant had previous experience of distance learning using the e-learning format.

Table 1  
Participants

Country	Students
Belgium	7
Austria	8
Hungary	2
The Netherlands	14
United States of America	11
Total	42

### Materials

#### *Claroline virtual learning environment.*

A Claroline virtual learning environment (version 1.6.3.) was used to conduct the e-learning tasks. Claroline (for more information see [www.claroline.net](http://www.claroline.net)) allows teachers to create and administer courses through the internet. It provides a number of features, such as group management, forum, and chat, which can be used for collaborative work. It contains an area where documents can be uploaded provided they are not larger than 2mb. In addition, Claroline has a calendar where, among other things, deadlines for assignments are kept, an assignment area, and a documents and links section where a teacher can upload and share course materials with students.

#### *E-courses.*

The programme incorporated seven e-courses, of which two were compulsory and five elective. Of the five elective courses, students had to choose two, resulting in each student following four e-courses. Students were engaged in a diverse array of learning activities: practical tasks (practicing body-mind centering technique, composing a solo performance, and preparing artifacts for a digital portfolio), individual writing assignments, and collaborative discussions and writing tasks. The following table (Table 2) provides an overview of the seven courses. The workload of each course was approximately 20 hours. The teachers were responsible for the content of their courses and the learning activities designed for the students. The e-learning assistant provided help transferring the content of the courses to the virtual learning environment. Successful completion of the e-learning courses led to participation in the 10-day intensive programme in Amsterdam. The e-

learning courses continued as face-to-face meetings. In addition to these courses, students could participate in several dance technique workshops.

Table 2

## Overview of the design of the seven e-courses

Subject matter, aim of the course	Assignments	Organisation	Interaction	Guidance	Feedback	N*
<p><b>The choreography seminar</b></p> <p>Students observed, analysed, and discussed the work of contemporary choreographers through video and performance.</p>	<p>Choose choreographer(s) to study, view choreographic work, write analysis of the work, and write a personal reflection on choreography based on area of expertise/interests. Write a final report based on previous assignments.</p>	<p>Initially fixed deadlines set for each task, spread throughout the course. Deadlines postponed several times.</p>	<p>Last step of each assignment was sharing findings with group. Changes were to be made according to group discussions.</p>	<p>Very detailed instructions for each assignment. Announcements sent to all students for guidance.</p>	<p>Grades and feedback on students' work sent to mentors. Some students received extensive personal feedback.</p>	43
<p><b>Physical Conditioning Training of Dancers</b></p> <p>Introduced training and conditioning principles for achieving a healthy body.</p>	<p>Introduction of students. Read two summaries about cardiovascular adoption and quantifying sports training, and answer 4 questions based on each reading. The third assignment was to read 3 articles, discuss them in the group, and write a collective essay.</p>	<p>Initially fixed deadlines set for each task, spread throughout the course. Deadlines for collective work postponed.</p>	<p>Collaboration took place among 5-6 students for the third assignment, writing a collective essay.</p>	<p>Instruction given, announcements used to urge students to start work on the collective task. Additional instruction added during the course.</p>	<p>The first two assignments graded after submission. Feedback sent to groups.</p>	43

<p><b>Geography of Choreography</b> To create a greater awareness of the role of place in choreographic practices.</p>	<p>Walk around their place of residence and write an essay about it as if the place were a person. Create 3 short movements or gestures which represent the place.</p>	<p>Two deadlines, one in the middle and one at the end of the course.</p>	<p>No interaction required. Students could read fellow students' papers.</p>	<p>Instruction given in assignments section.</p>	<p>No feedback given on assignments.</p>	<p>43</p>
<p><b>Digital Portfolio</b> To get a starting point (state personal ideas on dance) for creating a digital portfolio.</p>	<p>View video interviews of 3 choreographers describing their ideas on dance; think about their ideas on dance and discuss them with others in order to start to create a personal digital portfolio.</p>	<p>No deadlines: students had till the end of the e-learning courses. Two extra weeks given to finish the work.</p>	<p>Students were asked to discuss/share their ideas on dance.</p>	<p>Instructions given for viewing videos. Free discussion; no instructions, just a broad topic: my ideas on dance.</p>	<p>Teacher participated in forum discussions. Some students received feedback on their questions</p>	<p>14</p>
<p><b>Listening to the body</b> To be involved in the perception of body and space.</p>	<p>Read article about Body Mind Centering technique. Practical assignment: Focus on breathing and on the aspect chosen from the article (3 times a month) Write down experiences and observations after each session.</p>	<p>Deadlines spread. End of March, April, May.</p>	<p>No interaction required. Students could read fellow students' papers.</p>	<p>Clear instructions given in assignments section.</p>	<p>Feedback sent to each student on their writing.</p>	<p>17</p>

<p><b>Interactive composition workshop</b> Concentrated on the creative process, intuition and improvisation in theory and practice.</p>	<p>Write a reflective evaluation based on the findings of 2 interviews (intuition and improvisation) held by the students. Create a solo. During process keep log: how intuition, improvisation are applied. Make a video recording, send it to teacher. Read texts about improvisation, intuition, and creative process, and discuss them in the group.</p>	<p>Deadlines set for June. The last 2 assignments deadline 15th June. Last assignment given early June.</p>	<p>Students were asked to share ideas on improvisation, intuition, and creative process, and discuss them in the group.</p>	<p>Instructions given in assignments section. The third assignment started late. Problem with instructions for the last assignment.</p>	<p>Problems contacting teacher. Feedback was not given. Grades given.</p>	<p>14</p>
<p><b>The preservation of contemporary artistic practice in dance</b> Develop a theoretical investigation practice based on one particular theme in dance and on anthropological theories.</p>	<p>Introduction of students followed by 5 reading and writing assignments based on the materials provided by teacher.</p>	<p>Course lasted from mid-April till the end of June. Deadlines fixed. Time between the deadlines short.</p>	<p>No interaction in forum. Students were asked to read fellow students' comments on same theme, and add to or elaborate on the argument.</p>	<p>Instructions for tasks. No specific instructions for writing.</p>	<p>Course started later. Assignments to be done quickly, feedback was delayed.</p>	<p>15</p>

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\* Number of students in the course

#### *Data collection and procedure*

Data collection was carried out during the face-to-face programme in Amsterdam. A questionnaire was designed to measure students' satisfaction with the organisation, interaction, guidance, feedback, overall learning process, and learning outcomes of the courses, using a 5-point Likert scale (0-very dissatisfied; 4-very satisfied). Three open-ended questions were added: students were asked to identify the most enjoyable aspect of each course and the most problematic aspect of each course, and to give suggestions for improvement. In addition to the questionnaire, semi-structured group interviews were held to further discuss students' perspectives on their e-learning experiences. In the group interviews, we focused on the following themes: expectations and fears prior to e-learning, general experience of e-learning, perspectives on the organisation of the courses, interaction activities during the course phase, guidance and feedback provided by the teacher, evaluation of own learning, problems experienced during the course phase, and suggestions for improvement. The reason for choosing general themes was that the students were inexperienced in using ICT in their learning; therefore, we thought it inappropriate to ask students to evaluate directly the e-learning format and the ICT tools.

The students were divided over six groups, each containing 6-8 students. A separate meeting was held with each group. The meeting started with a short introduction to the study, followed by the handing out of the questionnaire, which each student was asked to complete. This took about 10 minutes. Once the students had completed and returned the questionnaire, the group interviews were conducted, lasting between 45 and 60 minutes. Group interviews were recorded on video and fully transcribed.

#### *Data analysis*

The quantitative and qualitative data collected using the questionnaire and the qualitative data from the group interviews were analysed in order to gain a better understanding of the students' experiences.

First, some descriptive statistics relating to the students' satisfaction with the organisation, interaction, guidance, feedback, own learning, and learning outcomes were calculated. A t test was used to examine whether students' satisfaction with the organisation of the courses, the interaction part of the pedagogy, guidance, and feedback provided by teachers differed in their perceptions throughout the whole educational programme. A Bonferroni

method was used to correct the level of significance of 5% for the number of *t* tests.

The aim of the analysis of the qualitative data was to divide the information collected into meaningful units, and to synthesise these units into meaningful themes (Bogdan & Bilken, 1992), as presented in the results section. The qualitative data collected from the open-ended questions of the students' questionnaires were inserted in seven databases and ordered by one researcher. Separate documents were created for each course. Each document included information about students' identifications, problems mentioned, most enjoyable aspects indicated, and suggestions for improvement. Each description was coded based on the content; for example, assignment, materials, deadlines. Based on the codes, all the problems, enjoyable aspects, and suggestions for improvement were summarised in a document for each course. The students' answers were organised under themes and sub-themes, including the number of students who mentioned the problem, and reference to the initial database. This final document can be seen as a structured summary of each course based on the qualitative data from the questionnaires.

The transcribed group interviews were analysed using content analysis method. Three steps were used in this analysis procedure. Firstly, fragments related to writing tasks, collaborative tasks, practical tasks, and the use of Caroline tools were selected by one researcher. Separate documents were created for each category. Secondly, different themes within the four categories were retrieved from the data. Two researchers carried out this procedure, and the theme for the each quotation was assigned after both researchers had agreed on it. Quotations were left out if the researchers disagreed. Thirdly, within each theme, one researcher summarised positive and negative evaluations of the students. In total, 336 quotations were analysed. The analysis procedure resulted in matrices with the information from the interview protocols structured into themes and sub-themes.

Finally, the data collected using the different instruments were combined. In general, we found summaries of the group interviews more informative than summaries of the open-ended questions. However, we found that no contradictory information was presented in the two summaries. Since the individual questionnaires were completed directly before the group interviews took place, students might have been more prepared to share their ideas in a group. In addition, in several cases, students provided rich examples of their experiences to explain their statements written in the questionnaires. We focused mainly on scrutinising students' own evaluations of the

experiences, and aimed to minimise our own interpretations. We have described above several measures, which were taken to increase the trustworthiness of our finding. These included data and investigator triangulation (Denzin, 1970).

## Results

In the following table (Table 3), the mean scores with standard deviation of students' satisfaction with the organisation, interaction activities, guidance and feedback provided by the teacher, and own learning processes and learning outcomes are presented for the seven e-courses.

In general, students were more satisfied with the organisation of the courses than with the feedback provided by teachers ( $t = 3.3$ ;  $df = 166$ ;  $p = 0.001$ ) and the interaction part of the pedagogy ( $t = 6.1$ ;  $df = 161$ ;  $p < 0.001$ ). Satisfaction with interaction activities was lower than satisfaction with the guidance provided by teachers ( $t = -5.0$ ;  $df = 159$ ;  $p < 0.001$ ). Finally, the guidance provided by teachers was more satisfactory than the feedback provided by teachers ( $t = 2.9$ ;  $df = 164$ ;  $p = 0.005$ ). This means that students were relatively dissatisfied with the teachers' feedback and interaction. Based on the analysis of the qualitative data, we conclude that sufficient time between the deadlines and clearly stated information about the course aims and instructions for assignments were the issues most often identified in relation to satisfactory organisation of the e-courses. The dissatisfying aspects of the interaction were that the group work assignments focused more on the organisational aspects of group work (including finding a suitable time for working in the context of different time zones) than group members working together on an assignment. In addition, dissatisfying interaction was also caused by time pressure, as students did not have enough time for collaborative work. Satisfactory guidance was received from teachers who replied to students' questions without long delay. On the other hand, dissatisfying feedback was received from teachers who neglected to give individual feedback to students, and provided them only with grades. Below, we discuss these findings in more detail, clustered in the three type of assignments used in the courses.

Table 3  
Mean scores (standard deviations) of students' satisfaction

	Courses							Total
	1. The choreography seminar	2. Physical conditioning training of dancers	3. Geography of Choreography	4. Digital portfolio	5. Listening to the body	6. Interactive composition workshop	7. The preservation of contemporary artistic practice in dance	
Organisation	3.2 (0.8)	2.6 (1)	3.6 (0.6)	1.8 (1.1)	3.5 (0.6)	2 (1)	2.5 (1.2)	2.9 (1.1)
Interaction	2.4 (1)	2.4 (1.1)	2.3 (1.3)	2.6 (0.8)	1.8 (1.1)	1.9 (0.9)	1.5 (1.1)	2.2 (1.1)
Guidance	3.5 (0.7)	2.7 (1)	2.5 (1.4)	1.6 (1.1)	3.5 (0.7)	1.5 (1.2)	2.2 (1.2)	2.7 (1.2)
Feedback	2.9 (1.1)	2.6 (1)	1.9 (1.2)	1.3 (1.4)	3.5 (0.7)	1.8 (1.2)	2.9 (1)	2.5 (1.2)
Learning process	2.9 (0.9)	2.5 (1)	1.9 (1.2)	1.6 (1.1)	2.8 (0.8)	2.6 (1)	3.3 (0.9)	2.7 (1)
Learning outcomes	2.8 (0.8)	2.4 (0.9)	2.7 (1.1)	1.8 (1.2)	2.6 (0.9)	2.6 (1.2)	3.1 (1.2)	2.6 (1)

0=very dissatisfied; 4=very satisfied

#### *Individual writing assignments*

From the group interviews we concluded that the most crucial factor for successful writing assignments using the e-learning format was guidance and feedback on students' work. The Listening to the body course (course 5) was rated as the most successful in this respect. The teacher contacted each student individually by e-mail to guide him/her based on the first reflections submitted. The teacher pointed out the issues which needed more attention and practice based on the students' writings. Students were pleasantly surprised by the depth of the feedback given in this course.

Although guidance and feedback was also given in the Choreography seminar (course 1), and in the Physical conditioning training of dancers (course 2), mixed opinions were expressed by students regarding the quality of the guidance and feedback in these courses. In regard to the writing assignments in course 1, students were generally satisfied with the guidance and instructions; however, many expressed dissatisfaction with the feedback procedure in this course. In the announcements sent to students, the teacher often provided general feedback on students' process. She pointed out the main issues concerning the assignments, for example, the bibliographies were too long, and the citations were incorrect in bibliographies. In addition to this feedback, some students who contacted the teacher received additional feedback. Therefore, some students were satisfied and some were dissatisfied with the feedback provided by the teacher, as it was also unclear to many that they could have asked for additional feedback on their performance. This issue arose in every group interview, and in each group some students were unaware of the possibility of getting additional feedback.

The teacher of the Physical conditioning training of dancers course (course 2) was described as being satirical and in some cases even rude when students contacted her to ask for further explanation of either the assignment or her feedback. The teachers of all other courses either did not reply at all or replied weeks later; this resulted in frustration for students. Some students, who were not experienced in working with computers, attributed the cause of this to their inability to use computers or failure of their computer, as they were not sure whether or not the teacher received their message.

Finally, in the Preservation of contemporary artistic practice in dance course (course 7), students appreciated the quality of the feedback provided by the teacher; however, they received feedback on their assignments with a considerable delay, so that they were unable to use the feedback to improve their work in successive assignments. This was a source of frustration. In

brief, the main factor which influenced individual writing assignments either positively or negatively was teaching, and in particular teachers' feedback.

Students did not indicate problems in relation to the suitability of the tools in the virtual learning environment for carrying out and submitting writing assignments. However, they mentioned that it took some time at the beginning to get used to the tools.

#### *Collaborative assignments*

In general, students encountered difficulties carrying out the collaborative assignments using the e-learning format. Most of these difficulties were related to interacting with other students in an online environment. For example, for the Interactive composition workshop (course 6), students were asked to discuss as one group their ideas on improvisation, intuition, and the creative process, and find five conclusions based on their discussions. Most of the students were annoyed by this assignment as it was introduced two weeks before the end of the course. They were busy finishing the other assignments for this course at this time, as the deadlines for all the assignments were set at the end. In addition, students questioned the aim of the assignment to find five conclusions based on the discussion. In their opinion, finding conclusions was difficult because the students represented different perspectives and it was difficult to find common ground for the conclusions.

In the Physical conditioning training of dancers course (course 2), students were asked to write a group essay. Students had been assigned to groups by the teacher prior to the assignment in order to have students from different countries and schools work together on the collective task. Students indicated that it took a lot of time to discuss the task on the forum with their fellow students. Some students indicated that it was also difficult to work together with people they did not know. They found it especially difficult to communicate to those group members who were not contributing to the collective essay that they should contribute equally to the work. That some group members were not participating in the assignments put extra pressure on the remaining members to finish the work. Some groups solved this problem of collaboration by writing different parts of the collective essay individually and submitting these parts as a group assignment. This can be seen as cooperation rather than collaboration, and has been observed in many CSCL (computer-supported collaborative learning) studies (e.g., Lockhorst, 2004). Often, there was not enough time to discuss all parts of the essay all over again with the group. Many students missed face-to-face contact, finding

it difficult to communicate with others without being able to see their non-verbal communication. Some students even mentioned that they could not truly commit to the assignments for this reason.

The Choreography seminar (course 1) also included a collaborative assignment. In this course, students were asked to share their assignments with their group members. In general, students were more satisfied with this format of collaborative task. They indicated, however, that it was often difficult to comment on other students' work because they were not familiar with the choreographer a student had chosen for the assignments. Students appreciated feedback given by their fellow group members. On the other hand, students who did not get any comments from their group about their work described this as problematic.

Finally, the Digital portfolio course (course 4) had an open discussion forum. Students could post their ideas on dance. Although students appreciated the freedom of this format of collaborative task, they mentioned that they missed the actual collaboration in the form of a discussion.

In terms of the suitability of the tools in the virtual learning environment for carrying out group assignments, several students mentioned that they preferred to use the chat tool for discussions, but that this failed for several reasons. Firstly, it was difficult for students to be online at the same time, and, secondly, the chat tool did not function properly. Although students were generally satisfied with the forum tool, many admitted that the process of discussion was very slow. During one group interview, alternative solutions for communication were suggested. For example, in addition to text messages, students suggested using video and voice communication.

In brief, students perceived several problems when using the virtual learning environment for collaboration. These were that collaboration required more time than was available; assignments were too open; there was often cooperation instead of collaboration; some students were lurking; and students missed real-life contact, including non-verbal communication, with fellow students. In addition, students encountered practical problems with the chat tool.

#### *Individual practical assignments*

As with individual writing assignments, students perceived that the crucial factor in completing successful practical assignments was the teacher's guidance and feedback on students' work. The Listening to the body course (course 5) was rated as the most successful in this respect because the teacher

contacted each student individually and guided each student by pointing out the issues which needed more attention and practice.

While discussing the problems of the Geography of choreography course (course 3), some students indicated that communication with the teacher was lacking as she did not reply to students' e-mails. Despite this, the assignments were clearly stated and the teacher's expectations clearly communicated in the course description section. This resulted in sufficient guidance for students in the form of written instruction. Another aspect mentioned by students was that the short movements and gestures they were asked to create were to be prepared for and delivered in the intensive programme in Amsterdam. Students were made aware that during the face-to-face programme they would present their gestures and movements and develop them further. In this respect, only the instruction of the practical assignments was communicated to the students using the e-learning format.

In the Interactive composition workshop (course 6), students were asked to send a video recording of their solo performance to the teacher. Most of the students enjoyed working on the solo; however, they encountered several difficulties preparing the video material of the solo and submitting the tape to the teacher. American students indicated that they had to convert their VHS video recordings to PAL and pay around \$ 30 to send it to Europe. Owing to these complications several students decided not to send their video recordings to the teacher; besides the troublesome procedures, the teacher was late to respond or did not respond at all to questions sent to him by e-mail. Students who did manage to send their video recordings to the teacher did not receive any feedback on their solos. Moreover, during the intensive programme, they heard that other students did not send a video recording of their solo to their teacher, and despite this were accepted to take part of the intensive programme. This was very frustrating for those students who had put a lot of effort into completing the task.

Finally, in the Digital portfolio course (course 4), students were asked to collect and prepare artefacts of their work for a digital portfolio. Many students prepared the artefacts and brought these to the intensive programme. Other students did not prepare the artefacts as it was unclear how to deliver these to the teacher; yet again, students experienced insufficient communication with the teacher during the e-learning period. In brief, the main factor which influenced individual practical assignments in either a positive or negative manner was teaching, and in particular the provision of guidance and feedback to students.

As made clear in the discussion of the suitability of the e-learning format for carrying out practical assignments, the tools available in the virtual learning environment were only suitable for communicating the practical task to the students. It was not possible for students to upload recordings of their solos to the learning environment, as it only supported uploaded files smaller than 2mb. In addition, the institution hosting the learning environment could only reserve a file allocation capacity which was less than would have been needed for video support. Besides the unsupported video features of the online learning environment, it was unknown whether students themselves would have had the technical ability, or tools, to produce and edit digital video. For these reasons, students were unable to present their artefacts and solos in the virtual learning environment.

### **Discussion and conclusion**

The study began with the premise that, following the current trends in dance pedagogy, with a more active role of students and increased responsibility for their knowledge construction and development of dance skills, the possibilities provided by ICT tools could be suitable to support dance students' learning activities. Several educational scientists (Anderson & Ellis 2005; Herrington et al., 2003; Jonassen et al., 2000; Simons, 2006) have claimed that student-centered educational practices in particular can be supported using the possibilities provided by ICT tools. In order to explore this premise, we investigated how dance students participating in an international dance collaboration programme experienced learning in a distance education programme delivered in an e-learning format using the virtual learning environment platform Claroline. Owing to the context of the study, the current research findings are specific to dance students for whom internet-based distance learning is novel, and especially applicable to the international and cross-institutional distance learning settings, which involve students who do not know each other prior to the learning experience. In addition to its relevance to the specific conditions, we believe that the results of this study can also be of interest to those considering internet-based learning possibilities in a more homogeneous institutional setting.

*E-learning format*

The first research question was, How do pedagogical features influence students' satisfaction with their learning processes and outcomes in an international dance education programme? Based on the findings, we conclude that carrying out individual writing assignments was supported by the e-learning format when the teacher provided sufficient guidance and feedback on students' work. Although it was also feasible to carry out practical tasks with sufficient guidance and instructions from the teacher, the process of delivering the outcomes of the practical tasks was problematic unless the outcomes were delivered in the form of a reflective essay. These findings are encouraging in that they show that with thorough guidance and instruction from the teacher it is possible to support students' reflection and critical-thinking skills, and to cultivate personal bodily awareness in the context of internet-based distance education.

The findings also show that carrying out collaborative assignments can be difficult in internet-based distance education. We have shown that it was demanding for students to work collectively with group members from different institutions, countries, and continents without having met each other. The difficulties with collaboration resulted from time-consuming communication and organisation of the collaborative task. Moreover, these difficulties were compounded by the fact that most of the group members did not know each other prior to the learning experience. The fully open format for discussion in combination with insufficient instruction and guidance from the teacher was also perceived as unsatisfactory by the students. Despite the evidence of these problems, we also found that sharing experiences in more open discussions was perceived positively by students when the assignment and instructions for collaboration were clearly presented and the teacher provided sufficient guidance and feedback. We conclude, therefore, that a crucial factor for success in collaborative assignments in the internet-based distance learning environment is the teacher's guidance and feedback on student's work.

In brief, we found that the most crucial factor in carrying out learning assignments was the teacher's guidance and feedback on student's work. Several learning assignments in the current study included application of the current trends in dance pedagogy which encourage students to take more responsibility for their learning processes. The literature on dance pedagogy (e.g., Shapiro, 1998; Stinson, 1997, 1998) indicates that dance educators should recognise and support the individual agency in their

students, and encourage students to take more responsibility for their learning. In addition to this, we have shown that in the internet-based distance education environment, the teacher's role and guidance is a key component for successful learning experiences. This conclusion is supported by the literature on online learning environments. Studies on scaffolding students in online learning environments (Reiser, 2002; Weinberger, Fischer, & Mandl, 2002) have shown that the teacher's role is crucial in such environments, and is not decreasing as a result of the implementation of ICT tools. Lockhorst (2004) distinguished three types of guiding tasks for teachers in CSCL environments. First, communication needs to be structured. A teacher needs to find the right tone and the right moment to respond to students' contributions. Second, collaboration needs to be stimulated. A teacher needs to establish a positive atmosphere for critical-thinking. Third, several interventions need to be applied to the content of students' work. At the start of the course, process-oriented interventions are needed, such as focusing on group dynamics and guidance in individual and collaborative assignments. Monitoring students' processes enables the teacher to intervene when things go wrong. Finally, regular feedback needs to be provided by teachers in order to stimulate students' participation.

#### *Virtual Learning Environment*

The second research question was, How suitable is the distance learning platform, a virtual learning environment, for carrying out individual writing assignments, collaborative assignments, and individual practical assignments in the international dance education programme? For carrying out and delivering written assignments, the tools available in the virtual learning environment proved to be sufficient. In terms of carrying out group assignments, several students mentioned that they preferred to use the chat tool, rather than the forum, for discussions, but this failed for practical and technical reasons. Alternative solutions for communication were suggested by students. In addition to text messages, students suggested using video and voice communication. In terms of the practical tasks, we conclude that the available tools were suitable for communicating the task to the students. However, the virtual learning environment did not provide students with the possibility to deliver their end products, such as a solo performance and artefacts of students' work, unless the end product was a written document.

Based on these findings we conclude that, in the opinion of dance students, the current virtual learning environment, Caroline, contained only

limited tools, mainly text file support, for facilitating students to carry out and deliver the required learning activities and outcomes. Based on this, we believe that the current virtual learning environment, similar to other well-known virtual learning environments, is mostly text-based and mainly facilitates knowledge-related learning processes allowing both individual work and collaboration with other students, but tends to neglect the need to carry out practical learning tasks and present the outcomes. As a result, we conclude that suitable virtual learning environments for dance education are those which, besides the commonly available tools for course organisation and collaborative and individual knowledge construction, possess tools for reflecting and sharing students' creative processes. The most suitable addition to a conventional virtual learning environment would most likely be a tool which supports the creation of media files such as video recordings of, for example, rehearsals and performances. This would allow students to analyse their own processes, and enable teachers and fellow students to provide feedback and suggestions for improvement after having viewed the submitted video recordings. Research has already shown that such tools can be of great value for dance education. Cherry, Fournier, & Stevens (2003) from the University of Washington showed how a digital video annotation tool was used to teach dance composition. In the Netherlands, experiments with the use of streaming video are currently being carried out in teacher education and other professional training programmes using DiViDU tool (e.g., Kulk, Janssen, Gielis, & Scheringa, 2005) to support students' reflection on their learning. The outcomes of these experiments can also be of value when choosing a suitable ICT tool in tertiary dance education.

In brief, we have shown which pedagogical elements had the greatest influence on the students' satisfaction with their learning processes and outcomes in an online distance educational setting, and to what extent the students' learning tasks were supported by the tools provided by a virtual learning environment.

Further research is needed to investigate the influence of online distance education on students' learning outcomes. A more controlled research design with more homogeneous participants would be appropriate for investigating the relationship between the online distance education setting and students' learning outcomes.

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## Chapter 3

### **Pedagogy before technology: What should an ICT intervention facilitate in practical dance classes?\***

#### **Abstract**

The aim of the study was to identify the features of the pedagogical context in choreography and dance technique classes which could be viewed as the basis for developing a suitable web-based ICT application to support teaching and learning in practical dance classes. The sample consisted of teachers from four dance academies in the Netherlands. Data about the pedagogy was gathered using a questionnaire and an interview. The results showed that there are similar patterns in applying reflection in terms of content, methods and frequency, and that students encounter difficulties with reflection activities in both choreography and technique classes. Therefore, an appropriate ICT tool for practical dance classes should focus on facilitating the pedagogy of students' reflection.

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## **Introduction**

Globally, the implementation of information and communication technology (ICT) tools into education in order to facilitate teaching and learning is increasing. De Boer (2004) found that although traditional learning settings still have an important role in higher education, the tendency indicates that ICT will be implemented on a wider perspective in higher education in the near future. While considering educational courses that currently make use of web-based ICT tools, it can be concluded that the learning outcomes, following Gagné's (1985) classification, in these courses are: learning declarative knowledge, intellectual skills, and cognitive strategies. Attitudes are often indirect learning outcomes, which can be incorporated into any educational programme including learning with the use of web-based tools. It seems that the usage of web-based ICT tools is neglected in educational programmes, which besides the four mentioned types of learning outcomes, aim to develop students' psychomotor skills.

The latter finding is remarkable as it indicates that a large part of education is neglected in making use of the possibilities provided by web-based ICT tools; e.g. offering students and teachers more flexibility in terms of time, place, pace, content, instructional approach and resources, and course delivery and logistics (Collis, Vingerhoets, & Moonen, 1997; De Boer, 2004; Simons, 2006). In addition, according to Simons, ICT allows students and educators to build contacts with parties outside of the educational setting, gives students a more active role in learning through problem-solving, decision-making, inquiry and research, design activities and learning as meaning construction, and makes thinking, learning and collaboration processes more visible through the on-line analysis of activities and patterns of interaction. Besides monitoring purposes, the latter facilitates teaching and learning how to learn. We believe that these possibilities are also useful for educational programmes that until now have overlooked the use of ICT to facilitate teaching and learning.

Research has already shown that the characteristics of web-based ICT tools are suitable for educational programmes where students are encouraged to develop their psychomotor skills in addition to other learning outcomes. For example, in the context of arts education, Anderson & Ellis (2005) described how to facilitate the teaching and learning of practical instrumental music skills via the Web using instructional videos, and Papat (2002) described the use of a dynamic website for teaching choreography in an

international cooperation project between students from Britain, Portugal and America.

Dance education is an area of arts education where developing psychomotor skills is largely visible, and for this reason we decided to investigate how web-based ICT tools can be used in this area of education. More specifically, dance technique courses, such as modern dance, ballet etc., and choreography courses in dance programmes address developing psychomotor skills. Although its degree, in comparison to other types of learning outcomes, varies in technique and choreography classes, it allows us to address both classes as one entity. As learning psychomotor skills is often related to intellectual skills, in practice the acquisition of psychomotor skill should not be viewed in isolation from the other learning aims. For this reason, technique and choreography classes will be referred to as practical dance courses, where practical indicates psychomotor skill acquisition in combination with other types of learning outcomes.

Finally, several authors (e.g. Watson, 2001; Herrington, Oliver, & Reeves, 2003; Jonassen, Hernandez-Serrano, & Choi, 2000) have pointed out that the usage of any ICT application in education needs to support the pedagogical context of a subject. Therefore, the purpose of this study is to explore the pedagogy of practical dance classes, and answer the following research question. Which pedagogical features of choreography and technique classes need further facilitation? To answer this question, the following criteria were used. First, which pedagogical features are acknowledged and viewed as trends in dance pedagogy in current scholarly literature on dance education? Second, which of these pedagogical features, suggested by literature, are frequently and similarly applied in choreography and technique classes? Third, despite the approval of theoretical and practical perspectives, which pedagogical features encounter difficulties when implemented in practice that could be resolved with ICT facilitation? In this paper, we will present findings from the literature review and empirical study to answer the research question using the above-described criteria.

#### *Trends of pedagogy in practical dance education*

In general, literature on dance education indicates that dance education has moved from a fixed educational setting towards a more open discourse concerning different aspects in both subject matter, and teaching and learning methods. Green Gilbert (1992) claims that it is not sufficient to only train students' dance skills, it is important for students to develop concepts of dance in relation to their skills. Smith-Autard (2002) emphasises that the content of

dance education should pay attention to knowledge in dance discipline as well as growth in creativity, imagination and individuality of students. She suggests combining 'open concepts' in movements with defined techniques from the professional dance world. Finally, she identifies a suitable pedagogy of dance teaching, including a combination of a problem-solving teaching approach with a direct teaching method. In addition, Butterworth (2004) and Lavender (1996) point out the need for collaborative learning through discussion and dialogue in dance education.

In addition to these new qualities required from dancers and choreographers, there is also a need to increase students' ability to reflect on their learning and develop critical-thinking skills (Lavender, 1996; Warburton, 2004). In order to increase choreography students' ability to think critically, Lavender has developed a model of critical evaluation, which advocates students to observe, write, reflect, discuss, evaluate and provide recommendations for revision for features of a dance work in order to develop students' own aesthetic qualities for viewing, creating and performing dance works.

Finally, Buckroyd (2000), Fortin, Long, & Lord (2002) and Bracey (2004) concluded that, besides giving external feedback to students, dance teachers should encourage their students to recognise the feedback that is provided by their own body. This includes, besides understanding how muscles and bones are being utilised to dance, encouraging students to sense what the movement feels like as it is happening. This experience of movement is the main goal of somatic education in dance, which can be obtained by implementing various movement analysis methods, such as the Feldenkrais method, Alexander technique, Ideokinesis (Kovich, 1994) and Body-mind centering (Cohen, 1993).

From this, we conclude that there are new ideas on what and how to teach in dance classes, but we wonder whether these ideas are implemented in practice. Our perception is supported by literature that indicates that, especially in technique classes, the more traditional teacher-driven way of teaching is still practised. Stinson (1994; cited in Spurgeon, 1997, 9-10) describes the authoritarian nature of dance classes: 'in most dance technique classes, the teacher is the authority and the only recognised source of knowledge'. Similarly, Morris (2003) points out that, "literature on the teaching professional ballet dancers has always focused on two areas: ballet vocabulary and training" (p. 17). She claims that teachers direct teaching methods in ballet technique classes, and students have little chance for an open discourse. Recent criticism on the authoritarian pedagogy used in

technique classes is issued by Lakes (2005). This criticism on the pedagogical methods seems to be mainly applicable for dance technique classes. It could be that the pedagogical practice of the choreography classes indeed includes the more innovative ideas of, for example, emphasising the development of students' critical-thinking skills and their individuality. However, practical dance classes consist of both choreography and technique classes, and there is little evidence about how these pedagogical ideas are implemented in the whole range of practical dance classes. To answer this question, we carried out an empirical study focusing on the perception of dance teachers from the Netherlands, who teach practical dance courses in dance academies. We decided to identify the perception of teachers because based on the findings from the study we intend to design an ICT facilitation, the purpose and usage of which needs to be recognised by dance teachers in order to be included into pedagogical practice.

## **Method**

### *Data*

Data about the pedagogy in practical dance classes was gathered using a questionnaire and an interview. The research sample was taken from practical dance teachers who work at five different Dance Academies in the Netherlands. We contacted the directors of the five dance academies and asked them to find volunteers for the study. One academy did not volunteer for practical reasons. The sample consisted of 20 teachers, 13 technique teachers (eight females and five males), and seven choreography teachers (five females and two males), which is 9 % of the total population of practical dance teachers in dance academies in the Netherlands. All teachers taught courses in the four-year higher professional education programmes, which prepare students for a career as a professional dancer or a choreographer. Their average teaching experience in higher education was 16.5 years, with a minimum of five years.

From these, five technique teachers (two females and three males) and three choreography teachers (all female) were selected for the interview, based on a variety of answers given in the questionnaire and the four institutions represented. Teachers received the interview questions approximately a week before the interview. Interviews were tape-recorded and transcribed. One transcribed interview was omitted from the analyses, as many of the discussed issues were not relevant. The subject of the technique

(modern dance, jazz dance, modern dance and ballet) and choreography classes (modern dance choreography, jazz dance choreography, improvisation and composition) was not relevant; it will, however, be used in the results section for illustrative purpose.

#### *Questionnaire and interview*

A five-part questionnaire was designed based on findings from the literature review. The first two parts contained six items measuring personal characteristics, and six items measuring descriptive information of the practical dance course(s) taught.

The third section contained 14 pre-structured questions measuring the use of teaching aims, mostly based on reviews of Smith-Autard (2002), Warburton (2004) and Lavender (1996). The fourth section consisted of five pre-structured questions on the teaching methods used by teachers, composed according to Smith-Autard, Fortin et al. (2002) and Butterworth (2004). The final section included eight pre-structured items measuring assessment. All these items were formulated according to the above-described teaching aims. These questions had a pre-structured format on a 5-point Likert type scale (0 - never applied; 4 - very often applied) and included illustrative information about how the aims, methods and assessment are applied e.g. "In my course I use a direct teaching method, where I, as teacher present the learning tasks and ask students to replicate these".

The aim of the interview was to gain additional qualitative information about how teachers apply pedagogical aims, use teaching methods and assessment, which they use often or very often. For example, one question was: You wrote that a direct teaching method, where you as teacher present the learning tasks and ask students to replicate these, is very often applied in your course. Please give an illustrative example of how you use this method in your course. The interview had a semi-structured format, organised according to the topics of the questionnaire: aims, methods and assessments.

#### *Analysis*

A t test was employed to examine whether technique and choreography teachers differed in their perception on the 14 items describing the aims of the course, five items describing the methods used, and eight items describing students' assessment. A Bonferroni method was used to correct the level of significance of 5% for the number of t tests.

The qualitative data collected from the semi-structured interviews was analysed using the content analysis methods, using the same categories as in the questionnaire. The aim of the analysis of the qualitative data was to break the collected information into meaningful units, and to synthesise these units into meaningful themes (Bogdan & Bilken, 1992). First, the qualitative data was inserted in six separate documents, created for aims, methods, assessment for both technique and choreography classes and ordered. Second, within each document, the answers of the teachers were organised under themes and sub-themes. This analysis procedure resulted in matrices (Miles & Huberman, 1994) for teaching aims, methods and elements of assessment of technique and choreography classes, which will be described in the next section.

## Results

The descriptive statistics of the questionnaire items are shown in Table 1.

Table 1

*Pre-structured questionnaire items, mean scores and standard deviations*

		Item	Choreography M (SD)	Technique M (SD)
Aims of learning	Personal features	Developing students' creativity	3.9 (0.4)	2.8 (0.9)
		Developing students' imagination	3.9 (0.4)	2.8 (1.0)
		Developing students' individuality	3.7 (0.5)	3.4 (0.9)
		Encouraging students to use personal feelings and intuition	3.6 (0.5)	2.9 (1.3)
Knowledge	Knowledge	Acquiring knowledge of how to create the form and structure of a dance	2.9 (1.1)	2.3 (1.5)
		Developing students' awareness and understanding of the social context	2.6 (1.1)	1.4 (1.4)
		Developing students' awareness and understanding of the historical context	2.3 (1.3)	1.3 (1.2)
		Developing students' awareness and understanding of the cultural	2.6 (1.1)	1.4 (1.4)

		context		
		Learning the meanings associated with different movements	3.1 (0.7)	2.9 (1.2)
	Physicality	Training students' physical skills	2.3 (1.4)	3.9 (0.3)
		Learning general movement principles	2.6 (1.0)	1.1 (1.1)
		Learning a specific dance technique with a particular range of movements	0.7 (1.5)	3.6 (0.8)
	Thinking skills	Formulating personal reflections on learning	3.9 (0.4)	3.0 (1.1)
		Developing students' critical-thinking skills	3.0 (1.0)	2.3 (1.3)
Methods of teaching		A direct teaching method	0.9 (1.1)	3.8 (0.4)
		An open-ended problem-solving method	3.6 (0.5)	2.0 (1.2)
		Collaborative learning methods	3.1 (0.9)	2.0 (0.9)
		Techniques of somatic education	2.1 (1.6)	1.9 (1.8)
		Asking students to carry out individual learning tasks	3.1 (0.7)	2.4 (1.5)
Assessment of students'	Physicality	Physical skills	2.6 (1.4)	3.7 (1.1)
	Personal features	Creative expressions	3.7 (0.5)	3.2 (1.3)
	Knowledge	Knowledge of how to create the form and structure of a dance	2.9 (0.9)	1.6 (1.5)
		Understanding of the social dimensions of dance	2.1 (1.7)	0.9 (1.2)
		Understanding of the historical dimensions of dance	2.1 (1.7)	0.8 (1.1)
		Understanding of the cultural dimensions of dance	2.1 (1.7)	1.3 (1.5)
	Thinking skills	Reflections on their learning process	3.9 (0.4)	3.1 (1.1)
		Critical analysis of a dance performance	2.7 (1.3)	1.2 (1.5)

We found some significant differences in the perception of technique and choreography teachers among pedagogical aims and methods. No statistically significant differences were found among the elements of assessment. Among pedagogical aims, choreography teachers applied more often developing students' creativity ( $t = 3.5$ ;  $df = 17.4$ ;  $p = 0.003$ ), and

imagination ( $t = 3.3$ ;  $df = 16.9$ ;  $p = 0.004$ ) in comparison to technique teachers. Choreography teachers compared to technique teachers applied less training students' physical skills ( $t = -3.1$ ;  $df = 6.2$ ;  $p = 0.02$ ), and teaching a specific dance technique ( $t = -5.7$ ;  $df = 18$ ;  $p < 0.001$ ). Among pedagogical methods, choreography teachers used a less direct teaching method ( $t = -8.7$ ;  $df = 18$ ;  $p < 0.001$ ) compared to technique teachers. Choreography teachers used more often a problem-solving method ( $t = 3.4$ ;  $df = 18$ ;  $p = 0.003$ ) compared to technique teachers. Based on these findings, there seems to be some difference in the pedagogy choreography and technique teachers use. In order to further understand these differences, we will summarise the qualitative data about how aims, methods and assessment are applied.

#### *Pedagogy of choreography teachers*

##### *Aims in choreography classes.*

The most often applied aims in choreography classes are related to developing students' personal features, developing students' creativity, imagination, individuality, and encouraging students to use their personal feelings and intuition for creating dances. Teachers explained that first, students need to find and settle a meaningful idea for their choreographic work. A modern dance choreography teacher explained that she often facilitates this process by asking students to prepare a text with their own story on something that is meaningful to them of which they choose some parts to compose movements in class. She emphasised:

In that way I really bring in their own individuality and their own story . . .  
and how they apply those stories to their own artistic work.

Second, the form and structure of dance need to support the story or an abstract idea that students want to communicate with their movements. A jazz dance choreography teacher indicated that students work on the dynamics and style of their work. A modern dance teacher slightly incorporates, due to her background in Laban movement analysis, the basic ideas about space, time and weight using open discussions. In the same manner, she encourages students to become aware of the social, cultural and historical context of the movements that they use.

Third, although training physical skills was rated much lower than the aims about developing students' personal features and knowledge, a teacher indicated that physical skills are important and they are developed

through self-discovery using techniques of somatic education. In terms of movement principles, she mentioned that students have to understand coordination in the body, cross patterning, how the lines connect the whole body when the body is in motion and how to work carefully with the joints.

Finally, all teachers ask students to reflect on their learning process, to understand how their personal ideas and concepts of dance form and structure have been used and developed in the process of a choreographic work. The jazz dance choreography teacher said that after every assignment they talk about what students did, saw and how they felt. She also uses video recordings of students' performances that are viewed and discussed with the group. Finally, she indicated that while in the beginning the reflection is completed through oral discussions, at a later stage she asks students to reflect on their process in writing. A modern dance choreography teacher mentioned that she asks students to write a reflection on their movement research and how it is used in the performance. The improvisation and composition class teacher mentioned that besides asking students to reflect on what they have learned, she also supports students to reflect on the aspects they have not been able to do yet, but would like to develop in themselves. This is part of advising students in their studies, which is carried out using one-to-one dialogues between the teacher and a student.

#### *Methods in choreography classes.*

Two teachers indicated that to start the course they demonstrate tasks. A modern dance choreography teacher indicated that with this she offers students the movement structure after which she uses an open-ended problem-solving method to stimulate discussions, asking students to find answers and solve their ideas. Similarly, a jazz dance teacher explained that at the beginning she introduces students to the jazz dance style, during which she also shows videos about the style. Once students are more familiar with the style, she starts using more open-ended methods, encouraging students to bring their materials, movements and music and become more creative in learning. According to the improvisation and composition teacher, she only uses a problem-solving method that is often related to using techniques of somatic education. All teachers indicated that using a problem-solving method relates to individual learning tasks. A modern dance choreography teacher indicated that collaborative tasks are also related to the problem-solving method, which is used in the form of role play where one student gets the role of director and two others the role of dancers.

*Assessment in choreography classes.*

First, one of the most assessed elements by choreography teachers was students' creative expression. A jazz dance choreography teacher described that she evaluates how students express themselves in their own work because that is their form of communication with the audience. A modern dance choreography teacher assesses students' willingness to be open, take risks, be vulnerable and expose their ideas because according to her, having a kind of openness is the ability to expose creative expression.

Second, teachers assess students' knowledge on dance form and structure, and awareness of social, cultural and historical context of the dances. A modern dance choreography teacher assesses how students apply the knowledge about space, time and weight in their work and awareness of the context of the movement they use in their work. The jazz dance choreography teacher described that most of the assessment is based on reflection. She explained:

They have to do an essay or a written diary about their working process.  
Present the things that they learned, how and what they changed.

Third, assessing students' reflection on their learning is another important element of assessment in choreography classes. The modern dance choreography teacher mentioned that she uses written assignments and discussions with students about their choreographic work. Similarly, the improvisation and composition dance teacher described that most of the assessment is based on students' reflections on extending their capabilities through discussions and written assignments. Finally, the jazz dance choreography teacher pointed out differences in reflection skill among students. She mentioned that some students analyse their process and development, while other students' writings are descriptions of their life-events without reflection.

*Pedagogy of technique teachers*

*Aims in technique classes.*

First, the most often applied aims in technique classes are training physical skills, learning general movement principles and a specific dance style. Two jazz dance teachers indicated that they demonstrate the exercises for training physical skills, paying attention to students improving their physical skills to the maximum. Two other teachers (a ballet and modern dance teacher and a modern dance teacher) indicated that the body needs to be trained, however,

they emphasised that they encourage students to explore their abilities by themselves. Students can work with a phrase based on their own wishes and abilities. This indicates that in technique classes, aims related to students' personal features are important in relation to training physical skills. In addition, the modern dance teacher pointed out that he uses techniques of somatic education for students to explore the movement principles.

Second, technique teachers find it important to teach the meanings associated with movements in the movement creation scale. They teach students the meaning of movement in a phrase, but also what the body does when making movements. In terms of knowledge acquisition about the form and structure of the dances, a modern dance teacher indicated that he often tries to approximate students' wish with their abilities, he explained:

First to see what they want to create, what is in the back of their head as desire, and then to see what skills they have, so I help them to approximate the wish to what they can.

In addition, he and a jazz dance teacher indicated that knowledge about the social, cultural and historical context of the dances is touched on. As some young dance students are unfamiliar with context, teachers find it important to introduce these topics, and because many students are foreign, teachers touch upon topics about cultural differences.

Finally, according to all teachers, supporting students to reflect on their learning was also a very important aim. As the learning in technique classes is for the most part related to training physical skills, it is also the main focus of students' reflection. A modern dance teacher indicated that students are asked to set goals for themselves in relation to a technique, and reflect on what they did in exercises in relation to the goals at the end of every lesson. The main method he uses for reflection is asking questions. Besides oral discussions, students are given written assignments. He also pointed out a difficulty:

A few students actually come into a class being able to really say, the teacher is saying this and that, and then I am going to work on this. So the ability to be flexible and to be critical enough, not just to absorb everything as it is, is lacking.

A jazz dance teacher explained that he builds it up gradually; first students learn the main principles about a technique, and later, based on the reflection

on their skills and interests, they are asked to lead their learning to a greater extent. A ballet and modern dance teacher explained that this aim is often addressed during the student mentor meetings every semester. He as mentor asks students to write reflections on how they see themselves at this moment, what are their goals for the next semester, and how they see themselves at the end of the year. He gives feedback to students and discusses their process during their meeting.

*Methods in technique classes.*

All teachers indicated that the most often used method is direct teaching method, where the teacher shows tasks which students replicate. Besides this, two teachers indicated that they also ask students to explore and solve the assignments based on their wishes and abilities. This more open approach to learning was associated with using the open-ended problem-solving method; within this method students obtain individual and collaborative learning tasks to explore their abilities and develop movement phrases. The modern dance teacher also related this to the use of somatic education techniques.

*Assessment in technique classes.*

First, the most frequently assessed element in technique classes is assessing students' physical skills. A ballet and modern dance teacher and the modern dance teacher give feedback, as a written report, on the technical abilities of the students, indicating what they have to concentrate on for their development. Besides this, a jazz dance teacher assesses students' process of how the student grew into the movements and gained skills. Another jazz dance teacher assesses how students have worked with their possibilities to the best of their abilities.

Second, another important element of assessment is creative expression. The ballet and modern dance teacher explained that during the lesson and final performances, he assesses how much rhythm they gain in the way of dancing, and do they present themselves with an ease and freedom indicating artistry. The jazz dance teacher assesses how students express emotion and communicate the movement. A modern dance teacher indicated that for him creativity deals with how students can solve problems, which often requires the ability to change perspective.

Finally, the last important element to assess is students' reflection on their learning. A jazz dance teacher assesses how well students are able to analyse their process and bring in constructive criticisms about themselves.

Similarly, the ballet and modern dance teacher assesses students' written reflections and discussions. He explained:

I assess how they are actually looking at themselves as dancers, if they are able to analyse themselves. If they can see where they are now in comparison to last month, where they see themselves in the future, where is their interest?

The modern dance teacher described an interesting relation between students dance work and dance methodologies, mentioning that these are often related. However, if a student chooses not to apply these methodologies or strays away from them, then the argumentation for the decisions is needed. Students need to reflect on how they created the composition.

### **Discussion and conclusion**

In brief, we found that the pedagogy of students' reflection in practical dance classes is a new development that requires further facilitation. We came to this conclusion using the following criteria. First, we searched which pedagogical features have been suggested by scholarly literature on dance education. The literature review revealed that in general, dance pedagogy is shifting from a teacher-centred towards a more student-centred approach. In addition to developing physical skills and learning the domain-related knowledge, students should be encouraged to develop features related to individuality, reflect on their learning and increase their critical-thinking skills. Besides a direct teaching method, literature suggests to use an open-ended problem-solving method, collaborative methods and techniques of somatic education.

Second, we explored which of the above-described trends are similar and often applied in choreography and technique classes. In general, findings revealed that the content in choreography and technique classes is rather different, as also indicated by Smith-Autard (2002). Central in the choreography classes is developing students' individuality in finding their stories to communicate within their dances and choosing the form and structure to the story using mostly the open-ended problem-solving method. In the technique classes, the main emphasis is on training students' physical skills both by following teacher's demonstrations and through own explorations. The latter indicates that technique teachers like choreography teachers encourage their students to become more active in learning and focus

on their individuality, as suggested to teachers by Bracey (2004) and Buckroyd (2000). This indicates that although the aims of the courses are different, the pedagogical practice is shifting towards a more student-centred approach. The most interesting finding in this respect was that both technique and choreography teachers encourage students to reflect on their learning, which previously has been reported in the context of choreography classes (Lavender, 1996; Warburton, 2004).

Third, we aimed to find which features, besides the approval of theoretical and practical perspectives, are difficult to implement in practice. In this respect, both choreography and technique teachers indicated that it is often difficult for students to carry out reflection on their learning: to set and focus on achieving individual goals, to relate concepts of dance methodologies to their own dance work; to analyse their learning process, and to carry out reflective writing.

In the introduction, we claimed that possibilities provided by web-based ICT tools can also be interesting for courses focusing on student's psychomotor skill acquisition, which have, until now, not made considerable use of ICT to facilitate teaching and learning. In our view, the focus of an appropriate ICT tool for practical dance classes should therefore be based on the reasoning that any ICT application in education needs to support the pedagogical context of a subject, on facilitating the pedagogy of students' reflection.

Research has already shown that web-based ICT tools can provide support for students to learn how to reflect, as using ICT can make learning processes more visible through the on-line analysis of activities (Simons, 2006). At the heart of applying reflection in practical dance classes, the tool should assist defining and achieving students' individual learning goals, facilitate connecting methodological concepts to students' dance style or choreography, and aid developing awareness over their learning process. For example, a web-based video application can be used for analysing recordings of students' development within a process of a dance work. This allows students to become more explicitly aware of their process and reflect on their learning in relation to methodological concepts and principles. In the Netherlands, experiments with the use of streaming video are currently carried out in teacher education and other professional training programmes using DiViDU tool to support students' reflection (e.g. Kulk, Janssen, Gielis, & Scheringa, 2005), the outcomes of these experiments can be of value when deciding on a suitable ICT tool to support students' reflection in tertiary dance education.

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## Chapter 4

### **Pedagogical practices of reflection in tertiary dance education \***

#### **Abstract**

The three different perspectives on reflection in education are embedded in the philosophical traditions of pragmatism, critical social theory, and Kant. We aimed to describe the pedagogical practices of reflection, and to develop a descriptive model of the practices of reflection in tertiary dance education which can be used by dance educators to support their students' reflection activities. Data about the reflection practices were collected from 13 dance teachers in The Netherlands. The developed model of pedagogical practices consists of five types of reflection based on the Kantian and pragmatists' notions of reflection.

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\* Leijen, Ä., Lam, I., Wildschut, L., & Simons, P. R. J. (in press). Pedagogical practices of reflection in tertiary dance education. *European Physical Education Review*.

## Introduction

The pedagogical practice of tertiary dance education has, during the recent decades, changed considerably. In the 1970s and 1980s tertiary dance education in North-America and many European countries focused mainly on mastering one prescribed dance style (e.g. Graham or Cunningham modern dance style, or classical ballet) and the repertoire of theatrically defined dance products through copying the teacher (Smith-Autard, 2002). This pedagogical practice was not concerned with students' subjective experiences in dance nor developing students' creativity and thinking skills. Several authors (e.g. Green Gilbert, 1992; Lakes, 2005; Lavender, 1996; Morris, 2003; Shapiro, 1998; Smith-Autard; Stinson 1997, 1998) have criticised this narrow approach to dance education and called for dance educators to recognise and support the individuality of their dance students. From the 1990s onwards the pedagogy in tertiary dance education has moved towards a more student-centred practice (Smith-Autard). Besides practising the theatrically defined dance techniques, students are encouraged to explore and develop a variety of movement concepts and principles (Green Gilbert; Smith-Autard). Moreover, attention is paid to deepening students' knowledge in dance disciplines (Smith-Autard) as well as to growth in the creativity, imagination, and individuality of students (Smith-Autard; Stinson). In addition to the mere repetition of teachers, the literature reports on using the open-ended problem-solving methods, collaborative methods (Smith-Autard; Green Gilbert; Butterworth, 2004), and techniques of somatic education (Bracey, 2004; Fortin, Long, & Lord, 2002; Kauppila, 2006). In this more diverse practice, dance students are expected to take more responsibility, reflect on their learning, and regulate their learning activities (Lavender; Lavender & Predock-Linnell, 2001; Stinson) in order to become, first and foremost, self-confident professionals, whether in preparation for becoming a dancer or a choreographer.

The context of the current study is tertiary dance education in The Netherlands which provides qualifications in higher professional education and prepares students for a career as a professional dancer or a choreographer. In particular, we focus on the pedagogy in practical dance classes (dance technique courses and choreography courses). Leijen, Admiraal, Wildschut, & Simons (2008) found that supporting students' reflection on their learning is currently one of the most important pedagogical aims in both dance technique and choreography classes in The Netherlands. In addition, the

findings of the study showed that substantial facilitation is needed to support students' reflection in these classes owing that it is often difficult for students to carry out reflection activities: to set and focus on achieving individual goals, to relate concepts of dance methodologies to their own dance work; to analyse their learning process, and to carry out reflective writing. Based on these findings we decided to investigate how to facilitate dance students' reflection activities. However, several authors (e.g. Griffiths, 2000; Gur-Ze'ev, Masschelein, & Blake, 2001; Hatton & Smith, 1995; Van Manen, 1995) have pointed out that the concept of reflection in literature is intangible and ambiguous regarding how to determine, facilitate, and assess reflection in practice. For this reason, we decided that before we can elaborate on facilitating reflection activities it is necessary to explore the different notions of reflection in education and develop further understanding of the aims, focus, and processes of reflection in practical dance classes.

Following, we will first give an overview of the different notions of reflection in education after which we present the research questions of the current study.

#### *Different interpretations of reflection*

Reflection can generally be defined as a cognitive process carried out in order to learn from experiences (Moon, 2004) through individual inquiry and collaboration with others (Dewey, 1933). Despite consensus on the importance of reflection for learning, there are different interpretations of reflection in education. Procee (2006) elaborates on the differences between the approaches to reflection by exploring the roots of reflection in education in Western philosophy. In his view, the most influential approaches are the pragmatist school of Dewey and the so-called Frankfurt school of critical social theory, e.g., the notions of Habermas. The followers of these schools interpret reflection differently. In Dewey's view, reflection allows one to become conscious of and thoughtful about one's actions, as opposed to using trial and error to deal with confusing and problematic situations. The process of reflection in Dewey's tradition follows sequential phases (Rodgers, 2002):

An experience; spontaneous interpretation of the experience; naming the problems or the questions that arise out of the experience; generating possible explanations for the problems or questions posed; ramifying the explanations into full-blown hypotheses; experimenting or testing the selected hypothesis. (p. 851)

Similar cyclical reflection models for educational settings have been suggested by Kolb (1984) and Korthagen (1985).

The critical social theory perspective on reflection emphasises the critical position of individuals and groups in relation to the actual situation. Reflection involves questioning existing assumptions, values, and perspectives which underlie people's actions, decisions and judgments. The purpose of questioning is to liberate people from their habitual ways of thinking and acting (Procee, 2006). Inspired by Habermas, Mezirow (1991) introduced the term *perspective transformation*, which entitles the process of becoming critically aware of how and why our assumptions about the world have come to constrain the way we see ourselves and relate to others. According to him, transformation in perspectives is only possible through the critical reconsideration of one's own perspectives and orientations to perceiving, knowing, feeling, and acting. Bolhuis & Simons (1999) characterise this kind of learning as breaking down and building up; what has been learned before – the frame of reference – has to be unlearned to make room for new knowledge, skills, and attitudes. Gur-Ze'ev, Masschelein, & Blake (2001) stated that this practice of reflection is more related to counter education and is not possible in the formal education owing to “the hegemonic realm of self-evidence and the productive violence of social and cultural order” (p. 93).

In addition to these two well-known approaches to reflection in education, a third approach was developed by Procee (2006). His systematic approach to reflection is based on Kant's distinction between *understanding* and *judgment*. The latter is associated with reflection. “Understanding is related to the ability to grasp logical, theoretical, and conceptual rules; judgment is related to ability to connect experiences with rules” (Procee, p. 247). As Procee argues:

Both are important in the field of education – students have to learn existing concepts and theories in their specialty (understanding), but they also have to learn to make connections between their state-of-art knowledge and the domains of reality in which they are operating (judgment). (p. 247-248)

These connections can occur in two ways, driven by pre-given concepts - *determinative judgment* - and driven by experiences – *reflective judgment*. Determinative judgement implies that a person stipulates and applies a set of rules or concepts in a particular practice. Reflective judgement is carried out when existing concepts or principles are limited and need to be developed

based on a particular practice (Procee). In accordance with the above, to reflect means both to compare and hold together one's conceptions and experiences in order to act with more self-confidence.

In brief, there are three different perspectives on reflection in education, embedded in the philosophical traditions of pragmatism, critical social theory, and Kant. Accordingly, the focus, purpose, and process of reflection vary in each tradition.

The main research question in this study was the following: How to describe the pedagogical practices of reflection in tertiary dance education in relation to the different perspectives and traditions of pragmatism, critical social theory and Kant? In order to answer this question, the following sub-questions were addressed: Can different types of reflection be distinguished in the context of practical dance classes? How can categories of reflection be conceptualised in a practically useful way? What teaching methods do teachers use to support students' reflection on their learning? Are there variations among dance technique teachers and choreography teachers in their perspectives on the pedagogical practices of reflection and the frequency of use of the different types of reflection?

## **Method**

### *Data collection and procedure*

To answer the research question, an empirical study was carried out in which we focused on the perceptions of dance teachers giving practical dance courses in dance academies in the Netherlands. In the Netherlands, tertiary dance education programmes are offered by five dance academies which provide qualifications in higher professional education and prepare students for a career as a professional dancer, a choreographer or a dance teacher. Completing the educational programmes will usually require a study period of four years.

Data for developing a descriptive model were collected in two stages, as described in Figure 1. Dance teachers were selected from the sample of a previous study (Leijen et al., 2008) for the first stage of the data collection. We interviewed seven practical dance teachers: four technique teachers (one female and three males) and three choreography teachers (all female), from four different dance academies in the Netherlands.

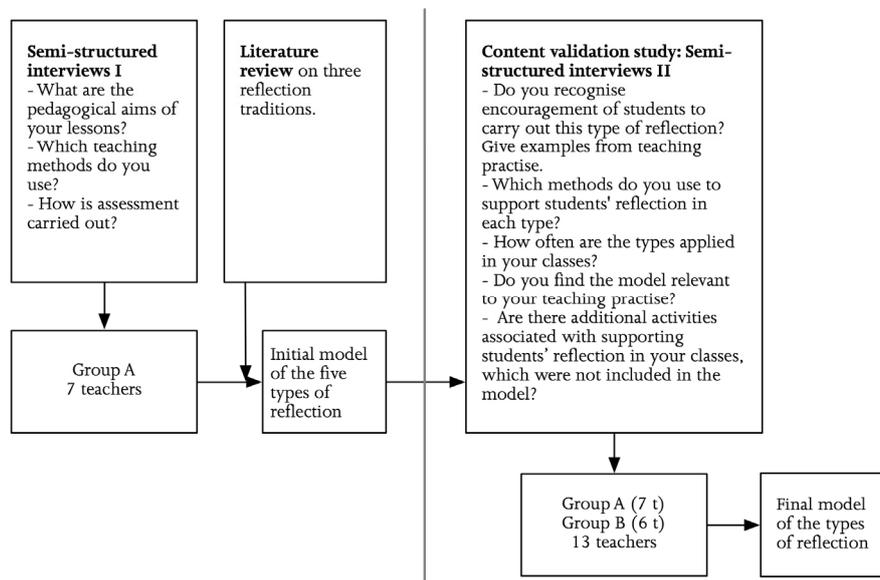


Figure 1. Overview of the data collection.

Since reflection is a confusing concept and teachers may not be aware that they encourage their students to reflect on or in their practices, we did not ask the teachers directly to elaborate on how they encourage students' reflection in their classes. Instead, the teachers were asked to give a general overview of their teaching practices. The themes of the interview were teaching aims, methods, and assessment. The descriptions of the practices given by the teachers were then analysed by researchers, who selected instances where teachers described how they encouraged students' reflection in their classes. Based on the teachers' ideas on pedagogy, and findings from the literature concerning the practices of reflection, a model of pedagogical practices of reflection in tertiary dance education was created (see data analysis).

In the second stage of the data collection, a content validation study was carried out in order to obtain feedback from previous and new informants as a procedure for corroborating findings from qualitative studies (Miles & Huberman, 1994). In total, thirteen teachers were interviewed during the content validation study. In this procedure, the seven teachers whose ideas formed the basis for the initial model were interviewed again. To allow the teachers to prepare for the interview, we provided them with the interview questions and supplementary materials approximately a week before the interview. The supplementary materials contained a model of reflection

practices in dance education, including descriptive information about the model and illustrative examples from their previous interviews. During the interview we asked whether they recognised the five types of students' reflection described in the model, if they could provide examples of how these were applied in their classes, which pedagogical methods they used to support students' reflection, and how often different types of reflection were included in their teaching practices. We also asked whether they found the model relevant to their teaching and if additional activities were carried out in their pedagogy to support students' reflection, which were not described in the model.

Following this, we interviewed six additional dance teachers using the same questions; these teachers were found after we asked two dance academies for volunteers for the content validation study. Three of these teachers were dance technique teachers (all female) and three were choreography teachers (two females and one male). Similarly to the previous procedure, the new informants received the interview questions and supplementary materials approximately a week before the interview.

#### *Data analysis*

The data collected in the first stage of the study were analysed in a qualitative manner, using a systematic set of procedures to develop an inductively derived descriptive model of reflective practices in tertiary dance education.

First, the first author of this paper assigned open codes to fragments related to the practices of reflection in all interviews. For example, the following fragment was coded as: developing meaningful ideas/stories and applying them to their artistic work.

I work a lot with text and movement, and one of the things that I always ask my students to do is either bring their own texts, or develop their own texts in the workshops. For instance, I might ask them to write about someone in their family or something close to them. In that way I really bring in their own individuality and their own story, because for me it is really about their own stories, both movement-wise and also in the text, and how they apply these stories and these texts to their own artistic work or their choreographic work.

These open codes were intended to summarise the content in a given fragment. During this procedure, the differences between supporting students' reflection in the dance domain and supporting students' reflection in

the domain of oneself were also noted, since teachers tended to separate these two in their descriptions. The fragment presented above was associated with the domain of oneself, since the teacher emphasises that students need to develop and apply ideas for their choreographic work which are personal and meaningful for them. However, for example, while teachers described how they encourage students to reflect on the extent they have applied a particular predefined principle of a dance technique or theoretical concept, the fragment was associated with encouraging reflection in the dance domain.

Second, the fragments coded using open codes were organised and grouped under more general categories or code families. These code families represented different reflection types. Since it has been shown that sensitising concepts taken from existing research are often relevant as interpretive devices for a qualitative analysis (Bowen, 2006), we used the following three sensitising concepts to interpret the practices of reflection. The first concept was encouraging students to carry out the determinative judgment and reflective judgment to connect concepts and principles with practice from the Kantian perspective. The second was fostering students to carry out a linear procedure of reflection steps to assess and improve current practice from the pragmatists' perspective. The third was encouraging students' engagement in critique and doubt by questioning existing societal assumptions, values, and perspectives in order to open up a horizon of liberation concerning the social critical view of reflection. For example, the fragment presented above was associated with the Kantian notion of reflection, since the teacher indicated that students need to develop meaningful ideas for choreographic work and reflect on how they applied these ideas to their artistic work, the fragment indicates encouraging both reflective judgement (students need to develop meaningful ideas) and determinative judgment (how they applied these ideas to their choreographic work).

In addition, to identifying the fragments from the three theoretical perspectives, a distinction was made between the domain of oneself and the domain of dance to identify different types of reflection. This procedure was carried out independently by the first and second authors of the paper. Both researchers had identified fragments related to the pragmatists' and Kantian notions of reflection with a further distinction between the domain of oneself and the domain of dance.

Third, the procedure of consensual validation (Eisner, 1991) was carried out. In this procedure, the initial categories developed by two researchers were critically compared and discussed by the two researchers until consensus was reached. Consensus on the organisation and grouping

was reached for all fragments. One of the discussion topics was the relevance of distinguishing the domain of oneself and the domain of dance among the fragments associated with the pragmatists' notion of reflection. Owing that the two domains were highly interrelated in these instances we decided to merge all fragments related to pragmatists' notion of reflection into one category. As a result of this analysis, we developed a descriptive model of the pedagogical practices of reflection containing five types of reflection: (1) determinative judgments to connect the theory of the domain of dance with practice, (2) determinative judgments to connect the knowledge of oneself with practice, (3) reflective judgements to connect practice with the theory of the domain of dance, (4) reflective judgement to connect practice with the knowledge of oneself, and (5) a circular reflection process related to pragmatists' notion of reflection for analysing one's improvements over a period of time.

The interviews conducted in the content validation study were initially summarised by the first author, resulting in separate documents of examples and frequencies for the five types of reflection, and suggestions for improving the model. Subsequently, in each document, the answers of the teachers were organised under themes and sub-themes. This analysis procedure resulted in cross-case matrices (Miles & Huberman, 1994) for each type of reflection, and a separate matrix containing teachers' suggestions for improving the model. Finally, three authors of the paper discussed and weighted teachers' suggestions for improving the model; based on this, minor changes were made to the initial model. The description of pedagogical practices of reflection and the model of reflection practices are presented in the results section.

## **Results**

The descriptive model of common pedagogical practices of reflection in tertiary dance education is presented in Figure 2. The model incorporates five types of reflection. Four of the reflection types are related to the Kantian notion of reflection, where students are encouraged to reflect on the following: (1) how they apply concepts and principles related to dance disciplines in their dance practice, (2) how they apply concepts and principles derived from awareness of oneself and one's bodily possibilities in their dance practice, (3) which new concepts and principles related to dance discipline

they have developed based on their dance practice, (4) which new concepts and principles related to themselves they have developed based on their dance practice. All these types are carried out to connect different concepts and principles with students' kinaesthetic experiences in order to be able to act with self-confidence in a professional practice. The fifth type of reflection is related to the pragmatists' notion of reflection: (5) students are encouraged to elaborate on their development over a period of time, point out what needs further attention during a following period, and plan activities for enhancement. The latter type of reflection can be characterised as a circular improvement procedure.

Hardly any of the practices of the social critical notion of reflection in tertiary dance education was found in this study, although we found evidence of teachers encouraging their students to discuss issues related to the social, cultural, and historical contexts of the dance disciplines. The main aim of such discussions is to develop understanding of the wider context of dance and appreciation of dance as an art form, and of other disciplines of art.

Since the circular improvement procedure was associated with evaluation moments taking place over a longer period of time, e.g., once in a semester, we placed this type of reflection on the outcurve of the descriptive model. Similar to the Kantian notion of reflection (Procee, 2006) as described earlier, the model points out the determinative and reflective judgments relating to the concepts, principles, and practice. Based on the teachers' descriptions and distinctions drawn between the concepts and principles related to dance disciplines and those related to the students' selves, we presented these themes separately. Twelve teachers out of thirteen considered the model relevant and useful for their teaching practice. The teacher who did not find the model relevant preferred a three-dimensional representation of reflection practices. Although he disagreed with the current representation, he provided several descriptions of encouraging students' reflection. These descriptions can be placed under the broad categories of supporting determinative and reflective judgments on daily practice, and a more linear improvement procedure for supporting students' reflection over a longer period. Below, we describe each type in more detail.

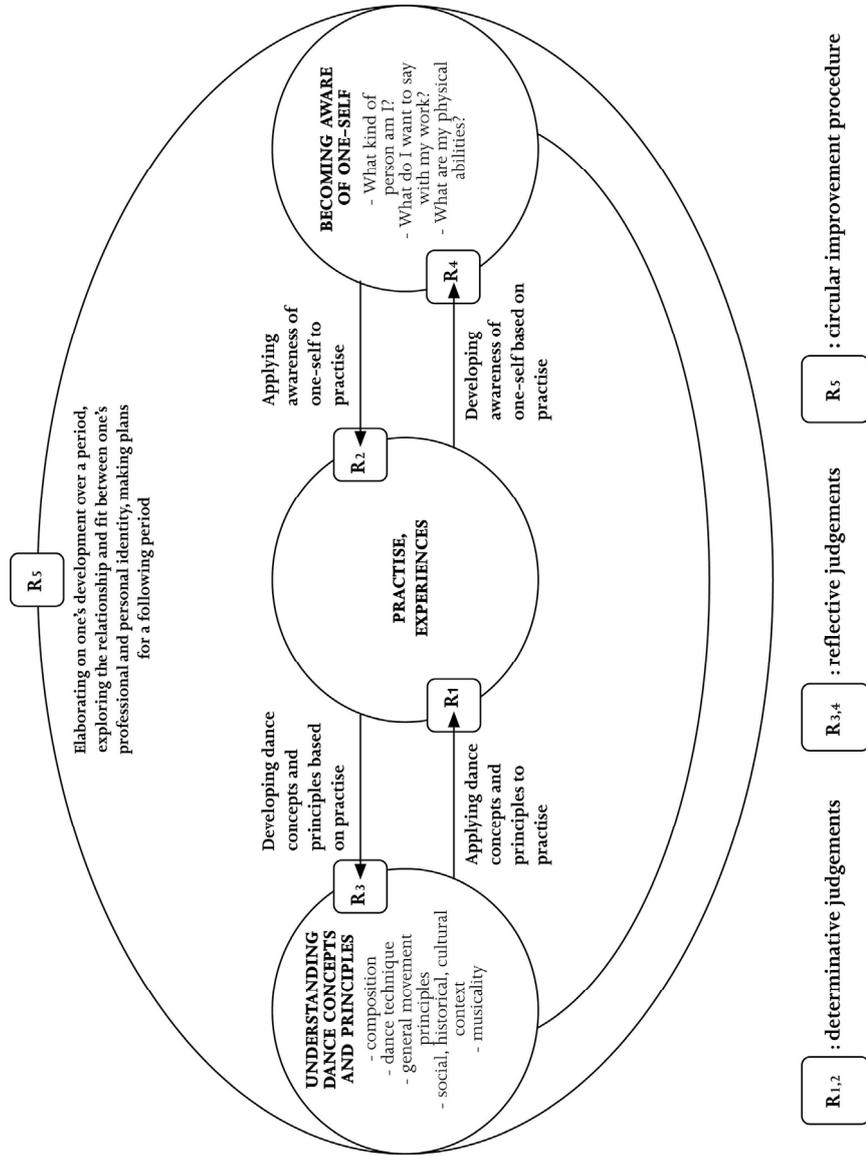


Figure 2. The model of pedagogical practices of reflection in tertiary dance education.

*Determinative judgments*

Using the first type of reflection, students should analyse their kinaesthetic experiences in the light of predefined concepts and principles related to a dance discourse. These concepts and principles can be related to different dance styles, composition theories, or general notions, e.g., post-modernism, related to a social, cultural, and historical context. Students are encouraged to elaborate on the extent they apply certain dance principles to their practice based on specific evaluation criteria that describe the accurate usage of these principles. For example, a choreography teacher explained how she teaches the concept and principles of the site-specific walk:

I show them videos of the site-specific walks and discuss these before they practise. They have to reflect on their walk and how far they are in this walk in relation to theory.

The teaching method most often used to support students' reflection on these matters is asking *what* and *how* questions, which are usually posed by the teacher. Peer-feedback activities are also often used to facilitate this type of reflection: peers provide their perspective on the questions. Some teachers also use video recordings as an input for reflection. Recordings of students' practice are viewed and discussed in a group. Following this, the teacher provides detailed feedback on students' practice. Finally, one teacher mentioned that he used unusual comparisons, e.g., "The foot should sound like a violin", or "Do it in the way Picasso painted this blue ball over there", to trigger students' reflection in applying dance concepts to practice.

Using the second type of reflection, students should analyse their kinaesthetic experiences in the light of the concepts and principles related to themselves. These include personality, which includes the social and cultural background of the student; preferences, which point to interests a student wishes to share and express in dance art; and bodily possibilities, which form a unique means for carrying out dance concepts and principles, and those of the self. A dance technique teacher elaborated how students should reflect on how they apply their bodily possibilities in an exercise:

...Let's take a few minutes and try it by yourselves. Let's see if you can do it now, find it for yourself, see if you have more questions. Then we stop and look at each, one by one. So I give them little time, and then they can see if they can get the full physicality of the movement with their own abilities.

The teaching methods used by the teachers to support this type of reflection include encouraging students to work with feelings and bodily sensations. Some teachers consider it the responsibility of students to reflect on how they apply awareness of themselves to their practice. Other teachers pose questions related to students' individuality, which are discussed in groups or during face-to-face meetings, and elaborated in writing. Writing assignments are also used where it is difficult for students to elaborate on their feelings in class or when students become too emotional during discussions. In addition, some teachers promote students to work on dance techniques and principles based on individual preferences and needs. Finally, teachers ask students to think about and share their views on how they can best adapt a teacher's movements to their own bodies. In relation to choreographic work, students need to elaborate on why a piece should be interesting for an audience. Following this, peers provide their perspectives on a student's choreographic work during a discussion. In group discussions and writing assignments, students are also asked to express their own views on how their choreography turned out, and what in their view needs further attention.

#### *Reflective judgments*

Students are also expected to discover concepts and principles based on their practice using reflective judgment; the third and fourth types of reflection are related to these judgments. The third type of reflection aims to create new dance concepts and principles. It appears in two ways. First, learned concepts become more meaningful through practice as they are embedded in practical experiences, or based on their experiences students perceive a concept in a new way. Second, students develop new concepts or principles while practising. The following illustration was given by a dance technique teacher:

I just ask them to roll down, then to kneel, and then to come up...In that way we come to different levels and they explore levels and things like that, and then we explore differences in levels, and they are given a very short exercise to produce choreography about the different levels.

Teaching methods supporting this type of reflection include setting out improvisation exercises, where students are encouraged to explore their practice. Following this, some teachers pose questions, which are usually discussed in groups. In addition, students are also expected to observe their peers in order to develop ideas for dancing. The concepts and principles

developed based on practice are usually not universally new; an exception in this respect can be the outcomes of searching for the meaning of movement.

Using the fourth type of reflection, students develop awareness of themselves, discovering personality traits or meaningful themes for choreographic work, or learning about their bodily possibilities and limits. A choreography teacher gave the following example of how she applied this type of reflection in her teaching.

I do a lot of exercises where they have to work together in pairs, and that tells them a lot about how they communicate with other people in dance. For instance, you can be someone who likes an action-reaction form like in a conversation, but you can have also a conversation in dance. I do a movement and you react to that movement, and then I do another and you react again, so you get action-reaction. Or it is possible that you like to follow somebody, the other person; he or she takes the initiative and you follow. Or, you could be someone who copies, who does not have a lot of ideas of your own, but likes to copy the person you are working with. Those are things that you can reflect on; how does this work for me?

Teaching methods supporting this type of reflection include setting out exercises which allow exploration of oneself and one's bodily characteristics. To support students in becoming aware of the latter techniques of somatic education, *Alexander Technique* and *Body-Mind Centering* and other explorative assignments are practised in classes. As with the second type of reflection, some teachers believe that it is the responsibility of the students to develop awareness of themselves. These teachers provide little guidance to the students in this process in their classes. Other teachers support this type of reflection through written assignments, questions, peer-feedback assignments, and group discussions. One teacher also uses video recordings of students' solo performances to help them become aware and elaborate on their personality and traits in relation to their social and cultural context.

#### *Circular improvement procedure*

The activities related to the four types of reflection were mainly associated with the pedagogy of students' reflection on their daily practice. The fifth type of reflection, which is in line with the pragmatists' notion of reflection, was associated with evaluation moments taking place once a semester or at the end of the course. One aim of these is to make explicit these aspects which can be improved in one's practice. A more linear procedure is applied for this type of

reflection. Students are expected to write a reflective piece on a previous period, in which they give an overview of their development, and point out areas of improvement and aspects which need to be further developed. Based on the latter they are asked to set goals for a following study period and realise these. During mentor meetings students should be able to motivate and further elaborate their viewpoints on their development. Mentors pose questions during the discussion, and give their views on matters under discussion. Semester reports and teachers' evaluations are also discussed at these meetings. Finally, the professional identity of students is discussed during the mentor meetings; this is essential for grounding their choices regarding specialisation and their future careers.

*Variations among teachers in relation to advocating the five reflection types*

We looked for variations among the teachers in their pedagogical practices of reflection. Table 1 gives an overview of the frequencies with which the five types of reflection were applied.

First, regarding the frequency of use of the reflection types, we can conclude that the first type of reflection, where students are encouraged to reflect on how they apply dance concepts and principles to their practice, is applied most often. We also found that dance technique teachers encouraged their students to reflect on these matters more often than choreography teachers. Six dance technique teachers used this type of reflection every lesson, and a technique teacher weekly. In comparison, three choreography teachers used this reflection type every day, and three choreography teachers only in specific classes. The largest variety in frequency among the whole group was found for the third type of reflection, developing dance concepts and principles based on practice. This type of reflection was not used by one technique teacher, but was used daily by six teachers (three technique teachers and three choreography teachers); other teachers applied it less often. The second and fourth types of reflection, which are related to reflecting on awareness of oneself in relation to practice, were applied by all teachers, varying from use over a longer period of time to use every class. While application and development of dance concepts and principles was always guided by the teachers, the application and development of awareness of oneself was seen by some dance technique teachers as the responsibility of the students, to be done without teachers' guidance. In addition, while in the dance technique classes the focus of self-awareness is mainly on the body, in choreography classes it is more often on a student's personality and preferences.

Table 1

## Frequencies of application of the five types of reflection

	Every class		Once a week		Specific classes		Over 4-6 weeks		Once in a semester to once a year		Not applied	
	T	C	T	C	T	C	T	C	T	C	T	C
1. Applying dance concepts and principles to practice	6	3	1			3						
2. Applying awareness of oneself to practice	3	1	1		2	3	1	2				
3. Developing dance concepts and principles based on practice	3	3	1		1	3			1		1	
4. Developing awareness of oneself based on practice	3	3			1	2	2	1	1			
5. Circular improvement procedure								4	7	2		

T- Dance technique teacher (N = 7); C- Choreography teacher (N = 6)

Reflecting on how a student applies and develops self-awareness based on practice was addressed, by some teachers, outside classes during private discussions with the student, while both types of reflection related to dance concepts and principles were always practised during classes. Finally, reflection on a longer period was also applied by all teachers. The format and role of the reflection over a longer period varies among dance academies, from mere discussions about development in the studies to providing input and rationale for choosing and following a personal curriculum, which students need to compose based on their own interests. Teachers from the same academies used similar formats for this type of reflection.

## **Conclusion and discussion**

We found five types of reflection practised in tertiary dance education, which we organised in a descriptive model. Four of the reflection types are related to the determinative and reflective judgments of the Kantian notion of reflection. Students are expected to connect concepts and principles related to dance discipline and their personality with their dance practice using determinative judgments. In addition, dance students are expected to develop new concepts and principles in regard to the dance discipline and themselves, based on their practice using reflective judgments. The fifth type of reflection contains a more linear set of procedures related to improvement, which is in line with the pragmatists' notion of reflection. This reflection type was associated with evaluation moments taking place over a longer period of time with the aim of elaborating on the students' developments during a period and making plans for a following period.

Teachers incorporate a variety of methods to support their students' reflection processes. The methods most often used were the following: teachers asking questions and providing feedback, peer-feedback activities, individual and group discussions, and viewing and analysing video recordings of students' practices. Reflection on how students applied and developed dance concepts and principles in relation to their practice and reflection on a longer period were always guided by the teachers. Reflection on how awareness of oneself is developed and applied in practice was, in some teachers' view, the responsibility of the students, to be done without teachers' guidance.

The lowest variation in frequency was found for supporting students in reflecting on how they applied dance concepts and principles to their practice. This type of reflection was also the type most often encouraged by dance teachers. The highest variation in frequency in supporting students' reflection among the five reflection types was found for the reflection type used to develop new dance concepts and principles based on students' own practice.

The Kantian notion of reflection in the current model differs from the original notion of Procee (2006), since, based on the dance teachers' views, the domains of the subject area and personal area are distinguished. A possible reason for such a view is that, in dance education, physical education, and other studies of human movement, the personality and bodily uniqueness of an individual are at the very heart of the learning process and its outcome. It is simply crucial to learn about the very personal and subjective characteristics of

an individual in addition to the more objective principles of a subject area. This view is in line with those expressed by researchers and practitioners in previous studies, who, for example, have called for more attention to the inclusion of somatic techniques such as the *Feldenkrais Method*, *Alexander Technique*, *Ideokinesis* (Kovich, 1994), and *Body-Mind Centering* (Cohen, 1993) in dance education, and listening to students' voices by encouraging personal storytelling (Garrett, 2006; Veri, Barton, Burgee et al., 2006) and biographical learning (Christensen, 2007) in the context of physical education. In brief, the present model of practices of reflection is a general framework, which can be adopted based on the content and aims of the class. Although the specific levels of self are not shown in the model, we acknowledge that matters related to a student's personality can be viewed in a more detailed manner. Similarly, depending on the focus of a class, the principles related to the domain of the subject matter can be far more specific than presented in the model. In addition, we admit that the domains of dance and self are closely related in students' development, and are complementary to a large degree. However, for a meta-analysis of a student's own practice and development it may be helpful to consider them separately and look for relationships between the two.

Hardly any evidence of the practices of the social critical notion of reflection in tertiary dance education was found in this study. Further research is needed to find out whether this notion of reflection is incorporated in practical dance classes. A limitation of the current study is that the data were collected from the teachers' description of their practices, and were not based on observations of pedagogical practices. Although we asked teachers to point out whether something was missing in the model during the content validation study, their comments were not related to encouraging social critical notion of reflection. We can only conclude, based on the teachers' perceptions of their practices, that hardly any evidence was found for the social critical theory notion of reflection being practised in the classrooms at the four dance academies in The Netherlands where we conducted our study.

Further research is needed to elaborate on the process of reflection, and to focus on the actual activities of reflection carried out by students. As a first step towards this, we aim to elaborate on the processes of reflection following the Kantian and pragmatists' notions of reflection, which can be helpful for understanding the actual activities of students' reflection in further research and in educational practices. In general, the pedagogical activities related to supporting the first four reflection types should address the processes of describing, evaluating, and relating, as described by Procee

(2006). Following we will describe how these processes can be supported according to him. First, in order to support students in describing their experiences, teachers should emphasise that the focus should be made explicit when viewing an experience. Teachers can facilitate this process by presenting reflection questions for students. In addition, viewing video recordings can help students to view the experience from a more objective perspective. Second, teachers can provide the criteria for evaluating the experiences. This is especially applicable when students are expected to evaluate how they apply pre-defined concepts and principles to their practice. When the other types of reflection are used, the criteria for evaluation are mainly subjective. Here, teachers should encourage their students to make the evaluation criteria explicit, and also encourage them to estimate the usefulness and relevance of the criteria. Third, in order to support learning from a variety of perspectives, teachers can present their own views on students' experiences and should incorporate the activities of peer-feedback and peer-assessment.

Reflection on a longer period of learning, the fifth type of reflection, is closely related to the pragmatists' view on reflection; therefore, a number of successive phases of reflection can be implemented. First, as presented in many of the pragmatists' models (e.g. Dewey, 1933; Korthagen, 1985), students should make plans for improving their practice and carry them out. The improvement can then be elaborated on the next time reflection on the longer period occurs. Teachers can present questions for reflection, ask students to carry out reflective writing on a period of study, and ask students to collect artefacts which show how they have obtained the competences related to their studies. Owing to the meta-view over the period of time, this type of reflection is also relevant for reflecting on the professional identity of a student. According to Procee (2006) the teacher can support students in this by posing questions for exploring the relationship and fit between the students' professional identity and their personal identity. In addition, questions can be asked about their professional toolbox and aspects missing from it. Finally, throughout all the processes of reflection, it should be the task of the student to formulate the final judgment on the experience considering one's own evaluation and the perspectives of others, based on the usefulness and relevance to learning from the student's own point of view.

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## Chapter 5

### **Difficulties students encounter with reflection: Lessons learned from dance education \***

#### **Abstract**

Despite its relevance to and inclusion in pedagogical practices, reflection is a challenging activity for students in tertiary dance education. The aim of the current study was to further explore the challenges encountered in the pedagogical practice of reflection. Data on the difficulties of reflection were collected from 14 dance teachers using semi-structured interviews. The results revealed four categories of difficulty: general difficulties, difficulties describing an experience, difficulties evaluating an experience, and difficulties relating to multiple perspectives. Based on these categories a questionnaire was composed, and completed by 17 dance students, in order to determine to what extent the barriers mentioned by the teachers are recognised by them. The difficulty most often recognised by students was related to the evaluation category. The reflection difficulties described in this study correspond to the reflection difficulties reported in other domains of higher education.

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## **Introduction**

Developing students' reflection in relation to their learning and behaviour is currently one of the major learning goals in higher education. The domain of our research was practical dance classes in tertiary dance education. The importance of reflection in dance studies has been pointed out by Warburton (2004) and Lavender (1996) regarding choreography classes. Recent research findings suggest that reflection is also required from students in dance technique classes. Leijen, Lam, Wildschut, & Simons (in press) found that dance students are expected to reflect on the following five areas in practical dance classes. First, how dance concepts and principles are applied to practice. Second, how the principles related to one's personality and body are applied to practice. Third, how new dance concepts and principles are developed based on own practice. Fourth, how new ideas and principles related to one's personality and bodily features are developed based on practice. Fifth, how one has developed over a longer learning period, e.g., in a semester, with the aim of pointing out overall improvements and goals for a following period. Despite its relevance and inclusion in pedagogical practices, reflection is a challenging activity for students in tertiary dance education (Leijen, Admiraal, Wildschut, & Simons, 2008). It is often difficult for students to set and focus on individual goals, to relate concepts of dance methodologies to their own dance work, to analyse their learning process, and to carry out reflective writing. The aim of the current study was to explore further the challenges encountered in the pedagogical practice of reflection in tertiary dance education.

Below, we elaborate on the notion of reflection in education and state the research questions of the study.

### *Reflection in education*

It has been pointed out that reflection leads to deeper learning (Moon, 2004), achievement of more complex and integrated knowledge structures, and more accessible and usable knowledge (Billing, 2007). Below, we elaborate on the characteristics of reflection, requirements for reflection, and processes of reflection.

It is widely acknowledged that reflection is a cognitive process or activity (e.g. Benammar, 2004; Dewey, 1933; Mezirow, 1991; Schön, 1983). Simons (1994) states that reflection allows creation of knowledge about one's own cognition, and regulation of that cognition. Boud, Keogh, & Walker (1985) emphasise, in addition to the cognitive dimension, the importance of

the affective dimension in the reflective process. Besides the cognitive and affective dimensions, several authors starting from Dewey emphasise the role of experience in reflection. In Dewey's theory of reflective thinking, action and thinking are intertwined and take place at the same time. A distinction between an experience and reflection was developed further by Schön, based on studies of students and teachers in professional educational practices. He found that practitioners engage in two types of reflection: reflection in action and reflection on action, where experience and reflection are related differently. Similarly to Schön, Mezirow (1991) showed that thoughtful action with reflection can occur during a developmental or challenging experience, and retrospectively as *retroactive* reflection. The latter is similar to Loughran's (1996) notion of *retrospective* reflection. In addition to recognising reflection during action and after the action, Loughran uses the term *anticipatory* reflection to describe reflection which takes place before a developmental experience.

In order to engage in reflection on experiences, active participation of an individual is required (e.g. Moon, 2004; Procee, 2006; Schön, 1983). Dewey (1933) stated that reflection requires attitudes that value one's own and others' personal and intellectual growth. The attitudes required for reflection according to Dewey are the following: *whole-heartedness*, which indicates the enthusiasm of an individual for his or her subject matter; *directness*, which includes trusting in the validity of one's own experience without spending a lot of time worrying about the judgments of others; *open-mindedness*, which means being willing to consider different perspectives and acknowledging the limitations of one's own and other's perspectives; and, finally, *responsibility*, which means, first, that the three above-mentioned attitudes should be carried out and grounded in reality and, second, acknowledgement that the meaning one acts on, is one's own meaning and not a disembodied meaning that is out there.

Several authors agree that, in addition to the requirements of active involvement, reflection needs to happen in a community, in interaction with others (e.g. Benammar, 2004; Dewey, 1933; Procee, 2006). This enables individuals to share and learn from the perspectives of others on experiences and ideas, and (re)interpret and develop their own perspectives further. Prawat (2000) states that language is the key in this process.

It allows the individual to transform his or her own inchoate understanding into a form that is more conscious and rational, thus serving

the self. It also allows the individual to share insight or understanding with others, thus serving the community. (p. 6)

Procee (2006) pointed out four general processes of reflection in an educational setting. First, students need to describe their experiences from an objective perspective; for this, the focus for viewing an experience should be made explicit. Second, students should evaluate their experiences. It is necessary that students know the criteria for evaluation; moreover, students should determine the usefulness and relevance of the criteria for learning from their own perspective. Third, in order to support learning from the manifold perspectives, students should consider their experiences from different viewpoints. These viewpoints can be embedded in different theoretical notions but also represent the different perspectives of peers and the teacher. Fourth, the process of reflection itself and aspects of professional identity should be reflected upon. One of the aims here is to explore the relationship and fit between the professional and personal identities of the student.

The above-described features illustrate an ideal situation for reflection. As noted earlier, in practice, reflection is a challenging activity for dance students. The research question for the current study was the following: What kinds of difficulties do students encounter while carrying out reflection activities in practical dance classes? In order to answer the research question, the following more specific questions were addressed. What difficulties related to students' reflection in dance classes most often appear according to teachers? To what extent are the barriers pointed out by the teachers recognised by dance students? To answer these questions, an empirical study following the cross-case study design (Miles & Huberman, 1994) was carried out; we focused on the perceptions of dance teachers and students from the Netherlands. In answering the research questions we hoped to gain insight into the actual and desired situations of the pedagogical practices of reflection. We compared the results of this study with the results of studies on reflection difficulties from the other fields of higher education. Finally, we aimed to find out which activities of students' reflection require more pedagogical support.

## Method

Data for the study were collected in two stages, first from dance teachers using a semi-structured interview and, second, from students using a questionnaire.

### *Data collection from teachers*

The sample consisted of 14 teachers from four dance academies in the Netherlands. Seven dance technique teachers (four female; three male), six choreography teachers (five female; one male), and one dance pedagogy teacher (female) agreed to participate as a result of our contacting the directors of all five dance academies in the Netherlands. All teachers taught practical courses in the four-year higher professional education programmes which prepare students for a career as a professional dancer, a choreographer, or a dance teacher.

Data were collected using a semi-structured interview in the context of a larger study on pedagogical practices of reflection in tertiary dance education. First, the teachers were asked to describe how they encourage their students' reflection across the five areas of reflection in their teaching practice. Second, for each of the five areas of reflection, a question was posed about the possible difficulties dance students encounter while carrying out the reflection activities. For example: Do your students encounter difficulties reflecting on how they apply dance concepts and principles to their practice? What kind of difficulties? (If difficulties indicated) Why do you think this happens? To allow the teachers to prepare for the interview, we provided them with the interview questions and supplementary materials approximately a week before the interview. The supplementary materials contained a model of reflection practices in dance education, including descriptive information about the model and illustrative examples from dance education practice.

### *Data collection from students*

To find out whether students themselves recognised the difficulties pointed out by the teachers, a questionnaire was composed to measure the difficulties of reflection; see Table 2 later in this article. For each category of difficulties, four to six items were composed based on the specific difficulties noted by the teachers. Expert checks were conducted by three educational researchers to increase the validity of the questionnaire items. The experts' suggestions for improving the questionnaire items were included in the final version, which consisted of 20 statements. Students were asked to rate how applicable the

statements were to them using a 5-point Likert scale. All the second-year dance students, 18 students in total, in one dance academy in the Netherlands were invited to fill in the questionnaire. This resulted in the collection of data from 17 students (14 female; 3 male).

#### *Data analysis*

The interviews with teachers were recorded on tape and fully transcribed. Following this, the interviews were ordered and analysed following the procedures suggested for cross-case analysis by Miles & Huberman (1994). First, all data were inserted in five matrices. The matrices contained information about difficulties students encounter with reflection activities from the five areas of reflection. Second, for every area of reflection, difficulties were clustered in each matrix using three aspects. The 'activity' with which the problem was associated was identified and inserted. In addition, the problem types relevant to an activity were identified using "the modal problem type, the one mentioned by most informants, when there were more than one" (Miles & Huberman, p. 181), and inserted. Third, the illustrations of the problems from the interviews were presented. This procedure resulted in five partially ordered displays of the data. Three of the most-used activities were related to the processes of reflection: describing, evaluating, and relating. This procedure was carried out by one researcher. The initial clustering of each area of reflection was then discussed and verified by three researchers in the course of reviewing the partially ordered data displays. The verification procedure resulted in minor changes to the initial clustering, which were included in the final categorisation of reflection difficulties.

The data collected using the student questionnaire were analysed using descriptive statistics: a mean score and standard deviation were calculated for each questionnaire item.

## **Results**

### *Teachers' perspectives on the difficulties of students' reflection*

The results revealed four categories of difficulties students encounter when carrying out reflection activities. The first category was called general problems. This category included dealing with emotions in reflection, verbalising ideas, and showing poor outcomes of reflection. Three other

categories were related to different processes of reflection: describing, evaluating, and relating. Table 1 gives an overview of the difficulties related to reflection as reported by teachers. We elaborate below on the problems most often mentioned in each category.

The most-often-mentioned general difficulty related to reflection was dealing with emotional and personal matters (1.2 in Table 1). This occurred especially while reflecting on how awareness of oneself is applied or developed based on practice. Issues related to the self can be too personal and difficult to realise, for example, becoming aware of limited bodily abilities, as noted by a technique teacher:

I think it is difficult especially with somatic. Very often at the beginning of studying somatic, you really learn to see what is really not in line, you see that one leg is shorter than the other or that you do not breathe properly, and that is hard. A lot of somatic work tells you that before you feel what to do. To achieve a better alignment mentally and physically, you need to know what doesn't work, and knowing what doesn't work is not easy.

In addition, teachers noted that it is difficult for students to express themselves in words (1.4 in Table 1). This difficulty was also pointed out in the context of applying and developing awareness of oneself in relation to practice.

Table 1

## Difficulties students encounter with reflection as reported by teachers

	Difficulties	N	Total
1. General difficulties	1. Making merely general comments to reflection (e.g., I need to learn a lot).	2	
	2. Dealing with emotional and personal matters (e.g., getting in touch with troublesome emotions, dealing with awareness of limited bodily abilities, refusing to reflect owing to emotional load).	10	
	3. Finding it hard to reflect on one's professional identity as a dance artist.	3	
	4. Finding it difficult to express oneself in words.	7	
	Total		22
2. Describing an experience	1. Discrepancy between doing and awareness (thinking, feeling what one is doing).	7	
	2. Difficulties noticing details of one's own and others' experiences (inc. the problem of not observing sufficiently).	7	
	3. Difficulties remembering previous experiences.	3	
	4. Not working enough with one's own sensations embedded in bodily experiences.	3	
	Total		20
3. Evaluating an experience	1. Waiting for the teacher to provide corrections instead of evaluating own experiences.	6	
	2. Focusing mainly on aspects of what the student did wrong, missing positive aspects.	3	
	3. Difficulties thinking about how one did the movements in relation to what one wanted to do, and how.	2	
	4. Believing without question that anything presented in one's own choreography project should be amazing for viewers.	1	
	5. Lacking the criteria for evaluation	2	
	6. Being shocked to realise that the image of dance in one's mind does not come out in practice, and realising weaknesses.	2	
	7. Remaining on the level of description in writing	1	
	Total		17
4. Relating to multiple perspectives	1. Not questioning the corrections and comments given by the teacher	6	
	2. Focusing on doing the movement in the right way; having difficulties thinking about alternatives.	2	
	3. Being ashamed of sharing own ideas or dance combinations in class, or shy to express them in a group.	5	
	4. Pointing out others' weaknesses while giving feedback to them.	2	
	5. Being focused mainly on oneself; not focusing on and observing peers.	1	
	6. Difficulties positioning oneself in relation to different conceptual notions.	1	
	Total		17

A frequently appearing difficulty related to describing an experience concerned the discrepancy between doing and awareness (2.1 in Table 1). What students think or feel about a movement, and how they do it, differs from the actual physical image of the movement. This issue appeared the most in the context of reflecting on how certain dance concepts and principles are applied to practice. A choreography teacher explained this as follows:

They have the movement vocabulary and they have a mental process of how the movement feels, but that is just the theory. The picture they have in their minds about how it felt, is also how it must look. So they look at it with this picture in front of their eyes, actually.

Another difficulty often experienced in the describing category was that students do not notice details of their experiences (2.2 in Table 1). This difficulty was associated with reflecting on how dance concepts and principles are applied in practice and reflecting over a longer period of time. A technique teacher explained:

I find that especially the people who are looking or standing the closest to the mirror are the ones who are looking, idealising themselves, but not really seeing themselves. Not seeing the details: where is my arm, there are my fingers, where are my eyes?

A difficulty often reported in relation to evaluation was that students mainly wait for the teacher to provide corrections instead of evaluating their experiences themselves (3.1 in Table 1). This problem was associated with reflecting on how students apply dance concepts and principles to their practice and reflection over a longer period of time. For example, a technique teacher described the following:

The more open-minded the student is, the easier it is. And they are very quickly into this opening: was it good? Or, okay, try this again; maybe do this little bit again; let's see how much you can do with your facility, body. What you can do? And you see somebody who can really work with it intelligently and somebody who tries once and then stands still and waits to be corrected.

Another problem related to evaluation was that students mainly focused on aspects which they did wrong, and ignored positive aspects (3.2 in Table 1). A dance pedagogy teacher explained:

At that moment they have a problem; they are not used to that way of looking at themselves, they have always been taught to say what they have done wrong and not what they have done right.

In regard to relating to multiple perspectives, teachers pointed out that students find it difficult to question the corrections and comments given by the teacher (4.1 in Table 1). This problem appeared in the context of all five areas of reflection. A choreography teacher described this as follows:

For example, when I give corrections in dance classes, everything I say is like gospel. I have a lot of power in this; for example, if I correct somebody's hair, which has nothing to do with dance, just with appearances, it has a lot of influence on how they style it next time. They don't criticise my correction, they don't look at it critically, you know; no one, for example, comes back with, I don't want to change my style, that's how I look.

#### *Students' recognition of the difficulties pointed out by teachers*

Table 2 presents the descriptive statistics regarding students' recognition of the difficulties of reflection pointed out by the teachers. The mean score and the standard deviation are presented for each statement.

The difficulty most often recognised by students ( $M = 4.2$ ,  $SD = 0.7$ ) was related to the evaluation process of reflection. Students noted that they focused merely on aspects which were wrong while evaluating their experiences. Another highly scored problem was associated with communication; students reported that they had difficulties expressing themselves in words ( $M = 3.7$ ,  $SD = 1.4$ ). Students also noted that they had problems dealing with awareness of their limited bodily abilities ( $M = 3.5$ ,  $SD = 1.1$ ). A higher mean score was also reported for the following statements: Not being able to notice details of the movement ( $M = 3.2$ ,  $SD = 0.9$ ), which was related to the process of describing; Focusing on doing a movement or piece in the right way, and having difficulties thinking about alternatives ( $M = 3.2$ ,  $SD = 1.1$ ), which was associated with relating to multiple perspectives.

Table 2

Students' recognition of the difficulties pointed out by teachers (N = 17)

	M	SD
<b>General difficulties</b>		
1. I tend to make merely general comments related to reflection (e.g., I learned a lot in this course).	3.1	1.2
2. Reflecting on my professional identity as a dance artist is difficult for me.	3.1	1.3
3. In general, I am afraid of getting in touch with my troublesome emotions.	2.5	1.3
4. Dealing with awareness of the imperfect abilities of my body is difficult for me.	3.5	1.1
5. I tend to refuse to reflect for emotional reasons.	2.3	1.4
6. I find it difficult to express myself in words.	3.7	1.4
<b>Difficulties related to describing an experience</b>		
7. I tend to have an (idealised) image in my head about how I did the movement, which is different from the actual physical image of the movement.	3.1	1.0
8. Noticing the details of my movements is difficult for me.	3.2	0.9
9. Remembering my previous experiences is difficult for me.	2.1	0.9
10. I tend to work insufficiently with my bodily sensations.	3	1.1
<b>Difficulties related to evaluating an experience</b>		
11. I tend to wait for the teacher to provide me with corrections instead of evaluating my experience myself.	1.9	1.1
12. While evaluating the experience, I tend to focus on aspects that I did wrong.	4.2	0.7
13. Thinking about how I did my movements in relation to what I wanted to do, and how, is difficult for me.	3.1	1.2
14. I believe, without question, that everything I do in my own dance should be amazing for viewers.	2.3	1.1
15. I lack the criteria to evaluate my own experiences.	3.1	1.1
16. In writing, I tend to write mere descriptions of events without analysis.	2.5	1.0
<b>Difficulties related to relating to multiple perspectives</b>		
17. To question the corrections and comments given by the teacher is difficult for me.	2.4	0.9
18. I tend to focus on doing a movement or piece in the right way, and I have difficulties thinking of alternatives.	3.2	1.1
19. I tend to be ashamed of my own ideas and thoughts.	2.2	1.2
20. It is difficult for me to point out others' weaknesses while I am giving feedback to them.	2.6	1.2

1: Not at all applicable; 5: Applicable to a great extent.

Interestingly, the lowest mean score was found for having difficulties questioning corrections and comments given by the teacher ( $M = 1.9$ ,  $SD = 1.1$ ). Of problems with relating to multiple perspectives, this difficulty was the problem most often mentioned by teachers. Six out of fourteen teachers reported this problem.

## **Discussion**

Analysis of teachers' perspectives on their students' reflection revealed four categories of reflection difficulties: general difficulties, difficulties describing experiences, difficulties evaluating experiences, and difficulties relating to multiple perspectives. The general problem most often reported was related to dealing with troublesome emotions and experiences. Similar difficulties have been pointed out in previous research. For example, Stein (2000) points out that learners may be unable or unwilling to confront or seek disconfirming information about themselves or implicitly held knowledge. Drake & Dart (1995, p. 128) illustrated that trainees were "avoiding the issue", when mentors attempted to challenge their ideas during feedback sessions in the context of teacher education. Personal problems as a barrier to reflection have also been elaborated by Miller, Tomlinson, & Jones (1994) in the context of nurse education.

Another often-mentioned general difficulty was related to verbalisation of ideas. On the one hand, the difficulty can be related to a lack of vocabulary, which was noted by Chung, Mak, & Paul (1995) as a barrier to reflection in their study in the teacher education context. On the other hand, Eraut (2000) distinguishes between awareness and representation. In his view, the knower may not be aware of what she/he is doing, but once she/he becomes aware she/he can communicate it; however, there is also knowledge which cannot be communicated.

The second category included difficulties related to describing experiences. These difficulties negatively affect one of the main functions of reflection (e.g. Dewey, 1993; Schön, 1983; Procee, 2006) - learning from one's own experiences. The issues most often mentioned in this category were a discrepancy between the students' doing and awareness, and an inability to notice details of the experiences. The discrepancy issue has been pointed out by Argyris & Schön (1974). Based on the research on practitioners in action, they discovered that two types of theories are involved in practitioners' actions. The first type, called *espoused theories*, represents notions

about what we are able to say, think, and believe. These theories exist at a conscious level, and they change relatively easily in response to new information or ideas. However, espoused theories are often inconsistent with behaviour, and new ideas do not lead to new behaviour. The second type, *theories-in-use*, are elusive and difficult to identify, yet these theories have more influence on our behaviour. The challenging task of describing experiences has also been pointed out by Benammar (2004) and Procee, since it requires taking an objective stance towards one's experiences, which is often difficult to achieve.

Third, the problem related to evaluation most often reported in the current study suggests that students wait for the teacher to provide corrections instead of evaluating their experiences by themselves. From the research on reflection in nurse education, Mountford & Rogers (1996) reported similar results. Prospective nurses did not value personal knowledge and their role in the construction of expert knowledge. That students experience this difficulty shows that one of the three basic attitudes required for reflection, *directness* (Dewey, 1933), is not acquired by dance students. Contrary to waiting for another's judgement, according to this attitude, students should trust the validity of their experiences without spending a lot of time worrying about the judgments of others.

Fourth, the difficulties associated with relating to multiple perspectives show that it is difficult for students to question teachers' comments and share their own ideas with classmates. As a result of the latter, compliance behaviour towards group members can occur, which was also pointed out as a barrier to learning from reflection by Platzer, Blake, & Ashford (2000) in the context of nurse education. The effects of particular group members who may be critical or dominant can influence the course of reflection in a group setting, as pointed out by Wade (1994) in the context of teacher education. In addition, Mackintosh (1998) has pointed out that writers may suffer from selective recall of events, and may be reluctant to express thoughts that others may read. Students' responses might include feelings of vulnerability that follow from exposing their perceptions and beliefs to others. This occurs especially if the locus of control is not with the individual. These barriers disturb development of another basic attitude for reflection, *open-mindedness* (Dewey, 1933), which points to the willingness to consider different perspectives and acknowledge the limitations of one's own and others' perspectives.

The problem most often recognised by students was associated with evaluation. Students tend to focus merely on aspects which were wrong in

their experiences, and neglect the positive aspects. A reason for such practice can be embedded in the culture of traditional dance training. As teachers noted, dance students are not encouraged to point out positive features; quite the opposite, the focus of traditional dance training has been on improving the weaknesses. Since both teachers and students recognise this as an obstacle to reflection, further attention is needed for tackling this issue in pedagogical practices of dance education.

The most remarkable outcome of the comparisons of students' and teachers' views on the barriers to reflection was associated with relating to multiple perspectives. While the problem most often reported by teachers in this area was students' unwillingness and inability to question the corrections and comments provided by the teacher, the students themselves reported this barrier as the difficulty that was the least often applicable. Further research should shed light on this discrepancy. It would be appropriate to observe learning situations and teacher-student conversations in professional dance education practice to find out whether students are aware of this feature of their behaviour. If this is practised implicitly, teachers should support their students by raising awareness of this difficulty in order to enable them to overcome this barrier and provide opportunities for learning from multiple perspectives.

We have elaborated on the difficulties dance students encounter with reflection, from the perspectives of teachers and students. It has been mentioned that the difficulties described in this study have been reported in previous researches in the other domains of higher education, mainly in teacher education and nurse education. This shows that the reflection difficulties described in this study are comparable with the difficulties in other educational domains. The results of the study, therefore, can be also relevant to other domains of higher education. We also point out here that further facilitation for supporting students' reflection is needed, not only in tertiary dance education, but also in nurse education (e.g. Mountford & Rogers 1996; Platzer, Blake, & Ashford 2000) and teacher training (e.g. Chung, Mak, & Paul 1995; Wade 1994).

Billing (2007, p. 509) concludes that reflection skills can be taught, "...e.g., through 'learning journals', discussion groups about self-appraisal, modelling and coaching". Simons (1994) proposed 14 principles for *Meta-cognitive Instruction*, including emphasising learning processes (rather than outcomes) and deeper cognitive processing, helping students to recognise and practise their learning strategies, reflectivity, and self-regulation skills, and gradually shifting responsibility for learning and its regulation to the students.

Based on these suggestions and the difficulties reported in this study, we suggest that the processes of reflection in tertiary dance education can be facilitated in the following manner.

First, since students may not have a realistic view of their experiences, video recordings could be used to help them to describe their practice. In the Netherlands, experiments with the use of streaming video are currently being carried out in teacher education and other professional training programmes using a web-based video application called DiViDU to support students' reflection (Kulk, Janssen, Gielis, & Scheringa, 2005). Teachers can support the describing process by asking questions to encourage students to think about their practice. Students should also be asked explicitly to point out positive and satisfactory features of their experiences, rather than focusing exclusively on problematic areas.

Second, in order to support self-assessment, students need to comprehend evaluation standards and the criteria representing these standards. On the one hand, students can be provided with these criteria by their teachers. Liu & Carless (2006) suggest that involvement of students in assessment can help students to develop conceptions of quality approaching those of their teachers. This would help students to process the feedback given by teachers. On the other hand, students can also use their own subjective criteria after they have made these explicit. This would support students in learning about their own conceptions and value judgements. As a last step in this process, students should be encouraged to determine the usefulness and relevance of the criteria to learning from their own perspective, and if necessary reconsider the criteria used.

Third, more aid could be gained from implementing peer-feedback activities for the reflection process. Owing to the perceived expertise of teachers and power relations, it can be difficult for students to consider their teachers' comments critically. Students may be more open to questioning the comments given by their fellow students. It may be also easier emotionally to accept feedback from peers instead of that provided by the teacher.

Finally, safety and trust need to be established in a classroom in order to support the activities of reflection, especially for dealing with delicate matters related to individuality and other areas of the self. This is particularly important since, besides enabling awareness of the self, which can be challenging to recognise, reflection activities in an educational setting often imply that the private areas of learning become public.

In brief, we have reported on several difficulties students encounter with reflection activities, and discussed how these difficulties can be facilitated in an educational setting.

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## Chapter 6

### **Facilitating the processes of students' reflection using ICT: A case of dance education\***

#### **Abstract**

This paper presents an evaluation case study describing the experiences of 15 students and 2 teachers using a video-based learning environment, DiViDU, to facilitate students' daily reflection activities in a composition course and a ballet course. In response to the difficulties students usually encounter in carrying out the reflection processes, the following ICT facilitation was used: video editing and viewing to facilitate students in describing their practice; writing online self-assessments to support students in evaluating their practice; online peer feedback activities to facilitate students in learning from multiple perspectives. In the composition course, eight students reflected on their choreographic work, which was performed by their peers. In the ballet course, seven students reflected on their practice of the ballet technique. Data about the influences of ICT facilitation on students' reflection processes were collected after completion of the reflection assignments using semi-structured interviews. The results revealed that students in both courses considered the ICT facilitation effective for carrying out self-evaluations. The usefulness of ICT facilitation for other reflection processes differed among the courses, in the students' view. The teachers considered the ICT facilitation generally useful for all reflection processes of their students; however, they also indicated some shortcomings.

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## Introduction

In the past two decades there has been a growing emphasis on facilitating teaching and learning by integrating ICT into pedagogical practices. The general benefits of implementing ICT in education include offering students and teachers more flexibility in terms of time, place, pace, content, instructional approach and resources, and course delivery and logistics (Collis, Vingerhoets, & Moonen 1997; De Boer, 2004; Simons, 2006). In addition, according to Simons, ICT may give students a more active role in learning through problem solving, decision making, inquiry and research, design activities, and learning as meaning construction. Moreover, it can make thinking, learning, and collaboration processes more visible through the on-line analysis of activities and patterns of interaction. Besides its usefulness for monitoring purposes, ICT facilitates teaching and learning how to learn. In line with the above, we aimed in this study to find out how students' reflection can be supported using ICT.

Developing students' reflection on their learning and behaviour is currently one of the major learning goals in higher education. Reflection can generally be defined as a cognitive process carried out in order to learn from experiences (Moon, 2004) through individual inquiry and collaboration with others (Dewey, 1933). It has been pointed out that reflection leads to deeper learning (Moon), to achievement of more complex and integrated knowledge structures, and to more accessible and usable knowledge (Billing, 2007). Despite its relevance and inclusion in educational practices, reflection is a challenging activity for students in different fields. Further facilitation for supporting students' reflection is needed, for example, in nurse education (e.g., Mountford & Rogers 1996; Platzer, Blake, & Ashford 2000) and teacher training (e.g., Abou Baker El-Dib, 2007; Lee, 2005; Wade 1994). The domain of this study was practical dance education. It is argued that supporting students' reflection is very important in this field of education also (Lavender, 1996; Leijen, Admiraal, Wildschut, & Simons, 2008a; Warburton, 2004). Reflection is necessary for raising students' awareness of their body and movement experiences in order to develop high-quality dance skills. Moreover, reflection is essential for students to learn how the audience may perceive their performance. The latter is not necessarily in line with how prospective dancers and choreographers themselves experience the movements. In addition to its importance in developing performance

qualities, reflection is crucial to dance students for building up a professional identity. However, encouraging students to carry out the highly cognitive activity of reflection in an educational context which focuses largely on physical activities is challenging, and as reported in previous studies (Leijen et al., 2008a; Leijen, Lam, Wildschut, & Simons, 2008b), needs substantial facilitation. In the current study we focused on how ICT facilitation can be used to support students in carrying out these reflection processes. In order to be able to do that we needed to know what kinds of difficulties students encounter when reflecting. This is the topic of the next section.

#### *Difficulties in reflection processes*

The four general processes of reflection in an educational setting, according to Procee (2006), are describing an experience, evaluating an experience, learning from multiple perspectives, and reflecting on the reflection process. The findings of our previous study (Leijen et al., 2008a) suggested that in dance education the first three processes are often carried out daily, and the last process is mostly associated with reflecting over a longer period of time. In the context of this study, our focus was on the reflection processes that take place in an educational setting on a daily basis. We addressed the first three reflection processes; below, we discuss some of the difficulties students encounter while carrying these out.

Concerning the first reflection process, describing an experience, Eraut (2000) distinguishes between awareness and representation. In his view, the knower may not be aware of what (s)he is doing, but once (s)he becomes aware (s)he can communicate it; however, there is also knowledge that cannot be communicated. Moreover, there is often a discrepancy between the students' doing and awareness, as pointed out by Argyris & Schön (1974). Based on the findings of research on practitioners in action, they discovered that two types of theories are involved in practitioners' actions. The first type, called *espoused theories*, represents notions about what we are able to say, think, and believe. These theories exist at a conscious level, and they change relatively easily in response to new information or ideas. However, espoused theories are often inconsistent with behaviour, and new ideas do not lead to new behaviour. The second type, *theories-in-use*, are elusive and difficult to identify, yet these theories have more influence on our behaviour.

Regarding the second reflection process, evaluating an experience, students should trust the validity of their experiences without spending a lot of time worrying about the judgments of others (Dewey, 1933). From the

research on reflection in nurse education, Mountford & Rogers (1996) reported that prospective nurses did not value personal knowledge and their role in the construction of expert knowledge. Similarly, the results of our study in dance education suggest that students tend to wait for the teacher to provide corrections instead of evaluating their experiences themselves (Leijen et al., 2008b). In addition, we found that students might lack the criteria for evaluation.

The third reflection process, learning from multiple perspectives, can also be challenging, as it is difficult for students to question teachers' comments and share their own ideas with classmates. As a result, compliance behaviour towards the teacher and group members can occur. This is a barrier to learning from reflection, as pointed out by Platzer, Blake, & Ashford (2000) in the context of nurse education. The effects of particular group members who are critical or dominant can influence the course of reflection in a group setting, as indicated by Wade (1994) in the context of teacher education. In addition, Mackintosh (1998) stated that writers may suffer from selective recall of events, and may be reluctant to express thoughts for others to read. Students' responses might include feelings of vulnerability that follow from exposing their perceptions and beliefs to others. This occurs especially if the locus of control is not with the individual.

#### *Facilitating reflection processes using ICT*

In this section, we describe how the difficulties encountered in the three reflection processes can be facilitated using ICT.

The most common way of supporting students in describing their experiences in educational settings is through written or verbal description (e.g., a reflective journal). However, as students may not have a realistic view of their experiences while describing these, ICT facilitation can be incorporated in the writing of subjective descriptions to support students in describing their practices. The learning technologies to support this reflection process include intelligent tutorial systems (Seale & Cann, 2000). These systems can keep a record of students' experiences with a task (Laurillard, 1993), and provide process prompts that promote students' attention to specific aspects of processes while learning (Lin & Lehman, 1999). Schauble, Raghavan, & Glaser (1993) developed the discovery and reflection notation (DARN) that, amongst other functions, displays each student's experimental pattern in his or her scientific inquiry processes. Saito & Miwa (2007) developed a search-process feedback system for information seeking on the

Web that visualises the learners' search processes based on the cognitive schema, and poses questions to help students reflect on their search processes presented by the system. These technologies are not optimal for dance education because dance students need to reflect on their dance practice. We believe dance students are most likely to benefit from video recordings; these can help them to develop a more realistic description of their practice. Several researchers in the field of teacher education (Rosaen, Degan, VanStratt, & Ziethow, 2004; Louden, Wallace, & Groves, 2001; Sherin & Han, 2004) have reported that observing videos of one's own teaching is beneficial for teachers' learning. For example, Van den Berg (2001) carried out a study in which students described the video fragment while discussing the content of the video in dyads. The rationale for using verbal description in Van den Berg's study was based on the following: students build a mental picture based on the video; the image is reflected on and schematised, which means that the relations within the image are linked to each other through language; finally, the schemas are reflected on, resulting in more abstract reasoning through theory formulation. We argue that instead of having students articulate the description in written or verbal communication, it may also be possible to incorporate video editing and viewing without externalised articulation as a means for developing the description of the practice. Video editing requires students to make a selection of images they wish to reflect on; during further viewing of the video recording, students can develop schemas of the images through internalised reasoning. Experiments with streaming video to support students' reflection have been carried out in teacher education and other professional training programmes using a video-based learning environment called DiViDU (Kulk, Janssen, Gielis, & Scheringa, 2005). In DiViDU teachers can support students in describing their experiences by asking questions to encourage them to choose a focus and think about their practice while observing the video recording, which students have recorded, edited, and uploaded prior to discussion in the learning environment.

In order to carry out self-assessment, students need to comprehend evaluation standards and the criteria representing these standards. On the one hand, teachers can provide students with these criteria. Liu & Carless (2006) suggest that involvement of students in assessment can help students to develop conceptions of quality approaching those of their teachers. This would help students to process the feedback given by teachers. On the other hand, students can also use their own subjective criteria after they have made

these explicit. This would support students in learning about their own conceptions and value judgements. In the DiViDU environment mentioned above (Kulk et al., 2005), teachers can present the students with reflection questions and criteria. Similarly, system prompts can be used to help students to evaluate their experiences. See, for example, the Thinker Tools that present students with prompts to help them to evaluate their work in physics experiments (White & Frederiksen, 1998). Other means to support this process include presenting models of experts' thinking processes in the tutorial system. Students can compare and contrast the expert's process with their own process in action (Lin & Lehman, 1999). We were of the view, however, that the latter might not be suitable in the context of this study, since dance students might rely too much on experts' comments and distrust their own perspectives on experiences.

In supporting learning from multiple perspectives, more benefit can be gained from implementing peer feedback activities for the reflection process. While it can be difficult for students to consider teachers' comments critically, they may be more open to questioning the comments given by their fellow students. The organisation and management of peer feedback activities can be supported effectively using web-based ICT tools (Van der Pol, 2007; Trahasch, 2004; Bhalerao & Ward, 2001). Peer feedback utilities are usually incorporated in virtual learning environments (e.g., Blackboard and WebCT). Similarly, the DiViDU environment (Kulk et al., 2005), which was designed to support students' reflection on their learning, includes such a tool.

In regard to the difficulties associated with sharing one's ideas in a group, certain conditions need to be met to enable students to relate to the multiple perspectives. In general, a safe environment and trust need to be established in the group to support proactive interaction. Lockhorst (2004) suggests that *social coherence* is crucial for providing and receiving feedback in online environments. She found that the precondition for social coherence in online environments is students' perceived personalisation, "e.g. knowing each other, valuing each others' contributions and mutual trust" (Lockhorst, p. 208). To support peer feedback activities, therefore, students can work in groups where members know each other well and feel comfortable with each other.

In this study, we used the DiViDU environment to support the reflection processes of dance students in practical dance classes (a choreography course and a ballet course). In particular, video editing and viewing, supported by the teachers' questions for choosing the focus in the

experience, were used to support students in describing their practice. Writing and submitting self-assessments in the DiViDU environment, based on the teachers' questions and evaluation criteria, were used to support students' evaluation processes. Online peer feedback activities were used to facilitate learning from multiple perspectives. Students worked in small groups and could choose their group members. The proposition of the study was that using the above-mentioned ICT facilitation would support students in reflecting on their dance experiences.

The research question of the current study was the following: In what ways does the ICT facilitation support students in carrying out the describing, evaluating, and relating processes of reflection?

## **Method**

### *Design*

Evaluation case study designs are often used to assess and explain the results of specific interventions which have been implemented in a real-life context (Yin, 1993). As we aimed to investigate the influence of the ICT facilitation, we adopted an *exploratory case study* methodology (Yin). We examined the influence of the ICT facilitation on the students' reflection processes in two practical dance courses in a dance academy in the Netherlands. The dance academy offers four-year bachelor's programmes in three specialisations: dancer, choreographer, and dance in education, and a master's programme in choreography. The current study was carried out in the context of the dancer / choreographer bachelor's programme. Students following the dancer / choreographer programme can specialise in professional dancing or choreography during the two last years of the study programme.

There were three criteria for choosing the two courses for the study. First, because prior research (Leijen et al., 2008a) has indicated that the pedagogical context differs in choreography and dance technique classes, we decided to choose one choreography course and one dance technique course. Second, to provide meaningful reflection experiences for students before they chose a specialisation, the courses had to be taught to second-year students during the last semester of their study year. Third, since participating in the study required teachers to adopt the ICT facilitation in their courses, we aimed to employ teachers on a voluntary basis.

The composition course was a short course. The face-to-face classes took place four times per week over a period of two weeks. Students created short compositions during the course. Special attention was paid to exploring and applying personal intentions in the composition, and developing awareness about the use of space and how spatial decisions support students' choreographic intentions. The ballet course was taught throughout the year. The aim of the course was to develop students' dance skills in ballet technique. Special attention was paid to executing the technique based on each student's bodily abilities. During the study students practised two different movement combinations.

In addition to regular curricular activities, students were asked to carry out reflection assignments in either the composition or the ballet course. The focus of reflection was different in the two courses. In the composition course students reflected on their choreographic work, which was performed by their peers. In the ballet course students reflected on their own practice of the ballet technique. Students could choose whether to conduct the reflection assignments in the composition or ballet course. The students who did not express a preference were appointed to a course by their mentor. The reflection assignments were carried out during the three guided sessions (see reflection assignments) after regular school hours. No incentives were offered to students for participation.

#### Participants

##### Teachers.

The composition course teacher was a choreographer, dancer, and guest teacher at different dance academies and companies. He had been teaching university students and professional dancers for six years. The ballet course teacher was a full-time dance technique teacher and mentor of the second-year students at the dance academy. He had seven years of teaching experience in higher education.

##### Students.

All second-year students (18 in total) were invited to participate in the study. The difficulties this group of students encountered with the processes of reflection have been reported elsewhere (Leijen et al., 2008b). In the current study, data were collected from 15 students. Eight students participated in the composition course and seven in the ballet course. Three second-year students did not participate in the study: one student was following an individualised

programme, one student was injured during the study, and one student quit the programme during the study. The average age of the 15 students was 21 (min 19, max 25). They had on average, including pre-education, been studying dance for 9 years (min 4, max 19).

#### Materials

##### DiViDU.

DiViDU was used to conduct the reflection assignments (see Figure 1). DiViDU is a video-based learning environment developed for learning tasks based on authentic practical situations; it covers three learning processes: learning to analyse authentic situations, learning to reflect on these situations, and learning to demonstrate acquired competences. Based on these didactical models, the environment comprises three modules (analysis, reflection, and assessment). The reflection module was used for this study. In this module teachers can re-use and create learning tasks for students using templates. The learning tasks are carried out using a video recording of students' practice. Students make digital video recordings of their practice using a video camera, select video fragments during video editing, and upload these on a streaming media server. The programme Windows Movie Maker was used for video editing. Using DiViDU, students can review these video recordings, analyse their own practice, connect theoretical concepts with their own performance, consider alternative behaviours, and get feedback from peers and the teacher. All these learning activities are integrated in one environment. (For further information about DiViDU, see <http://info.dividu.nl/>).



Figure 1. Print screen of a reflection assignment in a ballet class in DiViDU environment.

#### *Reflection assignments.*

To support the processes of students' reflection, assignments were designed in collaboration with the teachers and a researcher. These assignments were designed based on the principles and conditions related to facilitating the processes of reflection using ICT described in the introduction section. One round of assignments was completed in the composition course; two rounds in the ballet course. Students recorded their dance practices on video, edited these, and uploaded short videos to the streaming video server. Video viewing and editing were aimed at facilitating students in describing their experiences. Video viewing and editing functioned as means and product of the first reflection process – describing an experience.

For evaluating the experiences, students were asked to answer questions posted by the teacher. In the composition class students evaluated their experiences based on subjective criteria, for example: Please evaluate your own spatial decision making in relation to the outcome of your choreographic intentions. What worked, what did not work? Why? More importantly, as you look at the video, what new questions and impulses arise for you? In the ballet class, the teacher provided the criteria for evaluation, for example: Please evaluate and

elaborate on the quality of taking off and landing. What worked, what did not work? Why? Please make sure that you also point out aspects which you did very well. Write down your own evaluation using the following criteria, which you are familiar with from previous classes: 1. Correct placement of heels and use of feet articulation. 2. Correct body direction in coordination with body balance. 3. Correct timing and direction of focus.

In order to learn from the multiple perspectives, students were asked to pose two questions for feedback in both courses. Each student received feedback from at least two peers.

#### *Data collection and analysis*

After completion of the reflection assignments, semi-structured group interviews (four in total) with the students and semi-structured interviews with the teachers (two in total) were held. During the interviews we focused on the influences of the ICT facilitation: video editing and viewing to support the describing of experiences, use of questions and criteria for online self-evaluation, and online peer feedback activities for learning from multiple perspectives. The interviews lasted on average 60 minutes; all interviews were recorded on tape and transcribed verbatim.

The aim of the data analysis was to divide the collected information into meaningful units, and to synthesise these units into meaningful themes (Bogdan & Bilken, 1992), as presented in the results section. The following steps were carried out during the data analysis. First, following the themes of the interview, students' and teachers' answers regarding the influence of the ICT facilitation were extracted (292 fragments in total). Separate documents were created about describing, evaluating, and relating processes. Second, within each document, fragments were summarised by one researcher based on the content of the answer. Following this, an independent researcher reviewed the summarised fragments to determine whether the fragments were summarised accurately: 84 % of the fragments were considered by the independent researcher to be accurately summarised, 16 % were further discussed by the two researchers, and 10 % were considered to be insufficiently summarised; in most of these cases the summaries were incomplete. These summaries were further discussed and revised by the two researchers. This procedure can be understood as investigator triangulation (Denzin, 1970), carried out for quality assurance of the analysis procedure. Third, summaries with similar content were organised and grouped by one researcher under more general categories for each reflection process.

## Results

### *Describing an experience*

Table 1 gives an overview of the influences of the ICT facilitation on students' describing processes in the composition class. In general, half of the students reported that the facilitation resulted in positive influences, and the other half indicated either a negative influence or no influence.

*Video editing.* The students who mentioned that this activity helped them to describe the composition pointed out that editing helped them choose a starting point and was useful for describing and evaluating specific moments.

Table 1

### *Describing experiences in composition class*

Positive influence				Negative influence	No influence
Benefits of video editing	Benefits of video viewing			Dis-advantage of video	Video viewing not useful
Selection of fragments	Realistic and objective view on composition	Audience position	Composition as a whole	Small details, mimics get lost	Owing to having seen it in class
S	3	3	1	2	1
T	1				

S – Students; T – Teacher

*Video viewing.* Some students stated that since they had seen the combination already in class, viewing the recording of the composition was not useful. Other students indicated that the video projected a realistic view of the composition. One student explained this as follows:

In your mind somehow you can always make it richer than it actually was. So seeing it on video is more confronting, more real; you see it as it really was.

The teacher of the course indicated that viewing the composition on video helped students to describe it. He explained,

They see a live performance, but seeing it on a real screen distances them from it; they see just what is happening. They don't, of course, see every element of the way they did it in real life, and the flatness has an effect, but I think it helps them to start to conceive of a performance as an independent object outside the self.

Table 2 gives an overview of the influences of the ICT facilitation on students' describing processes in the ballet class. In general, all participants mentioned positive influences of the facilitation on the describing process.

Table 2

Describing experiences in ballet class

Positive influence					
Benefits of video editing		Video viewing in general		Benefits of video viewing	
Selection, choosing fragments	Slow motion	Satisfying	Frustrating	Realistic image	
Students	2	2	5	2	7
Teacher					1

*Video editing.* The students who pointed out its advantages indicated that it was useful either for selecting specific fragments for further reflection or for observing details using the slow motion function.

*Video viewing.* Regarding the benefit of developing a realistic image of their combination, some students explained that while dancing the combination, they had a good feeling about their execution of steps and performance, while after seeing the combination on video they realised there were things they were not aware of and/or could do better. One student noted the following:

What you feel in your body is not always what you see; things can feel very good at the time, but not look good on the video recording. That is how you can learn from seeing yourself perform, looking back and reflecting on it, and I think it is also really surprising to see.

The teacher of the course argued that seeing oneself on video has an advantage over viewing oneself in the mirror in the class:

When you are dancing in the studio, you have the mirror, of course, and that is a very immediate reflection in real time, but there is not enough time for the mind to translate what you see...I think in this 15 minutes when they sit to look at the video that the mind has more capacity to absorb information.

In brief, the teachers of both courses considered video facilitation useful for the students in describing their experiences. Students, however, reported the usefulness of video recordings of their own dancing (ballet) more often than they referred to the usefulness of video recordings of their own choreographic work for the describing process.

#### *Evaluating an experience*

Table 3 gives an overview of the influences of the ICT facilitation on students' evaluation processes in the composition class. In brief, the majority of the students pointed out positive influences of the facilitation on their evaluation processes.

*Evaluation questions and criteria.* The most prevalent positive influence was that answering the questions posed by the teacher helped students to think and become more precise in describing their compositions. A student reported the following:

Becoming precise, because before it was more like a feeling and I didn't have clear arguments for why I did what I did. It helped me to write things down to get them clear in my mind, and to have not only a feeling but something concrete that I could start working on.

Table 3  
*Evaluating experiences in composition class*

		Positive influence			Negative influence	Other		
		Benefits of questions and video			Character of evaluation	Not useful		
		Thinking, being precise	Confronted	New insights	Realistic picture of themselves	Criteria helped to focus	Focus on functionality, conceptualisation neglected	Assignment not meaningful
Students	6	1	1	1	3			1
Teacher	1			1			1	

Overall, the teacher was satisfied with the students' self-evaluations. He explained,

DiViDU was a second forum where they could continue their thinking, and they were good. It was nice to see that the growth they made in class continued in the electronic medium...everyone was quite clear, and I did not have a feeling that it was just writing for the sake of writing; they really thought about it, and this was the result of their thinking.

The teacher also indicated, however, that self-evaluation did not include conceptualisation of ideas. He explained this as follows:

I felt that the most of the self-evaluation in DiViDU was at the level of functionality; like did it work, did it not work, and did it cohere with my intentions at the beginning?

Table 4 gives an overview of the influences of the ICT facilitation on students' evaluation processes in the ballet class. In brief, all students noted only positive influences of self-evaluation. The benefit most often reported was that self-evaluation was more meaningful than merely receiving corrections from the teacher.

*Self-evaluation.* On the one hand, students reported that comments their teacher made in class became more meaningful in the course of self-evaluation. On the other hand, self-evaluation allowed them to become more active in the learning process without having to rely only on the teacher's comments. Based on what the students wrote in their evaluations, the teacher also noted that the assignment supported students in recognising and understanding the corrections he gave in class. He added,

I wish that I had it as a student...we only trusted the teacher, and if you didn't like the teacher then you had the feeling you were wasting your time. Now, even if you don't like the teacher and you don't like the class, you may see something like this and say, Ah, I have heard this so many times before, and you can start to respect what you have been told.

*Evaluation questions and criteria.* The students who reported on the positive influences of evaluation questions and criteria noted that these served as guidelines and prevented them from getting lost in the whole experience.

Table 4

## Evaluating experiences in ballet class

Positive influence			Negative influence		
General benefits of self-evaluation			The role of questions and criteria provided by the teacher		Character of evaluation
Teacher's corrections become meaningful	Do not have to rely only on teacher's comments	Meaningful evaluations	Teachers' questions and criteria guidelines, focus on details	Own interests and subjective criteria more relevant	Focus on details , failed to view the combination as a whole
S 3	4	7	5	2	
T 1			1		1

S – Students; T – Teacher

One student stated the following:

He covered all aspects that you had to look at, so you got a good overall view of what you were doing.

Another student noted,

I found them very, very helpful, because they really made me think specifically, okay, now I have to see is my foot good or not, is my landing correct or not...going into the details is where this thing makes the difference.

The teacher noted that the questions supported students in being more specific in self-evaluations. He also indicated, however, that the students elaborated mainly on the details of the combination and did not look at the combination as a whole, which is also necessary. He explained,

They could analyse the step itself technically; they analysed where the hand should be, where the feet should be, where the focus should be, but it was not complete, because they were not looking at the whole phrase, the dynamics of the combination.

In brief, the composition class students considered self-assessment to be effective because it facilitated their thinking and becoming more precise regarding their own compositions. The self-assessment in ballet class empowered students to take an active role in learning, and resulted in more meaningful evaluations. Although the teachers were generally satisfied with the facilitation for self-evaluation, they pointed out that conceptualisation of ideas (composition) and evaluation of the whole phrase and its dynamics (ballet) were neglected in self-evaluations.

#### *Relating to multiple perspectives*

Table 5 gives an overview of the influences of the ICT facilitation on relating to multiple perspectives processes in the composition class. The majority of the students reported only positive influences. In comparison with the other facilitations, online feedback on compositions was considered the most influential facilitation for reflection by the composition class students. Feedback helped students to realise to what extent their choreographic intentions were manifested in the compositions, and provided alternative perspectives for their compositions. A student indicated the following:

It was really interesting to see the feedback, because sometimes your mind is really so closed: you have your idea and you go this way, and you can't see the other ways. The feedback was broadening, it helped me to see things differently.

Both the teacher and students indicated that students felt safe sharing their ideas. The teacher explained this as follows:

In this setting they do begin to articulate themselves, and because everyone articulated themselves, you know, regardless of language difficulties and whatever, I felt that it was a good egalitarian structure; it doesn't become some sort of social game, it is really just about the material.

Although the teacher agreed that alternatives were provided in the feedback, he also noted the following:

It was focused on practicality, like what you need to do to fix things as opposed to what I imagine you are thinking about when I see this; it didn't get to the conceptual space behind the action, it dealt primarily with the physical world.

Table 5  
*Relating to multiple perspectives in composition class*

		Positive influence			Negative influence	Other
		Outcome of online feedback	Character of online feedback	Character of online feedback	Character of online feedback	Not useful
Realising how choreographic intentions came out in practice	Alternative perspectives on compositions	Safe to share ideas	Open and honest	Lengthy, elaborated answers (not functional in limited classroom time)	Focus on functionality, conceptualisation neglected	Assignment not meaningful
Students	5	6	7	3		1
Teacher		1	1	1	1	

Table 6 gives an overview of the influences of the ICT facilitation on relating to multiple perspectives processes in the ballet class. Students noted both positive and negative elements of online feedback. Online feedback was considered less effective than the other forms of facilitation by the ballet course students. Although the environment was considered safe for expressing one's own ideas, it was generally agreed that peer feedback did not provide alternative views for considering the combination; nevertheless, some useful suggestions for improvement were provided by peers. Interestingly, the written feedback in DiViDU was considered more rational than feedback in a face-to-face situation, and highly related to the material. A student explained this as follows:

The fact that it was written, and that I had the video recording and could look at it as often as I wanted, helped me to be rational somehow, because it was a situation where I could really reflect and specify what I thought, and then write it down.

The teacher of the course was satisfied with the feedback students gave each other. He explained the following:

I think they were honest with each other; they were not afraid to confront each other on the computer, and I think it was a good medium... They would not say all of these things face to face as they put them down here, and that has to do with the writing also. So they dared to be honest with each other, and that was wonderful.

He also acknowledged that students showed that they had enough competences in the subject to give feedback to each other.

In brief, all participants noted that DiViDU was a safe environment for students to share their ideas. In the students' view, online feedback was the most effective facilitation in the composition class, and the least effective in the ballet class. Although both teachers were generally satisfied with the feedback students provided each other, the composition course teacher criticised the tendency to focus merely on practical aspects and the functionality of the work.

Table 6  
 Relating to multiple perspectives in ballet class

		Positive influence				Negative influence		
Outcome of online feedback		Character of online feedback		Character of online feedback		Character of online feedback	Disadvantage of online feedback	
Valuable suggestions	Meaningful feedback from unexpected persons	Safe to share ideas, and to be honest with each other	Trying to be constructive	More rational than face-to-face	Similar to self-evaluation	Teacher's voice in feedback	Would prefer to illustrate and explain feedback face-to-face	
Students	5	7	4	4	2	4	3	
Teacher	1	1	1					

### **Conclusion and discussion**

The study was begun with the premise that ICT facilitation can support dance students in carrying out three processes of reflection: describing an experience, evaluating an experience, and relating to multiple perspectives. For this purpose a video-based learning environment, DiViDU, was implemented in a composition and a ballet course. Evaluation case study (Yin, 1993) was conducted to answer the research question: In what ways does the ICT facilitation support students in carry out the describing, evaluating, and relating processes of reflection?

Regarding the first reflection process, the video facilitation was more often considered useful in the ballet course than in the composition course. In the composition course students had already seen their compositions in class prior to viewing their work on video. Moreover, the students viewed their work twice from the same perspective, since the reflection activities in this class focused mostly on developing awareness of how their personal intentions were embedded in their choreographic work. It is likely that the students who did not find the video facilitation useful had already created the mental images and schemas regarding the applications of their intentions after viewing the composition for the first time. The video facilitation would probably have been more effective for describing the composition from an unfamiliar focus point. The results regarding video facilitation in the ballet class correspond to the findings from teacher education (Rosaen, et al., 2004; Loudon, et al., 2001; Sherin & Han, 2004), which showed that observing video recordings of teachers' own practice supports rising awareness of the practice. It was found that the majority of the students who found viewing the video recordings useful also reported that it supported them in developing a more realistic view of their dance experience. This indicates that the discrepancy between doing and awareness pointed out by Argyris & Schön (1974) can be overcome by using video recordings of the students' own practice.

The facilitation for the second reflection process, evaluating video footage of dance practice following presentation of the questions and criteria, was considered useful in both courses. The facilitation supported composition class students' thinking processes and formulation of precise answers. In the ballet class, similarly, the facilitation resulted in detailed and elaborated self-evaluations. In addition, in comparison to usual classroom practice, facilitation supported ballet course students in taking a more active role in

evaluation. This suggests that ICT facilitation can prevent students from relying merely on experts' decisions on their performance, which has been reported as a barrier to reflection by Mountford & Rogers (1996) and Leijen, et al. (2008b).

Regarding learning from multiple perspectives, on the one hand, all students noted that DiViDU provided a safe environment for sharing ideas with peers. This suggests that the students' perceived personalisation (Lockhorst, 2004) can protect against compliance behaviour towards group members, which has been reported as a difficulty in reflection by Platzer, et al., 2000; Mackintosh, 1998; and Wade, 1994. Moreover, the fact that students could base their feedback on the video material and submit their feedback in DiViDU might have caused the feedback to be highly related to the material and emotionally less loaded. On the other hand, this reflection assignment itself was considered more useful by the composition course students than by the ballet students. This difference is related to the subject matter and group homogeneity. First, the ballet technique itself is a fully predefined subject matter. Second, owing to their similar levels of content knowledge and skills, students have limited possibilities to provide alternatives while commenting on peers' performances. This shows that although group homogeneity can be useful for establishing a safe and comfortable learning context, it can also limit the possibilities of learning from multiple perspectives. In contrast, the composition course focused on discoveries, and owing to the open subject matter and heterogeneity of the perspectives presented, the peer feedback functioned more effectively.

In brief, we have illustrated using two case studies that a video-based learning environment can support dance students in describing and evaluating their practical experiences and relating to multiple perspectives in a detailed and functional manner provided the experiences captured on video are meaningful to revisit in the students' view, sufficient scaffolding in the form of questions and criteria is provided by the teacher, and peers with diverse experiences and/or perspectives are encouraged to share their ideas in a group.

Finally, although we did not focus in the current study on the outcomes of the reflection assignments, some interesting findings regarding the reflection outcomes were reported by both teachers. These findings suggest that direct video observation guided by teachers' questions might not be sufficient for students' reflection on the conceptual questions and on a more general level of practical experience. Van den Berg (2001) noted similar

results from research carried out in the teacher education context. She found that while reflecting on the exemplary teaching video footage, the student teachers presented well-defined images of the teaching shown in the video recording, but remained at low levels of abstraction of their ideas about teaching. This shows that both students and teachers have to learn how to use the facilitating tools more effectively for the purposes they find relevant. We cannot expect teachers and students to use new tools directly in the most optimal ways. Further research, therefore, should be focused on investigating more effective facilitation for supporting conceptualisation of ideas used in practical experience and for helping students to develop a more general view of experiences as opposed to focusing merely on specific details.

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## Chapter 7

### Conclusions and discussion

The research reported in this dissertation was started with the premise that web-based ICT applications could be useful for supporting teaching and learning in practical dance education. The central research question of this thesis was, *How can web-based ICT applications be used to facilitate teaching and learning in practical dance courses in higher education?* To address this research question, five studies were carried out. Below, we first present the main conclusions of the studies. Second, we reflect on the empirical findings of the studies. Third, we elaborate on the research methodology adopted in the five studies. Fourth, we provide suggestions for future research and, finally, we present the practical implications of the findings.

### Main conclusions

In this section we elaborate on the main conclusions regarding each research question introduced in the introduction chapter.

The first research question (RQ 1) was, *How suitable is a virtual learning environment for carrying out learning assignments in dance education?* The findings of the first study showed that for carrying out and delivering individual written assignments, the tools available in the virtual learning environment proved to be sufficient for the students. In terms of carrying out collaborative writing assignments, students noted that the tools available were relatively acceptable; however, they suggested using video and voice communication in addition to text messages. In terms of the practical tasks, we concluded that the tools available were suitable for communicating the task to the students. However, the virtual learning environment did not provide students with the possibility to share the process and deliver their end products, such as solo performances and artefacts of their work, unless the end product was a written document. We concluded, therefore, that the virtual learning environment, similarly to other text-based learning environments, proved insufficient for carrying out and sharing practical assignments.

The second research question (RQ 2) was, *How do pedagogical aspects of the e-courses influence students' satisfaction with their learning*

processes and outcomes in e-courses? The findings of the first study showed that, in the dance students' view, the most crucial factor in carrying out learning assignments was the teacher's guidance and feedback on students' work. The findings show that with thorough guidance and instruction from the teacher it is possible to support students' reflection and critical thinking skills, and to cultivate personal bodily awareness in the context of web-based distance education. In addition, the most preferred collaborative learning assignments were those where students could share their experiences in more open discussions. Similarly, the condition for successful open discussion was that assignments and instructions for collaboration were clearly presented and the teacher provided sufficient guidance and feedback to the students.

The third research question (RQ 3) was, Which specific pedagogical aims should a web-based ICT application facilitate in practical dance classes? The findings of the second study show that, despite its relevance and inclusion in pedagogical practices, further facilitation is needed to support students' reflection in both dance technique and choreography classes.

The findings of the third study provided further evidence relating to the pedagogical practices of reflection in practical dance classes. Our findings show that students are encouraged to carry out five types of reflection. Four of the reflection types are related to the Kantian notion of reflection, where students are encouraged to reflect on the following: (1) how they apply concepts and principles related to dance disciplines in their dance practice, (2) how they apply concepts and principles derived from awareness of oneself and one's bodily possibilities in their dance practice, (3) what new concepts and principles related to dance discipline they have developed based on their dance practice, (4) what new concepts and principles related to themselves they have developed based on their dance practice. All these types are carried out to connect different concepts and principles with students' kinaesthetic experiences in order to be able to act with self-confidence in professional practice. The fifth type of reflection is related to the pragmatists' notion of reflection: (5) students are encouraged to elaborate on their development over a period of time, point out what needs further attention during a following period, and plan activities for enhancement. Besides the focus on improving practice, the fifth reflection type is also aimed at developing awareness about one's professional identity.

The empirical findings of the fourth study indicate that, from the teachers' perspective, dance students encounter several difficulties with reflection; we organised these under the following categories: general

difficulties, difficulties describing experiences, difficulties evaluating experiences, and difficulties relating to multiple perspectives. The general difficulties category included dealing with emotions in reflection, verbalising ideas, and showing poor outcomes of reflection. The other three categories were related to specific processes of reflection described by Procee (2006). With some distinctive differences, these difficulties appeared among the five types of reflection described in the previous section. Students recognised some specific reflection difficulties in each category, and the barrier most often recognised by students was related to evaluating experiences.

Based on the findings from the three successive studies, we concluded that a web-based ICT application should address facilitation of students' reflection processes in practical dance classes.

The fourth research question (RQ 4) was, How can a web-based ICT application facilitate supporting the processes of students' reflection in practical dance classes? The findings from the fifth study show that a video-based learning environment can support dance students in describing and evaluating their practical experiences and relating to multiple perspectives in a detailed and functional manner given the following conditions. First, the experiences captured on video must be meaningful for revisits in students' view. Second, sufficient scaffolding by means of questions and criteria must be provided by the teacher. Third, peers with diverse experiences and/or perspectives must feel safe sharing their ideas in a group.

The fifth research question (RQ 5) was, In what ways does a web-based ICT application facilitate supporting students in carrying out the describing, evaluating, and relating processes of reflection in practical dance classes? The findings from the fifth study also show that viewing video recordings of students' own experiences supported them in developing more realistic perspectives on their experiences. The evaluation assignment in which students reviewed the video recordings of their experiences based on the questions and criteria provided by the teacher allowed students to take a more active role in assessment. Moreover, the assignment allowed them to be more precise and detailed in their reasoning. The online peer feedback activities provided the choreography class students with valuable alternatives in their compositions, and some useful suggestions for enhancing the dance technique in the ballet class. Moreover, all students reported that the virtual learning environment was safe for giving feedback. Some students also mentioned that the conditions of the online peer feedback assignment fostered greater

rationality in their feedback, compared with when they shared their opinions in face-to-face situations.

### **Reflection on empirical findings**

In this section we reflect on the empirical findings of the different studies. Although the main line of research was focused on exploring the possibilities of ICT implementation in practical dance education, we believe that the research findings also contribute to the understanding of pedagogy in tertiary dance education and pedagogical practices of reflection in practical dance classes. Therefore, we first reflect on the empirical findings of this dissertation from three angles: dance pedagogy, reflection in practical dance education, and ICT in practical dance classes. Second, we discuss whether and how the findings of the current study can be generalised to the other fields of higher education.

#### *Dance pedagogy*

The findings of the empirical study reported in Chapter 3 show that the pedagogy in practical dance classes in dance academies in the Netherlands can to a large degree be illustrated by Smith-Autard's (2002) *Mid-Way model*. This model of dance education incorporates two very different, even contradictory, approaches to formal dance education.

The first is the *creative dance* approach, based on Rudolf Laban's ideas from the late 1940s and practised until the early 1970s. Smith-Autard (2002) calls this approach the *educational* model of dance education, which emphasises "the process of dancing and its affective / experimental contribution to the participant's overall development as a moving / feeling being", (p. 4). Given the aims of dance education, the *educational* model advocates an open, discovery approach to learning. "Discovery learning is effected by the teacher who presents a problem-solving situation which delineates an area for exploration by the pupil" (Smith-Autard, p. 24).

Second is the *professional* model of dance education, which focuses on producing highly skilled dancers and theatrically defined dance products for presentation to audiences. Its spreading to formal dance education at primary, secondary, and tertiary levels was influenced by the popularity of the American modern dance model, which focused on technique and teaching of compositional skills (Smith-Autard, 2002). Great emphasis is placed on the

development of physical skills in the professional model. Graham, (1935, cited in Smith-Autard) pointed out, “It takes ten years to build a dancer. The body must be tempered by hard, definite technique”. The main pedagogical method for learning the dance technique and repertoire is the so-called direct teaching method, which entails that the teacher presents a dance exercise and students are required to follow and repeat the exercise until they have mastered it to a high level. The professional model was a prevalent pedagogical framework for tertiary dance education in America and many European countries in the 1970s and 1980s.

In some ways, it is surprising that we found evidence of two pedagogical approaches that traditionally were completely separate, and were even considered opposed to each other. Based on her experiences as a dance educator, curriculum developer, and evaluator, Smith-Autard (2002) stated that although the pedagogical approaches used in tertiary dance education programmes in the United Kingdom can best be described using the *Mid-Way* model, the pedagogical context in dance technique classes is expected to be more closely related to the *professional* model, and the pedagogy in choreography classes is expected to be closer to the *educational* model. The findings of this study provided empirical evidence for these differences regarding pedagogy in dance technique and choreography classes in tertiary dance education in the Netherlands, as hypothesised by Smith-Autard.

We also found similarities, however, between the two types of dance classes, indicating that the pedagogical approaches are becoming more intertwined than ever before. By expressing the importance of students’ individuality and the need for reflection, both dance technique and choreography teachers seem to be searching for ways in which they can account for professional images, on the one hand, and more ownership on the part of students, on the other hand. This allows the teacher to present what the professional domain stands for, but it also allows space for the students to consider the professional standards and relate these to the self. In order to connect the professional standards with their individuality, students need to be encouraged to reflect on themselves, their practice, and the dance domain. Supporting students’ reflection can, therefore, be considered a key element in connecting the diverse aims of *educational* and *professional* approaches. Moreover, reflection can also be important to bridge the different islands (courses) of dance education programmes.

*Reflection in practical dance education*

The findings of the empirical study reported in Chapter 4 show that the pedagogical practices of reflection in practical dance classes can be described according to the Kantian and pragmatists' notions of reflection. In theory, these are two completely different schools; consequently, they differ greatly regarding the purpose, focus, and process of reflection. Surprisingly, in examining reflection in practical dance classes, we found how both can be recognised in the dance pedagogy.

Reflection practice in Kantian terms is aimed at connecting concepts and principles with practice in order to become self-confident professionals. For example, dance students can reflect on the manner and extent to which they apply certain principles relating to ballet technique in their practice; and / or develop the principles relating to the ballet technique further based on their practical experiences. This approach to reflection is not primarily concerned with improving the practice; rather, it fosters the holistic view on theory and practice. Reflection practice in pragmatists' terms is mainly concerned with identifying features and elements in personal practice which need to be improved. For example, dance students can identify specific goals for improving their ballet technique and plan activities for these, conduct them, and look back on the developments. This improvement process is usually cyclical, starting from experiences and returning back to experiences to find out whether the aspect of practice has led to improvement as planned and expected. Our findings show that reflection in Kantian terms takes place in daily educational practice, whereas reflection in pragmatists' terms is encouraged over a longer period. This finding gives indications of how both reflection approaches may be combined in pedagogy.

Regarding reflection on daily practice, our findings show that dance students are encouraged to reflect, on the one hand, on the core issues regarding the dance domain and profession, and, on the other hand, on the self. In a sense, we see that the two pedagogical frameworks described in the previous section form the background of the daily reflection practice. This means that the focus of reflection in practical dance education concerns both the standards of the professional dance domain and the subjectivity of the dance students. The descriptive model developed of the practices of reflection also incorporates the somewhat different views on reflection in dance education described in earlier studies. Anttila (2003) introduced the term *thoughtful motion*, where bodily sensitivity is coupled with thoughtfulness and fosters conscious reflection about the dance experiences. Sensory and

reflection of the lived experience of the body is also emphasised by Stinson (1995). These ideas of reflection are mostly associated with the reflective judgments that connect the practical experiences with the concepts and principles related to oneself. Besides reaching reflection on the experience through internal inquiry of the personal experience, other authors (Warburton, 2004; Lavender, 1996; Lavender & Predock-Linnell, 2001) point out the need for developing dance students' critical thinking skills regarding their own and others' dance works. This perspective on reflection is associated more with the determinative and reflective judgments aimed at connecting practical experiences with the concepts and principles related to the dance domain.

Regarding reflection over a longer period, our findings show that, besides being encouraged to engage in the cyclical improvement procedure related to the pragmatists' notion of reflection, dance students are also encouraged to reflect on their professional identity. Students are encouraged to reflect on the relationship and fit between their personal identity and their professional identity with regard to different agencies in the dance profession. Various questions are addressed here, e.g., Which area in the professional dance community suits me best? What is expected of me? What is missing from my toolbox? At this point the results from distinct domains of reflection on daily practice become very informative. Besides the considerations and comparisons, it is also here that the two areas become closely intertwined, enabling students to make informed choices for specialisation in their studies and further careers in the professional community. What is important about this finding is that, besides introducing the concepts and principles of a particular domain of practice, educators in dance need to pay attention to matters related to the professional identity of prospective professionals.

Hardly any evidence of the practices of the social critical notion of reflection (e.g., Mezirow, 1991) in practical dance education was found in our study. This notion of reflection would involve questioning existing assumptions, values, and perspectives underlying people's actions, decisions and judgments, in order to liberate them from their habitual ways of thinking and acting (Procee, 2006). Professional dancers usually start their training at an early age, and by the time they start their professional careers they have followed numerous technique classes and other training practices with the aim of becoming excellent professionals. Considering this, it does not seem so strange that educational settings focus on preparing students for the professional domain rather than fostering doubt and critique about the

profession. We saw that the critical social theory notion of reflection is not practised in practical classes in the Netherlands. The next question which comes to mind is, should it be integrated in dance education? We return to this question in the section containing our suggestions for further research.

#### *ICT in practical dance classes*

Chapters 2 and 6 report on how ICT was used in two different contexts to support dance students' learning. In the study reported in Chapter 2, ICT was used to support carrying out a wide arrange of learning tasks: individual writing assignments, collaborative writing assignments, and individual practical assignments. In the study presented in Chapter 6, ICT was used to facilitate students' reflection processes in a ballet course and a composition course. Below, we elaborate on the findings of both studies.

In Chapter 2, we found that the most crucial factor in carrying out different learning assignments in a virtual learning environment was the teacher's guidance and feedback on students' work. This finding is interesting, since the literature on dance education pedagogy (e.g., Stinson, 1997, 1998; Shapiro, 1998) indicates that dance educators should recognise and support the individual agency in their students, and encourage students to take more responsibility for their learning. However, we showed that asking students to take more responsibility does not mean that the teacher's role is vanishing in online dance courses. On the contrary, in the web-based distance education environment, the teacher's role and guidance is a key component for successful learning experiences. This finding is relevant to dance education in practical terms, for planning and implementing web-based distance learning in dance education programmes. The findings of the study are encouraging in that they show that with thorough guidance and sufficient instruction from the teacher it is possible to support students' reflection and critical thinking skills, and to cultivate personal bodily awareness in the context of web-based dance education.

Another important finding of the study was that carrying out practical assignments was the aspect least supported by the virtual learning environment. This shows that, besides the commonly available tools for course organisation, and collaborative and individual knowledge construction, additional tools are needed for reflecting and sharing students' processes and outcomes of practical assignments. The most suitable addition to a text-based virtual learning environment would, consequently, be a tool which supports the creation, storage, and usage of media files such as video recordings of

rehearsals and performances. Besides enabling students and teachers to view the recorded material, it would be appropriate if this tool allowed them to comment on and annotate video recordings in order to foster reflection and sharing of ideas. These suggestions cohere with the findings of Cherry, Fournier, and Stevens (2003), who showed how a digital video annotation tool was successfully used to teach dance composition.

The findings reported in Chapter 6 show that ICT facilitation in regular dance courses can help students to take a more active role in self-reflection. Using video recordings and teachers' questions and criteria set out in the virtual learning environment empowered students to reflect on their learning, behaviour, and convictions, since they were now able to use the means which usually are merely available to others, in particular to their teachers.

Out-of-the-box thinking about one's experiences, and seeing them from a more objective perspective, as though they were the actions of another, is a challenging task, not only for dance students but for people in general. It is easier to view others' experiences in that respect, and so it is also easier for an experienced teacher to mirror the experiences for the students. However, the danger here is that it can make students passive and dependent on the teacher. As shown in Chapter 5, this can increase the barrier to self-reflection, since students may merely wait for the teacher to give corrections instead of evaluating their experiences by themselves. Moreover, since teachers are experts in a particular subject matter, it can be difficult for students to question the corrections and comments provided by the teacher. This all despite the fact that the aim of the dance teachers, as indicated in the interviews carried out throughout the different studies of the current research, is to encourage students to become active in learning and to take more responsibility and ownership for it. The findings of the current study are, therefore, particularly important, since we have shown that observing their own practice on video helps students to observe their own experiences from a more objective perspective and notice new features of the experiences.

Although seeing oneself on video is a powerful support for reflection, it can fall short on its own. While reflecting on experiences captured on video, students also need to choose a focus and evaluate the particular. The challenge here is that students might not know which criteria are useful for evaluating a particular aspect of their experiences. What we have shown in the current study is that teachers can guide self-evaluation by posing questions and criteria. This allows students to learn about the standards in the

professional practice and make use of them in considering their own practice. As summarised by a student in the ballet course: “You can be your own teacher in a way”.

In addition to describing and evaluating one’s practice, reflection also entails considering an experience from multiple perspectives. For example, one can consider the experience in the light of different theoretical notions (e.g., specific composition theories in dance), or try to understand how the experience may be seen and interpreted by different bodies in a professional dance domain and by members of an audience. The latter is especially important since dance is a performing art, and in addition to becoming aware of how one experiences one’s own dancing, it is important to learn how it can be interpreted by others. For that purpose, we decided to encourage students to give peer feedback. We saw that viewing video recordings of dance practice prior to giving feedback supported peers in becoming more specific in their feedback. Moreover, some students considered their feedback in the online environment to be more rational than in face-to-face situations. The assignment also helped students to think about how to be constructive in their comments so that the receiver of the feedback would be able to make the best use of it. These findings are interesting since they show that students can also learn how to give feedback to their peers when facilitated by ICT.

In brief, the findings are encouraging. We have shown that video-based ICT facilitation can be valuable for supporting dance students’ reflection processes, because it helps teachers guide their students and opens up new possibilities for students to take more responsibility and ownership in their learning.

Finally, although we did not focus on the outcomes of the reflection assignments, some interesting findings regarding these were reported by teachers. These findings suggest that direct video observation guided by teachers’ questions might not be sufficient for reflecting on the conceptual questions and on a more general level of practical experience, as also reported by Van den Berg (2001) in her study of video usage in teacher training. This shows that both students and teachers have to learn how to use the facilitating tools more effectively for the purposes they find relevant. We return to this proposal in the section containing suggestions for future research.

*Generalisability*

Our research was focused on practical dance education. In the following section we discuss whether and how the empirical findings of the current studies can be generalised to other fields of higher education.

*Pedagogy in arts and physical education.*

Harland (2007) pointed out that the essential ingredients of good arts education have traditionally been developing students' creativity, on the one hand, and techniques and skills related to a specific arts domain, on the other hand. This shows that the Mid-way model in dance education is in accord with the general aims of arts education. Moreover, the question of balance between the two different areas is still an issue in different domains of arts education. Harland and colleagues (2000) carried out a study among arts pupils (11 – 16 years old) in secondary schools; they found that thinking and problem-solving skills were low among arts and dance pupils, and somewhat evident among drama and music pupils. Creativity and experimentation were high among arts students, somewhat evident among dance pupils, and lowest among the drama and music pupils. These findings show that the overemphasis on learning domain-specific skills and techniques in some arts curricula has a negative effect on the development of students' creativity and thinking skills. Harland (2007) stressed that arts education needs to get the balance right between the two areas. Moreover, he emphasised that a third area is becoming very important in arts education, which addresses the meaning in expression and exploration. An appropriate model of arts education in his view is, therefore, a mutual learning triangle. These three categories of aims of arts education are most likely accepted by many arts educators; however, the question remains, how to support students' development in the three distinctive areas? The findings of the current study suggest that the meaning category should not be viewed as a distinct area on its own, but rather as a primary element in both traditional aims of arts education: (1) creativity and subjectivity, and (2) profession-related knowledge and skills. We suggest that students' reflection on their learning, behaviour, and convictions would support the development of meaning in their expression and exploration. Moreover, since reflection supports thoughtfulness and personalisation of the two different domains of arts education, it would also allow students to unite and balance these domains.

The model of the practices of reflection developed also concurs with current ideas on pedagogy in the fields of physical education. First, in physical

education, and other studies of human movement, the personality and bodily uniqueness of the individual are at the very heart of the learning process and its outcome. It is simply crucial to learn about the very personal and subjective characteristics of an individual in addition to the more objective principles of a subject area. Therefore, the two domains of reflection pointed out in the current study are also relevant to physical education more generally.

It has been acknowledged that the student-centred pedagogies need to be given more attention in these areas of education. For instance, Ennis (2000) indicated that a social constructivist approach to theme-based curricula can be a solution for reconnecting disengaged students with sport-based physical education. Dyson, Griffin, and Hastie (2004) concluded that constructivist learning models are more suitable for learning in physical education, since such models allow students to be active, social, and creative, which in return results in more meaningful learning and deeper levels of understanding. The notion of students' reflection itself can be seen as a key principle of new ideas of pedagogy. On the one hand, supporting students in carrying out reflective judgments facilitates the development of new knowledge which is relevant and meaningful to them, since it is embedded in their practical experiences. On the other hand, prospective professionals can be given more responsibility in learning the established principles and concepts of a subject area. Students can carry out determinative judgments by themselves in order to estimate how accurately the general principles are applied in their practice.

#### *Difficulties with reflection and ICT facilitation*

Developing students' reflection on their learning and behaviour is currently one of the major learning goals in higher education. It has been pointed out that reflection leads to deeper learning (Moon, 2004), achievement of more complex and integrated knowledge structures, and more accessible and usable knowledge (Billing, 2007). What we have shown in Chapter 5 is that the difficulties described in this study regarding dance students' reflection have been reported in previous researches in other domains of higher education, mainly in teacher education and nurse education. This shows that the reflection difficulties described in this study are comparable with the difficulties in other educational domains, and seem to point to the more general challenges of reflection in educational settings. These challenges include students' unwillingness and inability to confront or seek disconfirming information or implicitly held knowledge; the mismatch

between awareness, representation, and verbalisation; the discrepancy between doing and conscious awareness; students' tendency to underestimate their personal knowledge and role in the construction of expert knowledge; and students' compliance behaviour towards teachers and peers. Consequently, the question of how to support students in overcoming the difficulties of reflection is relevant beyond the curricula of tertiary dance education. The benefits dance students reported in using the video-based DiViDU environment for their reflection processes are, therefore, also relevant to other fields of higher education. This is because they show that ICT facilitation can be valuable for supporting students in overcoming the classic difficulties of reflection, provided the students find the reflection assignments meaningful for learning. In 2006 - 2007 a national project, DiviDossier (for further information: <http://www.dividossier.nl>), took place in which 14 higher educational institutes in the Netherlands used the DiViDU environment to support students' reflection in diverse fields: teacher training, language learning, and medicine. The outcomes of this project confirm that one of the major benefits of using video is that it allows students to become aware of and analyse their own practice. Moreover, students find it valuable to receive feedback and suggestions from their peers in order to further understand their practices. In all cases in this project, the main focus of reflection was communication and pedagogical skills. What we have shown in the current study, additionally to similar findings regarding the benefits of digital video, is that a video-based learning environment can be useful for learning a wider range of skills beyond those of pedagogy and communication.

### **Practical implications**

In the current section we point out some specific implications for tertiary dance education institutes derived from the empirical findings discussed in previous sections.

#### *Supporting students' reflection*

We have shown, first of all, that students' reflection on their learning and behaviour needs to be given further attention in practical dance classes. The descriptive model of the pedagogical practices of reflection is of practical relevance for tertiary dance institutes since it presents five types of reflection which dance educators can explicitly integrate in their teaching practices to

support students' reflection activities. We have also pointed out that it is not sufficient merely to ask students to reflect; teachers should guide students in these activities. Posing open questions to students is one of the most common methods used to foster students' reflection. In addition, peer feedback activities and analysing video recordings of students' performances can be used to encourage students' reflection.

We have also shown that reflection activities can be challenging for dance students. The findings are, therefore, of practical relevance to tertiary dance education institutes, as we describe different obstacles dance students may face while reflecting on their learning and behaviour. This enables teachers and institutes to become aware of and support students in overcoming the general reflection difficulties and specific obstacles related to the three processes of reflection. For example, the students' overwhelming recognition of the difficulties related to evaluating their experiences, which indicates that students tend to point out merely negative aspects of their experiences and overlook positive features in self-assessments, needs to be critically considered by dance educators. In order to support students in becoming self-confident professionals, dance educators need both to model a positive view on experiences and encourage students to take notice of and be explicit about the satisfactory elements and features of their dance practice. In our last study, ballet class students were explicitly asked to point out aspects which they considered positive and satisfactory. This is an example of how a simple intervention can help students to take notice and communicate their experiences from a more positive perspective.

Besides pointing out the challenges of reflection, we have also illustrated how a video-based ICT facilitation can be used to help students overcome the difficulties related to specific processes of reflection. The main implications of the findings are the following. First, to support students in describing their practice it is useful to film students' dance practice, and ask them to edit the video recording in such a way that the most important features of the experience are presented. Teachers can provide students with additional guidelines for choosing a focus in video editing, for example, by asking them to demonstrate the flow of movements in a series of combinations. Second, to support the self-assessment process, teachers can provide evaluation criteria to students. This is especially applicable when students are expected to evaluate how they apply pre-defined dance concepts and principles to their practice. Following the criteria provided by the teacher, students can then evaluate their experiences captured on video. Third, peer

feedback activities can be used to help students to learn how others interpret their experiences. The condition for peer feedback activities is that students feel safe sharing their ideas in a group. Moreover, providing feedback in a virtual environment might foster a more accurate relation of students' feedback to the material presented, and it might be less emotional than in face-to-face situations. In brief, ICT facilitation can help teachers to guide their students, and open up new possibilities for students to take more responsibility and ownership of their learning.

#### *Practical advice for ICT implementation*

As we have shown in the studies reported in Chapters 2 and 6, ICT implementation for supporting teaching and learning in practical dance classes needs to be based on the pedagogical aims and needs of the subject matter. Instead of aiming to determine whether a particular ICT tool could be of use in dance education, the first questions to address are, what do we wish to achieve with ICT facilitation and how can this be done? This entails that, besides setting out the content of the activities, considerable attention needs to be given to planning and organising their implementation. For example, regarding the online distance education course, it is necessary that students know before starting the course what the aims of the course are, what learning assignments they will be expected to carry out, what the deadlines of the assignments are, and what criteria will be used to evaluate them. Moreover, teachers need to be aware that their role is crucial in guiding the students in online learning activities. This also implies that students must know how they can contact their teacher. Since teachers can not reply to students' questions instantly, especially in a course which includes students from different continents with different time zones, students need to know when they can expect feedback from the teacher.

Even if the learning activities using ICT facilitation to a large degree complement the regular curricula activities, students need to be given extra time for carrying out the activities. In the study reported in Chapter 2, learning activities in the online environment were additional to the regular curricula activities in the different institutes the participating students attended. Similarly, in the study reported in Chapter 6, students carried out their reflection activities after their regular school hours. Rather than demotivating students with extra tasks on their own time (which often is used for dance rehearsals), ICT facilitation, similar to any learning activities in a dance education programme, should be integrated in the curricula.

In addition to considering the purpose of ICT facilitation and setting out the content and structure of the activities, considerable attention needs to be given to choosing, testing, and learning to use the ICT tools. In both studies where ICT was implemented, additional facilitation was provided to both teachers and students for using the ICT tools. For example, the majority of the teachers (six out of seven) in the first study preferred that an e-learning assistant transferred the content of the courses to the virtual learning environment. Similarly, in the last study, most of the content of the reflection assignments was transferred to the web-based environment by the initiator of the study. In addition to guidance in learning to use the DiViDU environment, students also needed additional facilitation in filming, video editing, and uploading. This shows that technical support can not be underestimated in technology-rich learning environments.

### **Methodological considerations**

In this section we reflect on the research methods adopted in the different studies, and discuss whether and how these were appropriate to address the research questions of the dissertation.

#### *Explanatory mixed methods designs*

In the studies reported in Chapter 2 and Chapter 3, the explanatory mixed methods designs (Creswell, 2005) were adopted. In both studies we collected first quantitative data and then qualitative data to explain and elaborate on the quantitative results. Regarding the study reported in Chapter 2, the advantage of the quantitative data was that it allowed us to get an overall picture of the students' perceptions of the specific pedagogical implications of the courses. For example, we found that students' satisfaction was usually the lowest with the interaction activities, when compared with their satisfaction with other pedagogical implications. From the open-ended answers and group discussions we found further information which helped to explain why satisfaction with the interaction activities was generally very low.

It is questionable, however, whether it was plausible to follow up and compare the individual perceptions presented in the questionnaires with the socially shared perspectives communicated in the group interviews. We would reconsider the use of group interviews in similar research designs. Collecting quantitative and qualitative data in similar conditions would also

allow comparison of data collected using different instruments to increase validity of the empirical data.

Regarding the study reported in Chapter 3, the data collected using the questionnaire provided a general picture of the pedagogical practices in dance technique classes and choreography classes. The results of a t test indicted some interesting differences between the pedagogical practices of dance technique and choreography teachers, which we investigated further in the semi-structured interviews. Since each interview was a follow-up to the data presented in the questionnaire, the interview questions were also more meaningful for the teachers. Finally, we selected the interviewees based on the variety of answers presented in the questionnaires and four institutes represented. We believe that this was a more efficient way for the qualitative data collection than the procedure used in the study reported in Chapter 2, since this resulted in data collected from a small sample representing a wide variety of cases.

In the study reported in Chapter 2, two researchers were involved in the analysis procedure; the aim of this was to increase the trustworthiness of the findings. The qualitative data in Chapter 3 were analysed by one researcher; however, these data followed up data collected using another instrument, and could, therefore, be considered more credible. For future research we would make additions to this analysis method. We believe that to increase the credibility of the analysis it would have been appropriate to use member checks in this study. Teachers, whose ideas were ordered and grouped, could have been asked to verify the matrices of their teaching practice created by the researcher.

#### *Exploratory qualitative design*

In the study reported in Chapter 4, an explorative qualitative design was adopted to further understanding of the pedagogical practices of reflection from the perspective of practical dance teachers. The sensitising concepts from the literature used in the first stage of the study to detect and interpret teacher's examples of encouraging students' reflection in their classes were very useful, since these allowed us to search for three very different notions of reflection in education. A limitation of the data collection in the first stage of the study is that the data were retrieved from a previous study, which was focused on the pedagogical practices in more general terms than merely discussing the relevance and implications of supporting students' reflection. It was unknown, therefore, whether teachers themselves would recognise their

encouraging of the five types of reflection which we found. To collect further evidence about whether and how dance teachers supported these five types of reflection in their classes, and whether something was overlooked in the descriptive model developed, we conducted a content validation study (Miles and Huberman, 1994). The teachers whose ideas had formed the basis for the model developed received supplementary materials regarding this model prior to the interviews. Moreover, we presented teachers with examples from their previous interviews to illustrate the five different reflection types. This procedure can also be understood to some extent as a member check, since teachers could comment on how we had grouped their pedagogical implications related to reflection. All teachers recognised the five types of reflection and their organisation in the descriptive model, and provided more evidence for how they encouraged the five reflection types and which problems students usually encountered with each reflection type in their classes. After this, we conducted additional interviews with seven other teachers to see if the developed reflection model was also applicable to their classes. Five out of six teachers recognised the model developed and provided further examples of how the reflection types were encouraged in their classes and which difficulties students usually encountered while carrying them out. Even the teacher who did not agree with the presentation of the model, because he preferred a three-dimensional presentation of it, provided several examples of how the different types of reflection were encouraged in his classes and the challenges his students faced with reflection.

The content validation study, therefore, forms the core of the current design as it allowed us to increase both the credibility and the trustworthiness of the descriptive model of the reflection practices developed, by obtaining feedback from previous and new informants. Moreover, several researchers were involved in the data analysis in both stages of the study in order to increase the trustworthiness of the findings. Two researchers grouped the interview fragments independently in the first stage of the study, and discussed the differences till consensus regarding the grouping was reached. The teachers' suggestions for changing the model were critically discussed and weighted by three researchers.

#### *Exploratory mixed methods design*

In the study reported in Chapter 5 we adopted an exploratory mixed methods design (Creswell, 2005) to find out to what extent the difficulties related to reflection activities as reported by teachers about their students were

recognised by the dance students. The qualitative data collected from the teachers regarding the reflection difficulties were collected in the context of the content validation study described in the previous section. This procedure allowed us to collect data about prospective difficulties regarding each reflection type. Moreover, we could see which difficulties appeared throughout different types of reflection and which were specific to a particular reflection type. For example, students' tendency not to question the corrections and comments given by the teacher was reported as a problem throughout all the five reflection types, whereas the discrepancy between doing and awareness was mostly reported in the context of students' reflection on how they had applied certain dance concepts or principles in their own practice. All difficulties reported by the teachers were organised in four categories by the three researchers in order to increase the trustworthiness of the findings.

Based on the difficulties reported by the teachers, we designed a questionnaire; this was completed by 17 second-year dance students from a dance academy. The advantage of this procedure was that the quantitative data allowed us to refine and extend the qualitative findings from the students' perspective. Students recognised some difficulties in each category, for example, the difficulty related to noticing positive aspects; evaluating one's practice was the problem most often recognised by the students. Some difficulties reported by the teachers were not recognised by the students. The most remarkable discrepancy between the two perspectives concerned questioning teachers' comments and suggestions. The current research design, therefore, allowed indication of both similarities and differences regarding teachers' and students' views on the difficulties with reflection. Although we believe that the data collected from the students also contribute to the understanding of the challenging nature of reflection in tertiary dance education, further research is necessary to explore the prospective difficulties with reflection. Since the data were collected from a small number of students from one dance academy, the results of the study are not generalisable to the whole population of dance students in the higher educational setting in the Netherlands. In further research, with this purpose, data should be collected from a large number of randomly selected dance students from all dance academies in the Netherlands.

*Evaluation case study design*

In the last study, presented in Chapter 6, we conducted an evaluation case study (Yin, 1993) to assess and explain how the ICT facilitation supported dance students' processes of describing, evaluating, and relating processes of reflection in a composition course and a ballet course. This design was more demanding than other research designs adopted in this dissertation since besides designing and evaluating an intervention (programme theory), considerable attention was needed and effort invested in designing the implementation theory of the intervention. Moreover, since the real-life setting can not be controlled, the implementation theory itself had to be flexible and adjustable based on the circumstances of the practice. In the current study, the implementation of the ICT facilitation was a result of negotiations between researchers, teachers, students, a school leader, and other staff members of the dance academy. We kept a record of different changes and adaptations to the implementation plans. Moreover, we had to question to what extent the changes might influence the course of an intervention and its possible outcomes. This process included a series of consultations with other researchers. As the implementation process itself might influence participants' perceptions of the intervention, we reported and reflected on participants' views and experiences in the field reports on each contact meeting in order to further our understanding of the context of the study. In agreement with the findings of the researchers involved in the study, the influences of the ICT facilitation were found to be more similar among participants in a particular course rather than different owing to their personal experiences and views on the implementation process. Although the data on implementation have for this reason become somewhat invisible and are not reported in Chapter 6, implementation of the intervention in the real-life context was a crucial part of that study.

Regarding the research methods used to evaluate the programme theory, we asked the participating teachers and students during the interviews whether and how the intervention supported students in carrying out the reflection assignments. As an alternative method, we could have used think-aloud protocols with students during work on the reflection assignments. There are several reasons why we did not use the alternative approach. First, the think-aloud protocols are suitable for finding evidence in a limited time frame. The reflection processes, on the other hand, might require a longer time to make sense of the experiences. Second, the think-aloud protocol is itself a tool to support reflection since the participants are asked to articulate

what they think during the assignments. Consequently, it might have an influence on the course of reflection processes, which intent might be difficult to distinguish from the other interventions. Third, from the think-aloud protocols researchers can find evidence relating to issues which participants themselves are not aware of or do not find relevant. The advantage of interviewing participants after completion of the reflection assignments, which took a month or two months, was that we collected data about the influences participants themselves were aware of and found relevant. This was especially important in the studies aimed at testing interventions for the practices. The analysis of the influences regarding each process of reflection resulted in matrices of influences for both courses. Two researchers were involved in the early stages of the analysis of the answers; this was aimed at increasing the trustworthiness of the findings. In addition to this, we could have designed an evaluation questionnaire based on the influences, similar to what was done in the study reported in Chapter 5, and asked students to rate the relevance of the different influences from their perspective. This data would have provided more insight into the relationships between the different influences. Further research is, therefore, needed to extend the preliminary findings of the current study.

### **Suggestions for further research**

In this section we present several suggestions for further research, which are presented in six themes. These suggestions focus mainly on deepening and expanding the understanding of pedagogical practices of reflection in dance education.

#### *Reflecting on the professional identity*

We have emphasised that reflection on practical experiences has a crucial role in the development of the professional identity. We have hypothesised that students' reflection on how they apply and develop concepts and principles related to the domain of dance and the domain of themselves on a daily basis can also foster students' reflection over a longer period of time on the relationship and fit between their personal identity and their professional identity. Further research is needed to explore the development of the professional identity in relation to reflection activities, and investigate

whether and how reflecting on two distinct domains on a daily basis facilitates students' reflection on their professional identity.

*The role of the social critical notion of reflection*

The model of reflection developed does not include applications of the social critical notion of reflection. A question for further research is whether this notion of reflection needs to be given further attention in tertiary dance education. There is one particular issue in dance education which in our view needs critical consideration, and that concerns the physical and mental health of dancers. The research on physical and mental well-being in the dance profession is currently one of the major research issues among dance scholars in the Netherlands (see, for example, the pain research of Aalten, Van Amsterdam, & Van der Linden, 2008). Research has shown (Aalten, 2007) that the implications of the cultural and social order of the dance profession can direct dancers to be abusive towards their bodies. From the perspective of the individual capacities of one's body, a more critical perspective of a student on the criteria and norms of the dance profession is needed. Further research is needed to find out whether this aim can be reached by applying the descriptive model of reflection presented in this dissertation, or whether additional guidelines are needed to communicate and address this issue in practical dance classes.

*Pedagogy of reflection*

In the current study, dance technique and choreography teachers reported only one difference regarding the frequency of encouraging the five types of reflection in their classes. This showed that dance technique teachers encourage reflecting on how dance concepts and principles are applied by students more often than their colleagues in choreography classes. Additional research is necessary to find out where there are more differences regarding the frequency of the reflection types, and whether some general patterns of reflection types can be identified in choreography and dance technique classes. For example, it would be interesting to find out whether certain patterns are more applicable in beginners' classes as opposed to more advanced classes. Further research is also needed to elaborate on the students' processes of reflection, and to focus on the actual activities of reflection carried out by students. For example, we noted that whilst dance choreography teachers tended to support all the five types of reflection in their classes, some technique teachers considered reflection on personal

questions the responsibility of students. In further research it could be investigated how these types of reflection are carried out by students in dance technique class, and whether the processes and outcomes of these types differ from those explicitly guided by the teachers.

#### *Reflection difficulties*

As pointed out earlier, additional research is also necessary to explore further the difficulties dance students encounter with reflection in practical dance classes. The questionnaire developed regarding the difficulties could be used to collect data from dance students and teachers from a larger sample to further investigate the extent of the difficulties, and possible relationships and patterns among them. Furthermore, it would be interesting to look into possible discrepancies between the perceived and experienced difficulties of reflection. The results of the current study showed that while one difficulty often reported by teachers was students' unwillingness and inability to question the corrections and comments provided by the teacher, the students themselves reported this barrier as one of the least often applicable difficulty of reflection. Further research should shed light on this discrepancy. It would be appropriate to observe learning situations and teacher-student conversations in professional dance education practice to find out whether students are unaware of this feature of their behaviour. If so, how can teachers support students in becoming aware and overcoming this barrier to reflection? Another topic for additional research is the students' overwhelming recognition of the difficulties related to self-assessment, which shows that students tend to focus merely on the negative aspects in the experience when assessing their own practice. Since both teachers and students recognise this as an obstacle to reflection, further attention needs to be given to tackling this issue in pedagogical practices of dance education.

#### *ICT facilitation*

In general, we think that encouraging students' reflection and using ICT applications can change the pedagogy of dance education towards the more student-centred pedagogical practices. Both dance educators and dance scholars have emphasised that students need to be more active in their reflection, but as we have shown, it can be challenging to organise this. We believe that ICT tools help in developing the independence of students in their reflection. We have shown in this study that the difficulties related to specific processes of reflection can be addressed and decreased using ICT facilitation.

Additional research is necessary to find further ways to empower dance students to reflect on their own and to enable students to help each other in the reflection process. What we have shown here is that we cannot expect teachers and students to use ICT directly in the most optimal ways. It should be the task of follow-up research to explore and expand on the findings of this explorative study and develop design principles for more effective use of ICT for reflection in practical dance classes.

#### *Applicability to other domains*

The suggestions for further research described in this section concern the pedagogical practices of reflection in tertiary dance education. We discussed above that the findings of the current study can also be of interest to educators and researchers in other areas of arts and physical education. Therefore, in addition to deepening and expanding the understanding of reflection in dance education, further research should focus on the adoption and transferability of the findings to other fields of higher education. With these aims in mind, I plan to continue the research on reflection in higher professional education in my home country, Estonia.

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## **Samenvatting**

### *Hoofdstuk 1*

Het in dit proefschrift gerapporteerde onderzoek ging uit van het idee dat op het internet gebaseerde ICT applicaties diverse mogelijkheden bieden om het leren en lesgeven in het hoger onderwijs te ondersteunen. Het gebruik van ICT biedt docenten en studenten bijvoorbeeld meer flexibiliteit in zowel tijd, inhoud, instructieaanpak en hulpmiddelen als aanbod en logistiek van de lessen (Collis, Vingerhoets, & Moonen, 1997; De Boer, 2004). Bovendien biedt ICT leerlingen en docenten de mogelijkheid om contacten te leggen met partijen buiten de onderwijsinstelling, en geeft het leerlingen een actievere rol in het leerproces door zelf problemen op te lossen, besluiten te nemen, navraag te doen, te onderzoeken, activiteiten te bedenken en te leren door betekenisverlening. ICT kan verder denk-, leer- en samenwerkingsprocessen van leerlingen beter zichtbaar maken door online analyse van activiteiten en interactiepatronen. Naast dat het gebruikt kan worden voor monitoringsdoeleinden, ondersteunt het laatstgenoemde ook het lesgeven en het leren (Simons, 2006).

In het verlengde hiervan vroegen we ons af waarom deze voordelen, die voornamelijk van algemene aard zijn, alleen worden toegepast om het leren van declaratieve kennis, intellectuele vaardigheden en cognitieve strategieën te ondersteunen, en niet worden ingezet in onderwijsprogramma's die daarnaast ook het ondersteunen van fysieke vaardigheden als doelstelling hebben. Het lijkt erop dat een groot deel van het onderwijs wordt voorbij gegaan als het gaat om het benutten van de mogelijkheden die op internet gebaseerde ICT applicaties bieden. We besloten om onderzoek te richten op het dansonderwijs als voorbeeld van een onderwijsprogramma waarin het ontwikkelen van fysieke vaardigheden is opgenomen. Toen wij begonnen met het onderzoek werd ICT in danseducatie in het hoger onderwijs nog niet gebruikt. In 2005 startte een innovatief Europees project waarbij een op internet gebaseerde ICT applicatie toegepast werd in een internationaal dansonderwijsprogramma. Voor alle deelnemende instituten was het de eerste keer dat zij gebruik maakten van een op internet gebaseerde ICT applicatie. Wij maakten van de gelegenheid gebruik om te onderzoeken wat de dansdocenten, die de online cursussen gaven, dachten van de mogelijkheden die ICT te bieden heeft in het dansonderwijs. Tijdens de informele gesprekken benoemden de dansdocenten meerdere voordelen die de op internet gebaseerde ICT applicaties het dansonderwijs te bieden hebben. Deze

voordelen vallen samen met de algemene voordelen die ICT het onderwijs biedt, zoals bevordering van samenwerken met andere partijen buiten de onderwijsinstelling, ondersteuning van leerlingen om actiever te leren, leerlingen helpen de leerprocessen zichtbaar te maken, leerlingen meer flexibiliteit bieden in het leren en bevordering van onderwijs op afstand. We gaan er daarom vanuit dat we ons niet hoeven af te vragen of het praktisch dansonderwijs baat kan hebben bij ICT applicaties die op internet zijn gebaseerd, maar eerder hoe ICT in het praktisch dansonderwijs kan worden gebruikt. Ondanks de mogelijke voordelen is er in het praktisch dansonderwijs tot nu toe geen substantieel gebruik gemaakt van ICT. De hierop gebaseerde centrale onderzoeksvraag luidt als volgt:

*Hoe kunnen op internet gebaseerde ICT applicaties gebruikt worden om het lesgeven en leren in praktische danslessen in het hoger onderwijs te ondersteunen?*

#### Hoofdstuk 2

Zoals aangegeven was aan het begin van dit onderzoeksproject weinig bekend over ICT in het dansonderwijs. We vonden een internationaal dansonderwijsprogramma waarin gebruik werd gemaakt van een op internet gebaseerde ICT applicatie. Ons doel was om uit te zoeken hoe de dansleerlingen het leren in dit programma ondervonden. We wilden in het bijzonder onderzoeken of de elektronische leeromgeving, wat destijds één van de meest gebruikte ICT applicaties in het hoger onderwijs was, de leerlingen ondersteunt in het uitvoeren van de leeropdrachten in de aangeboden internetlessen (individuele schrijfoopdrachten, gezamenlijke schrijfoopdrachten en individuele praktijk opdrachten). Omdat de perspectieven van de leerlingen op de waarde van technologie in het onderwijs beïnvloed worden door hoe en op basis van welke pedagogisch doelen de technologie wordt ingezet, onderzochten we daarnaast ook hoe de leerlingen aankeken tegen de toegepaste pedagogiek in de internetlessen. Gegevens van 42 dansleerlingen werden verzameld door middel van een vragenlijst en een groepsinterview.

Als eerste lieten de resultaten van deze studie zien dat de beschikbare instrumenten van de elektronische leeromgeving voldoende waren voor de leerlingen om de individuele schrijfoopdrachten uit te voeren en in te leveren. De leerlingen lieten weten dat de beschikbare instrumenten van de elektronische leeromgeving redelijk acceptabel waren voor het uitvoeren van de gezamenlijke schrijfoopdrachten. Voor het uitvoeren van praktische leeropdrachten was de conclusie dat de beschikbare instrumenten van de elektronische leeromgeving bruikbaar waren voor het communiceren van de

opdrachten naar de leerling. De elektronische leeromgeving gaf de leerling echter niet de mogelijkheid om het leerproces te delen en de eindproducten in te leveren, zoals bijvoorbeeld een solo-uitvoering of kunstvoorwerpen uit het werk van de leerling, tenzij het eindproduct een geschreven document was. Hieruit leidden we af dat de elektronische leeromgeving, vergelijkbaar met andere op tekst gebaseerde leeromgevingen, ontoereikend is voor het uitvoeren en delen van praktische leeropdrachten. De meest geschikte toevoeging aan een op tekst gebaseerde elektronische leeromgevingen lijkt hoogstwaarschijnlijk een hulpmiddel dat het maken, de opslag en het gebruik van mediabestanden zoals video-opnames van repetities en voorstellingen ondersteunt.

Als tweede bleek de begeleiding en feedback op het werk van de leerling door de docenten de meest cruciale factor in het uitvoeren van leeropdrachten. De bevindingen toonden aan dat, in de context van internet gebaseerd onderwijs, een gedegen begeleiding en instructie van de docent het mogelijk maakt om reflectie en kritische denkvaardigheden van leerlingen te ondersteunen, het lichamelijke bewustzijn te ontwikkelen en uitwisseling van kennis in gezamenlijke leeropdrachten te bevorderen.

### Hoofdstuk 3

Gebaseerd op de resultaten van de eerste studie hebben we besloten om de didactiek in praktische danslessen nader te onderzoeken om te achterhalen wat de specifieke didactische doelen zijn die in deze lessen verder bevorderd moeten worden. Als eerste hebben we literatuur over didactiek van dans onderzocht om uit te zoeken wat de huidige trend in het tertiair dansonderwijs is. Als tweede stap hebben we op basis van de gevonden trends een vragenlijst opgesteld om kwantitatieve gegevens te kunnen verzamelen over leerdoelen, leermethoden en beoordeling. Het doel van de gegevens, verkregen van 20 praktische dansdocenten van vier verschillende dansacademies in Nederland, was een algemeen beeld te krijgen van de didactische toepassingen en om aan te tonen in hoeverre de in de literatuur aangegeven trends daadwerkelijk in de huidige danstechniek- en choreografielessen in Nederland worden toegepast. Vervolgens hebben we, om meer inzicht te krijgen in de didactische principes en hoe docenten de huidige trends in hun praktijklessen toepassen, kwalitatieve gegevens verzameld door middel van semi-gestructureerde interviews. Een aanvullend doel was om nader aan te duiden welke didactische trends, die zowel in danstechniek- als in choreografielessen voorkomen, verdere facilitatie nodig hebben. Elk interview was een vervolg op de via de vragenlijst verzamelde

gegevens over de door de individuele docenten gehanteerde didactiek. Om gegevens te kunnen verzamelen uit een grote variëteit van omstandigheden, zijn voor deze interviews die docenten geselecteerd die tezamen een goede afspiegeling vormen van alle vier de academies en van de verscheidenheid in antwoorden op de vragen uit de vragenlijst. De resultaten lieten zien dat er vergelijkbare patronen zijn in hoe reflectie, wat betreft inhoud, methode en frequentie, wordt toegepast en dat leerlingen moeilijkheden hebben met reflectieactiviteiten in zowel choreografie- als technieklessen.

#### Hoofdstuk 4

Op basis van de resultaten uit de tweede studie hebben we ons in de derde studie gericht op reflectie in praktische danslessen. We hebben in twee fasen gegevens over de didactische praxis van reflectie verzameld. Een literatuurstudie naar reflectietheorieën aan dat er in het onderwijs drie verschillende benaderingen van reflectie zijn die vervat zijn in respectievelijk de filosofische tradities van het pragmatisme, de sociaal-kritische theorie, en Kant. Het doel, de focus en het proces van reflectie zijn volgens deze drie zienswijzen verschillend. De bevindingen uit de literatuurstudie zijn gebruikt als richtinggevende concepten in de eerste fase van de studie. In de eerste fase hebben twee onderzoekers de gegevens van de interviews uit de studie in hoofdstuk 3 opnieuw onderzocht om te achterhalen welke theoretische noties van reflectie gebruikt kunnen worden om de ondersteuning van reflectie van leerlingen in de praktische danslessen te omschrijven. De eerste fase van de studie resulteerde in een beschrijvend model van de didactische toepassingen van reflectie. Echter, de door de onderzoekers in meer algemene groepen ingedeelde reflectieactiviteiten corresponderen niet noodzakelijk met hoe dansdocenten zelf de reflectie in hun lessen doorgronden. Om deze reden achtten wij het noodzakelijk om de docenten opnieuw te ondervragen, dit keer over wat zij dachten van onze indeling van de reflectieactiviteiten, of zij de aanmoediging daarvan in hun lessen herkenden en of zij in het beschrijvend model iets misten. Hiervoor hebben we een inhoudsvalidatiestudie uitgevoerd (Miles & Huberman, 1994). Na deze tweede ronde interviews met zeven docenten, was ons doel om te kijken of de reflectiegroepen door andere docenten kunnen worden herkend. Zes aanvullende docenten werden daarvoor bevroegd. Uit de resultaten daarvan bleek dat leerlingen worden aangemoedigd om vijf typen van reflectie in praktische danslessen uit te voeren. Vier van de reflectietypen zijn gerelateerd aan het reflectiedenkebeeld van Kant waar leerlingen worden aangemoedigd om te reflecteren op: (1) hoe ze in hun danspraktijk concepten en principes

toepassen die gerelateerd zijn aan hun dansdiscipline, (2) hoe ze in hun danspraktijk concepten en principes toepassen die ze ontleen aan bewustzijn van zichzelf en van de eigen fysieke mogelijkheden, (3) welke nieuwe aan hun dansdiscipline gerelateerde concepten en principes ze hebben ontwikkeld gebaseerd op hun praktische danservaringen en (4) welke nieuwe aan henzelf gerelateerde concepten en principes ze hebben ontwikkeld op basis van hun praktische dansoefeningen. Al deze reflexietypen worden uitgevoerd om de verschillende concepten en principes te verbinden met de kinesthetische ervaringen van de leerlingen, waarmee ze dan in staat zijn met zelfvertrouwen in een professionele omgeving te handelen. Het vijfde reflectietype is gerelateerd aan de pragmatische zienswijze van reflectie: (5) leerlingen worden aangemoedigd om gedurende een bepaalde periode uitgebreid in te gaan op hun ontwikkelingen, aan te duiden wat meer aandacht nodig heeft in een volgende periode en activiteiten voor verbetering te organiseren. Naast de aandacht om de oefeningen te verbeteren heeft het vijfde reflectietype ook ten doel het bewustzijn van de eigen professionele identiteit te ontwikkelen.

#### Hoofdstuk 5

Naast het onderzoeken van de didactische doelen rondom reflectie en de lesmethoden die gebruikt worden om de zelfreflectie van leerlingen te ondersteunen, hebben we ook onderzocht welke moeilijkheden leerlingen tegenkomen wanneer ze de reflectietypen uitvoeren. Bij de 14 docenten uit de inhoudvalidatiestudie zoals omschreven in het vorige hoofdstuk, hebben we ook kwalitatieve gegevens verzameld over de moeilijkheden die leerlingen tegenkomen bij reflectie. De empirische bevindingen gaven aan dat de leerlingen, in de optiek van de docenten, verschillende moeilijkheden met reflectie tegenkomen. Deze hebben we onderverdeeld in de volgende categorieën: algemene moeilijkheden, moeilijkheden bij het omschrijven van ervaringen, moeilijkheden met het evalueren van ervaringen en moeilijkheden met meerdere perspectieven. De categorie algemene moeilijkheden bestond uit het omgaan met emoties tijdens reflectie, het verwoorden van ideeën en het laten zien van matige resultaten van reflectie. De drie andere categorieën waren gerelateerd aan specifieke reflectieprocessen zoals omschreven door Procee (2006). Met een aantal kenmerkende verschillen vielen deze moeilijkheden onder de vijf reflectietypen zoals in het vorige hoofdstuk beschreven. Gebaseerd op de door de docenten omschreven moeilijkheden ontwierpen we een vragenlijst die vier tot zes elementen bevatte van elke categorie reflectiemoeilijkheden. Deze vragenlijst werd ingevuld door 17 tweedejaars dansleerlingen van een dansacademie. De leerlingen herkenden

een aantal specifieke reflectiemoeilijkheden uit elke categorie. De moeilijkheid die het meest werd herkend had betrekking op het evalueren van ervaringen.

#### Hoofdstuk 6

In de laatste studie keerden we terug naar ICT en richtten we ons op de vraag hoe een ICT applicatie gebruikt kan worden om leerlingen te ondersteunen bij het uitvoeren van de reflectieprocessen in het hoger dansonderwijs. De op video gebaseerde leeromgeving DiViDU werd gebruikt om de dagelijkse reflectieactiviteiten van de leerlingen in een choreografie- en danstechniekcursus te ondersteunen. Deze ICT ondersteuning werd toegepast als antwoord op de moeilijkheden die leerlingen ondervinden tijdens het uitvoeren van reflectieprocessen. Om de leerlingen te ondersteunen bij het beschrijven van hun praktijkervaring werd gebruik gemaakt van videobewerking en video-observatie in combinatie met vragen van de docenten om een focus te kiezen. Vragen en evaluatiecriteria van de docenten werden gebruikt om de leerlingen te ondersteunen bij het evalueren van hun danservaringen. Terugkoppeling door medeleerlingen werd gebruikt om het leren vanuit meerdere invalshoeken te bevorderen. Deze ICT ondersteuning werd empirisch onderzocht via een evaluerende gevalstudie als onderzoeksopzet (Yin, 1993) en was gericht op de perceptie van de 15 leerlingen en twee docenten. Wat betreft de onderzoeksmethoden om de theorie achter de interventie te beoordelen hebben we de deelnemende docenten en leerlingen tijdens de interviews gevraagd of en hoe de interventie leerlingen ondersteuning bood in het uitvoeren van de reflectieopdrachten. De uitkomsten lieten zien dat een op video gebaseerde leeromgeving leerlingen onder de volgende condities kan ondersteunen bij het beschrijven en evalueren van hun praktijk ervaringen en bij het op een gedetailleerde en functionele manier in verband brengen van deze ervaringen met meervoudige perspectieven. Ten eerste zijn de op video vastgelegde ervaringen in de optiek van leerlingen van belang om herhaaldelijk terug te kijken. Ten tweede moeten er voldoende ondersteunende vragen en criteria door de docent worden aangeboden. Ten derde moeten medeleerlingen met verschillende ervaringen en/of perspectieven zich in een groep veilig voelen om hun ideeën te delen. De bevindingen lieten ook zien dat het kijken naar de video opnames de leerlingen hielp om een realistischer beeld van hun ervaringen te ontwikkelen. De evaluatieopdrachten, waarin de video-opnames van de ervaringen opnieuw bekeken werden met behulp van de vragen en criteria van de docenten, zorgden voor een actievere rol van de leerlingen in de beoordeling. Bovendien maakte de opdracht het voor de leerlingen mogelijk

om preciezer en gedetailleerder te redeneren. De online activiteiten voor feedback bezorgden de leerlingen van de choreografieklas waardevolle alternatieven voor hun composities en een aantal bruikbare suggesties in de balletklas om de danstechniek te verbeteren. Verder vonden alle leerlingen de elektronische leeromgeving veilig genoeg om feedback aan anderen te geven. Sommige leerlingen lieten ook weten dat online terugkoppelings opdrachten tot een meer rationele terugkoppeling aanspoorde in tegenstelling tot de neiging in "één op één" situaties om meningen te delen.

#### Hoofdstuk 7

Het laatste hoofdstuk begint met de belangrijkste conclusies van de verschillende studies. Vervolgens beschouwen we de empirische bevindingen van dit proefschrift vanuit drie invalshoeken: danspedagogiek, reflectie in praktisch dansonderwijs en ICT in praktisch dansonderwijs. Eén van de belangrijkste onderwerpen die aangehaald wordt is dat dansleerlingen worden aangemoedigd om te reflecteren, enerzijds op de kernonderwerpen van het dansdomein en de dansprofessie en anderzijds op de eigen persoonlijkheid. We zien dat de twee didactische kaders, de creatieve en de professionele modellen van dansonderwijs, de achtergrond vormen van de dagelijkse reflectiepraktijk. Dat betekent dat reflectie in praktisch dansonderwijs zowel de principes van het professionele dansdomein als de subjectiviteit van de dansleerlingen aangaat. Wat betreft reflectie die betrekking heeft op een langere periode worden leerlingen ook aangemoedigd om te reflecteren op hun professionele identiteit. In relatie tot de verschillende groepen in de dansprofessie worden leerlingen aangemoedigd om te reflecteren op de relatie en overeenstemming van hun persoonlijke en professionele identiteit.

Vervolgens bespreken we de mogelijke relevantie van de bevindingen over pedagogiek en reflectie voor andere gebieden van de kunsten en lichamelijk onderwijs. Volgens Harland (2007) zijn de essentiële bestanddelen van goed kunstonderwijs traditioneel gezien het ontwikkelen van enerzijds de creativiteit van leerlingen en anderzijds de technieken en vaardigheden die betrekking hebben op een specifiek kunstdomein. Hij benadrukt dat kunstonderwijs een balans moet zien te vinden tussen deze twee gebieden. Daarbij geeft hij aan dat een derde gebied in kunstonderwijs, dat ingaat op de betekenis in expressie en ontdekking, erg belangrijk begint te worden. We stellen echter voor dat deze categorie niet gezien moet worden als een op zichzelf staand aspect, maar als een primair element in de beide traditionele doelen van kunstonderwijs, te weten: (1) creativiteit en subjectiviteit, en (2) professioneel gerelateerde kennis en vaardigheden. We wijzen er op dat het

reflecteren van leerlingen op het eigen leren, het gedrag en overtuigingen de ontwikkeling van de betekenis in expressie en ontdekking zal ondersteunen. Omdat reflectie de doordachtheid en verpersoonlijking in de twee verschillende domeinen van het kunstonderwijs ondersteunt, wordt het voor leerlingen bovendien mogelijk deze twee domeinen te verenigen en balanceren. Het ontwikkelde reflectiemodel komt ook overeen met huidige ideeën over didactiek in het veld van lichamelijk onderwijs. Het wordt erkend dat student gecentreerde didactiek meer aandacht moet krijgen in dit gebied van het onderwijs (b.v. Ennis, 2000). Reflectie van leerlingen kan op zichzelf gezien worden als een kernprincipe van de opkomende didactische ideeën. Reflectieve beoordeling door studenten bevordert de ontwikkeling van nieuwe kennis, dat voor de studenten relevant en betekenisvol is omdat het onderdeel is van hun praktijkervaringen. Daarnaast zorgt reflectieve beoordeling ervoor dat aan toekomstige professionals meer verantwoordelijkheid kan worden gegeven in het leren van bestaande principes en concepten van een studieonderdeel. Leerlingen kunnen bepalende beoordelingen zelf uitvoeren om vast te stellen hoe nauwgezet de algemene principes in hun oefeningen zijn toegepast.

Een andere belangrijk discussie houdt verband met het gebruik van ICT ter ondersteuning van de reflectie op de dagelijkse praktijk. Out-of-the-box denken over eigen ervaringen en deze vanuit een meer objectief perspectief bezien alswaare het de acties van een ander, is een uitdagende opgave, niet alleen voor dansleerlingen maar ook voor mensen in het algemeen. In dat opzicht is het makkelijker om de ervaringen van anderen te beschouwen en dus ook makkelijker voor een ervaren docent om de leerlingen een spiegel voor te houden. Het gevaar is echter dat het leerlingen passief en afhankelijk van de docent zou kunnen maken. Dit kan de drempel voor zelfreflectie verhogen omdat leerlingen de neiging hebben te wachten op correcties van de docenten in plaats van zelf de ervaringen te evalueren. Omdat docenten expert zijn in bepaalde onderwerpen kan het daarnaast ook moeilijk zijn voor leerlingen om kritiek uit te oefenen op correcties en commentaar van de docent. Dit in tegenstelling tot het feit dat het doel van dansdocenten is, zoals aangegeven in de interviews in de verschillende studies, om leerlingen juist aan te moedigen zich actief op te stellen in het leren en meer verantwoordelijkheid ervoor en eigenaarschap erover te hebben. De bevindingen van deze studie zijn daarom in het bijzonder van belang omdat we hebben laten zien dat, door het observeren van de eigen praktijk op video, leerlingen geholpen worden hun eigen ervaringen objectiever te beoordelen en nieuwe aspecten op te merken. Hoewel het zien

van jezelf op video reflectie sterk ondersteunt, kan het op zichzelf ook tot mislukking leiden. Tijdens de reflectie van op video opgenomen ervaringen moeten leerlingen ook een aandachtspunt kiezen en dat in het bijzonder evalueren. De vraag is echter of leerlingen kunnen weten welke criteria bruikbaar zijn om een bepaald aspect van hun ervaringen te evalueren. Wat we hebben laten zien in deze studie is dat docenten zelfevaluatie kunnen begeleiden door vragen te stellen en criteria aan te bieden. Dit stelt leerlingen in staat om te leren over normen in de professionele praktijk en om deze toe te passen in het beschouwen van de eigen praktijk. Naast het beschrijven en evalueren van de eigen praktijk houdt reflectie ook in dat ervaringen gelijktijdig vanuit meerdere perspectieven worden beschouwd. We zagen dat het bekijken van video-opnames van dansoefeningen voorafgaand aan het geven van commentaar, medeleerlingen hielp om specifieker te zijn in hun terugkoppeling naar de ander. Ervan uitgaande dat de moeilijkheden bij reflectie zoals in deze studie omschreven, vergelijkbaar zijn met moeilijkheden zoals we die in andere onderwijsdomeinen zien en het feit dat deze lijken op de meer algemene aandachtspunten bij reflectie in het onderwijs, suggereert dat de vraag "hoe leerlingen ondersteund kunnen worden bij het overwinnen van reflectiemoeilijkheden" ook relevant is buiten de curricula van het hoger dansonderwijs. De voordelen die dansleerlingen beschreven bij het gebruik van de op video gebaseerde DiViDU leeromgeving ter ondersteuning van de reflectieprocessen zijn daarom in onze optiek ook relevant voor andere domeinen in het hoger onderwijs.

In vervolg op de beschouwing van de empirische bevindingen gaan we uitgebreid in op de praktische implicaties van de studies met betrekking tot reflectieondersteuning bij leerlingen en geven we praktisch advies voor het implementeren van ICT. In het laatste gedeelte van het hoofdstuk gaan we eerst in op het onderzoeksontwerp en de onderzoeksmethode die toegepast zijn in de verschillende studies. We bespreken of en hoe deze geschikt waren om de onderzoeksvragen in dit proefschrift aan de kaak te stellen. Ten slotte geven we suggesties voor verder onderzoek dat zich concentreert op de volgende thema's: reflectie op professionele identiteit, de rol van de sociaal-kritische theorie bij reflectie, didactiek van reflectie, moeilijkheden bij reflectie, ICT ondersteuning en de toepasbaarheid van de huidige bevindingen in andere domeinen.

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## Kokkuvõte

### Peatükk 1

Käesolevas väitekirjas kajastatav uurimus lähtus eeldusest, et informatsiooni- ja kommunikatsioonitehnoloogia (IKT) rakenduslahendused pakuvad kõrghariduses mitmeid võimalusi õppimise ja õpetamise toetamiseks. Näiteks võimaldab IKT rakenduslahenduste kasutamine üliõpilastele ja õppejõududele suuremat paindlikkust (flexibility) nii ajalises mõõtes, õppimise sisus, pedagoogiliste lähenemiste ja materjalide osas ning kursuse vahendamises ja logistikas (Collis, Vingerhoets, & Moonen, 1997; De Boer, 2004). Lisaks paindlikkusele toob Simons (2006) välja IKT poolt pakutavad muud võimalused. IKT võimaldab õppijatel ja õppejõududel luua kontakte õpikeskkonna väliste osapooltega. Õpikeskkonna siseselt võimaldavad IKT rakendused teadmiste organiseerimist. IKT kasutamine aitab mõtlemist, õppimist ja kollaboratiivseid protsesse rohkem nähtavale tuua. Lisaks monitooringule, võimaldab see õpetada ja õppida õppimist. Veel aitavad mitmed veebipõhises keskkonnas kasutatavad meetodid (nt probleemõpe, uurivõpe, õppimine kui tähenduste konstrueerimine) õpilasel saavutada õppimises aktiivsemat rolli.

Ülaltooduga seonduvalt arutlesime, miks need loomu poolest üldised võimalused on rakendust leidnud peasjalikult selliste õpitulemuste soodustamisel nagu teadmiste omandamine, intellektuaalsete oskuste arendamine ja kognitiivsete strateegiate kasutamine ning tahaplaanile jäänud haridusprogrammides, kus teiste õpitulemuste kõrval on eesmärgiks üliõpilaste füüsiliste oskuste arendamine. Arutlusest nähtus, et IKT lahenduste poolt pakutavate võimaluste kasutamine on jäänud teatud haridusvaldkondades suuresti tähelepanuta. Oma uurimuses otsustasime keskenduda tantsuharidusele kui näitele sellisest haridusprogrammist, mis hõlmab endas üliõpilaste kehaliste oskuste arendamist. Antud uurimuse alguses ei leidnud IKT kõrgemas tantsuhariduses märkimisväärset kasutust. 2005 aastal leidis aset uudne rahvusvaheline tantsuõppe projekt, mille raames kasutati veebipõhist õpiahaldussüsteemi e-õppe läbiviimiseks. Kõigile projektis osalevatele kõrgkoolidele oli sellises formaadis õppe korraldamine esmakordne. Me kasutasime võimalust uurida, kuidas suhtusid antud projektis e-kursusi õpetanud tantsuõppejõud IKT poolt pakutavatesse võimalustesse tantsuhariduse kontekstis. Vestlustes tõid tantsuõpetajad välja mitmeid ideid, kuidas veebipõhine IKT võiks tantsuharidust toetada. Need võimalused on sarnased üldistele IKT kasutamisele kaasnevatele tugevustele, nagu koostöö

soodustamine väljaspool haridusasutust tegutsevate osapooltega, üliõpilaste aktiveerumine õpiprotsessides, õpiprotsesside nähtavamaks muutumine, paindlikkuse (*flexibility*) suurenemine ning distantsõppe toetamine. Selle põhjal arvame, et ei ole otstarbekas esitada küsimust, kas veebipõhised IKT rakenduslahendused on tantsuharidusele kasulikud, vaid pigem uurida, kuidas saab ja võiks IKT rakenduslahendusi praktilises tantsuõppes kasutada. Hoolumata võimalikest lisaväärtustest, ei ole IKT antud kursuste õpetamisel märkimisväärselt kasutuses. Ülaltoodud arvestades esitasime antud uurimuse põhiküsimuse:

*Kuidas saab veebipõhiseid IKT rakenduslahendusi kasutada õppimise ja õpetamise toetamiseks praktilistes tantsukursustes kõrghariduse kontekstis?*

#### Peatükk 2

Nagu eelpool mainitud, oli uurimuse algusfaasis veebipõhise IKT kasutuse kohta tantsuhariduses suhteliselt vähe teada. Me leidsime rahvusvahelise tantsuõppe projekti, kus kasutati veebipõhist õpihaldussüsteemi. Meie eesmärgiks oli välja selgitada, kuidas tajusid üliõpilased antud programmis õppimist. Täpsemalt oli meie eesmärgiks uurida, kuivõrd otstarbekas oli üliõpilaste hinnangul veebipõhine õpihaldussüsteem - tol hetkel kõige laiemalt kasutatav IKT lahendus kõrghariduses - õpiülesannete sooritamisel (individuaalsed kirjalikud ülesanded, kollaboratiivsed kirjalikud ülesanded ja individuaalsed praktilised ülesanded) e-kursuste raames. On teada, et üliõpilaste hinnangud tehnoloogia kasutamise väärtuse osas hariduses on mõjutatud sellest, kuidas ja millistel pedagoogilistel alustel on tehnoloogiat rakendatud. Seetõttu soovisime ka välja selgitada, kuidas kogesid üliõpilased e-kursustel kasutatud pedagoogikat. Uurimisandmed koguti 42-lt üliõpilastelt, kasutades selleks küsimustikku ja grüpiintervjuud.

Uurimustulemused näitasid, et individuaalsete kirjalike ülesanne läbiviimiseks ja esitamiseks olid õpihaldussüsteemis olevad võimalused (üliõpilaste hinnangul) piisavad ning kollaboratiivsete kirjalike ülesannete läbiviimiseks suhteliselt piisavad. Individuaalsete praktiliste ülesannete osas nähtus, et olemasolevad vahendid osutusid piisavaks praktiliste ülesannete juhiste edasiandmiseks. Samas, õpihaldussüsteem ei võimaldanud üliõpilastel õpiprotsessi teistega efektiivselt jagada ning ülesannete lõpp-produkte esitada, kui oli tegemist muu kui kirjaliku esitlusega, nagu näiteks tantsusoolo etendusega. Sellest järeldus, et sarnaselt teistele tekstipõhiste õpihaldussüsteemidele osutus programmis kasutatud õpihaldussüsteem ebapiisavaks praktiliste ülesannete läbiviimisel ja jagamisel. Kõige sobilikum

lisarakendus õpiahaldussüsteemile on meie hinnangul tantsuhariduse seisukohalt selline, mis võimaldab tudengitel luua, salvestada ja kasutada meediafaile, näiteks videosalvestusi oma tantsutöö proovidest ja esinemistest.

Ühtlasi nähtus uurimistulemustest, et kõige olulisemaks teguriks õpiülesannete läbiviimisel oli õpetajapoolne juhendamine ja tagasiside üliõpilaste töödele. Tulemused näitasid, et õpetaja põhjaliku juhendamisega on veebipõhise distantsõppe kontekstis võimalik soodustada üliõpilaste eneserefleksiooni ja kriitilist mõtlemist, suurendada personaalset kehalist teadlikkust ning soodustada teadmiste ja kogemuste jagamist kollaboratiivsetes ülesannetes.

### Peatükk 3

Esimese empiirilise uurimuse tulemuste põhjal otsustasime teises uurimuses praktiliste tantsutundide pedagoogilist konteksti lähemalt uurida, et välja selgitada, millised pedagoogilised eesmärgid vajavad nendes tundides suuremat toetust. Antud teavet soovisime kasutada veebipõhise rakenduslahenduse soovitamiseks, mis toetaks õppimist ja õpetamist praktilises tantsuõppes tõhusamalt kui laialdaselt kasutatavad õpiahaldussüsteemid.

Esiteks tutvusime tantsupedagoogika alase kirjandusega, et saada ülevaade tantsuhariduse kaasaegsetest suundadest. Teiseks koostasime kirjanduse põhjal küsimustiku, et koguda kvantitatiivseid andmeid kõrgkooli tantsuhariduse eesmärkide, õpetamismeetodite ja hindamispehõhimõtete kohta. Küsimustikuga kogusime andmeid 20-lt õpetajalt, kes õpetavad praktilisi tantsutunde neljas Hollandi tantsuakadeemias. Andmete kogumise eesmärgiks oli välja selgitada, millises ulatuses on uudsed tantsupedagoogika suunad ja lähenemised mainitud tantsuakadeemiate koreograafia ja tantsutehnika tundides rakendust leidnud. Kolmandaks viisime läbi osaliselt struktureeritud intervjuud, mille käigus kogusime kvalitatiivseid andmeid selleks, et pedagoogilisi pehõhimõtteid paremini mõista ning aru saada, kuidas õpetajad on oma pedagoogilises töös rakendanud uudseid lähenemisi. Lisaks soovisime intervjuude abil välja selgitada, milliste pedagoogiliste pehõhimõtete rakendamine vajab nii koreograafia kui ka tantsutehnika tundides suuremat tähelepanu ja toetust. Iga intervjuu kujutas endast järelkaja küsimustikus kajastamist leidnud andmete, mis puudutasid iga õpetaja poolt kasutatud pedagoogikat. Selleks, et koguda andmeid võimalikult erinevate juhtumite kohta, valiti intervjuueeritavateks küsimustikele kõige erinevamalt vastanud õpetajad. Lisaks soovisime, et intervjuueeritavate hulgas oleks kõigi nelja tantsuakadeemia esindajad.

Uurimistulemused näitasid, et nii koreograafia- kui ka tantsutundides on üliõpilaste eneserefleksiooni toetamine väga oluline. Eneserefleksiooni sisu, sagedus ja selle toetamiseks kasutatavad pedagoogilised meetodid on mõlemas grupis sarnased. Lisaks tõid mõlema grupi õpetajad välja, et üliõpilastel ilmneb eneserefleksiooniga raskusi.

#### Peatükk 4

Teise uurimuse tulemustele tuginedes otsustasime keskenduda kolmandas empiirilises uurimuses üliõpilaste eneserefleksioonile praktilistes tantsukursustes. Uurimisandmed refleksiooni pedagoogiliste praktikate kohta kogusime kahes etapis. Kirjanduse ülevaade refleksiooniteooriatest hariduses viitas kolme erineva lähenemise olemasolule. Need lähenemised põhinevad sellistele filosoofiatraditsioonidele nagu pragmatism, kriitiline sotsiaalteooria ja Kanti filosoofia. Refleksiooni eesmärk, fookus ja protsess on nendes lähenemistes erinevad. Kirjanduse ülevaade tulemused leidsid uurimuse esimeses osas kasutust kui suunavad mõisted (*sensitising concepts*), mil kaks uurijat analüüsisid uuesti teises uurimuses läbiviidud intervjuusid eesmärgiga mõista, milliseid refleksiooni teoreetilisi lähenemisi võib kasutada üliõpilaste eneserefleksiooni toetamise kirjeldamiseks praktilistes tantsutundides. Uurimise esimese etapi tulemusena koostasime refleksiooni pedagoogilisi praktikaid kirjeldava mudeli. Samas, uurijatepoolne refleksioonitegevuste grupeerimine üldisemate kategooriate alla ei esinda seda, kuidas õpetajad ise refleksiooni oma pedagoogilises praktikas mõistavad. Seetõttu pidasime oluliseks küsitleda neid õpetajaid uuesti, kelle arvamuste ja näidete põhjal kirjeldav mudel koostati. Küsitluse eesmärgiks oli välja selgitada, mida nad meiepoolsest refleksioonitegevuste organiseerimisest arvavad, kas nad tunnevad ära, et toetavad neid oma tundides ja kas kirjeldavast mudelist midagi olulist on välja jäänud. Neid eesmärke silmas pidades viisime läbi sisu valideerimise (*content validation*) uurimuse (Miles & Huberman, 1994). Pärast seitsme õpetaja teistkordset intervjuerimist soovisime teada saada, kas meie poolt koostatud refleksioonikategooriad on äratuntavad ka teiste praktilisi tunde õpetavate õpetajate poolt. Selle eesmärgiga intervjuerisime me kuut õpetajat. Kolmeteistkümne intervjuu analüüsi tulemuste põhjal leidsime, et praktilistes tantsutundides julgustatakse üliõpilasi viit erinevat refleksioonitüüpi läbi viima. Neli neist on seotud Kanti lähenemisega refleksioonile, mille raames on üliõpilased julgustatud reflekteerima järgmist: (1) kuidas nad rakendavad tantsudistsipliiniga seotud mõisteid ja põhimõtteid oma praktilises tegevuses, (2) kuidas nad rakendavad oma praktilises tegevuses mõisteid ja põhimõtteid, mis tulenevad teadlikkusest iseenda ning

oma kehaliste võimete kohta, (3) milliseid uusi tantsudistsipliiniga seotud mõisteid ja põhimõtteid on nad oma praktilise tegevuse põhjal kujundanud, (4) milliseid uusi iseenda ja oma keha kohta käivaid mõisteid ja põhimõtteid on nad oma praktilise tegevuse põhjal kujundanud. Kõiki neid reflektsoonitüüpe viiakse läbi eesmärgiga ühendada erinevaid mõisteid ja põhimõtteid oma kehalis-tunnetusliku praktikaga, et käituda enesekindlalt erialase tegevuse kontekstis. Reflektsooni viies tüüp on seotud reflektsooni pragmatistliku lähenemisega: (5) üliõpilased on julgustatud arutlema oma pikemaajalise arengu kohta, välja tooma, mis vajab suuremat tähelepanu järgneva perioodi vältel ja planeerima tegevusi nende eesmärkide saavutamiseks. Lisaks praktika parendamisele, on viienda tüübi eesmärgiks ka oma professionaalse identiteedi alase teadlikusse tõstmine.

#### Peatükk 5

Lisaks sellele, et keskendusime reflektsooni pedagoogiliste eesmärkide ja reflektsooni soodustamiseks kasutatavate pedagoogiliste meetodite kirjeldamisele, uurisime ka seda, milliseid raskusi üliõpilased kogevad erinevaid reflektsoonitüüpe soodustavate ülesannete raames. Kvalitatiivsed uurimisandmed reflektsooniga seonduvate raskuste kohta kogusime 14-lt tantsuõpetajalt eelmises osas kirjeldatud uurimuse kontekstis, mis keskendus loodud mudeli sisu valideerimisele. Empiirilised uurimistulemused näitasid, et tantsuõpetajate hinnangul kogevad üliõpilased reflektsooniga seonduvalt mitmeid raskusi. Mainitud raskused organiseerisime järgnevasse kategooriatesse: üldised raskused, tegevuse kirjeldamisega seotud raskused, tegevuse hindamisega seotud raskused ning erinevatesse seisukohtadesse suhestumisega seotud raskused. Üldiste raskuste kategooria hõlmas raskusi nagu emotsioonidega toimetulek, ideede verbaliseerimine ja reflektsooniprotsessi lõppedes kasinate tulemuste esitamine. Teised kolm kategooriat olid seotud Procee (2006) poolt esitatud spetsiifiliste protsessidega reflektsoonis. Vaatamata teatud selgetele erinevustele, ilmnesid need raskused eelmises osas kirjeldatud viie erineva reflektsoonitüübi lõikes. Toetudes õpetajate poolt välja toodud raskustele, koostasime küsimustiku, mis hõlmas nelja kuni kuut väidet iga reflektsooniraskuse kategooria kohta. Küsimustik täideti ühe tantsuakadeemia 17-ne teise aasta tantsuüliõpilase poolt. Viimased märkisid ära mõned raskused igas kategoorias, lisaks toodi välja, et enim kogetud probleem oli seotud oma tegevuse hindamisega.

## Peatükk 6

Viimases uurimuses pöördusime tagasi IKT juurde ja keskendusime sellele, kuidas saaks üliõpilaste refleksiooniprotsesse IKT vahendusel kõrgemas tantsuhariduses toetada. Selleks kasutasime ühe koreograafiakursuse ja ühel tantsutehnika kursuse raames videopõhist õpikeskkonda (DiViDU) üliõpilaste igapäevase eneserefleksiooni toetamiseks. Vastukaaluks refleksiooniprotsessidega seonduvatele raskustele rakendasime IKT tuge järgmiselt. Üliõpilaste praktilise tegevuse kirjeldamise toetamiseks kasutati videomontaaži ja video vaatamist, mida toetasid omakorda fookuse valimiseks õpetajate poolt ette antud küsimused. Õpetajate poolt esitatud küsimusi ja hindamiskriteeriume rakendati oma tantsupraktika hindamise toetamiseks. Kaasõppijate tagasisidega seotud ülesandeid rakendati aga erinevate seisukohtade teadvustamiseks. IKT toe mõju uurisime hindamise juhtumiuuringu (*evaluation case study*) (Yin, 1993) disaini kasutades, kus keskendusime 15-ne üliõpilase ja kahe õpetaja seisukohtadele. Juhtumiuuringu teooria (*programme theory*) hindamiseks kasutasime uurimismeetodina intervjuud õpetajatega ja grüpiintervjuud üliõpilastega. Intervjuude käigus küsisime uuringus osalenud üliõpilastelt ja õpetajatelt, kas ja mil moel toetas IKT tugi üliõpilasi refleksiooniülesannete läbiviimisel.

Uurimistulemused näitasid, et videopõhine õpikeskkond saab üliõpilasi toetada individuaalse tantsupraktika kirjeldamisel ja hindamisel ning võib soodustada erinevate seisukohtade teadvustamist alljärgnevatel tingimustel. Esiteks, filmitud praktika on üliõpilaste hinnangul piisavalt tähendusrikas. Teiseks, õpetaja poolt esitatud küsimuste ja hindamiskriteeriumide näol on osutatud üliõpilastele piisavat toetust. Kolmandaks, erinevate kogemuste ja/või seisukohtadega kaasõppurid tunnevad end grupis turvaliselt oma seisukohtade ja põhimõtete jagamisel. Uurimistulemused näitasid veel, et oma tantsupraktikast videoülesvõtete vaatamine soodustas üliõpilasi oma tegevustest realistlikuma pildi kujunemist. Hindamisülesanded, kus üliõpilastel oli võimalik kasutada õpetaja poolt antud küsimusi ja hindamiskriteeriume, soodustasid üliõpilasi hindamises aktiivsemat rolli võtma. Lisaks, hindamisülesanne soodustas neid olema arutluskäigus täpsem ja põhjalikum. Kaasõppurite tagasiside osutas koreograafiakursusel väärtuslikele alternatiividele üliõpilaste poolt loodud tantsukompositsioonide osas ning pakkus balletiklassis mõningaid kasulikke soovitusi tantsutehnika täiustamiseks. Kõik üliõpilased märkisid, et veebipõhine õpikeskkond oli turvaline tagasiside andmiseks. Mõned üliõpilased tõid välja, et veebipõhine tagasisideülesanne toetas neid olemaks

ratsionaalsem oma tagasisides võrreldes silmast-silma (*face to face*) situatsiooniga.

#### Peatükk 7

Viimase peatüki alguses toome välja erinevate empiiriliste uurimuste tulemused. Järgnevalt arutleme empiiriliste uurimistulemuste üle kolmest erinevast vaatevinklist: tantsupedagoogika, refleksioon praktilistes tantsutundides ning IKT praktilises tantsuõppes. Üks peamisi arutlusaspekte seondub sellega, et ühelt poolt on tantsuõppe üliõpilased julgustatud reflekteerima tantsudistsipliiniga seotud küsimuste üle ning teiselt poolt iseenda üle. Põhimõtteliselt arvame, et kaks tantsuhariduse traditsioonilist õpetamiskäsitlust – loovtantsu mudel ja professionaalse tantsu mudel – vormivad tausta igapäevaseks eneserefleksiooniks. See tähendab, et eneserefleksiooni fookus praktilises tantsuõppes puudutab nii professionaalse tantsukunsti standardeid kui ka üliõpilaste subjektiivsust. Lisaks on eneserefleksioonis pikema ajaperioodi vältel olulisel kohal ka üliõpilaste professionaalne identiteet. Üliõpilased on julgustatud hindama, millises suhtes on nende personaalne identiteet erinevate tantsukunsti professionaalidele sobiliku professionaalse identiteediga ja kuidas need omavahel haakuvad.

Lisaks arutlesime, kuidas on antud uurimustes tantsupedagoogika ja refleksiooni kohta saadud tulemused asjakohased ka teistes kunstivaldkondades ja kehakultuuri õppeprogrammides. Harland (2007) tõi välja, et traditsiooniliselt on hea kunstihariduse eesmärkideks olnud: loovuse arendamine ja kunstivaldkonna spetsiifiliste tehnikate ning oskuste arendamine. Ta rõhutab, et need kaks eesmärki peavad kunstide hariduses tasakaalus olema. Lisaks toob ta välja, et kolmas eesmärk, mis on suunatud tähendusele väljenduses ja loomises, on muutumas kunstide hariduses väga oluliseks. Me leiame, et tähenduse kategooriat ei peaks vaatama eraldiseisvana vaid pigem primaarse osana traditsiooniliste kunstide hariduse eesmärkides: (1) loovus ja subjektiivsus ja (2) valdkonnapõhised teadmised ja oskused. Oleme seisukohal, et õppijate eneserefleksioon oma õppimise, käitumise ja veendumuste osas toetab ühtlasi ka tähenduse leidmist väljenduses ja loomises. Lisaks, kuna refleksioon toetab kahe eesmärkide grupi mõtestamist ja isikustamist, leiame, et refleksioon on oluline ka mainitud eesmärkide ühendamiseks ja tasakaalustamiseks.

Esitatud refleksiooni pedagoogiliste praktikate mudel haakub ka kaasaegsete kehalise kasvatused pedagoogika seisukohtadega. Välja on toodud, et õppijakeskne pedagoogika vajab selles haridusvaldkonnas suuremat tähelepanu (nt Ennis, 2000). Õppijate eneserefleksiooni saab vaadata kui ühte

võtmepõhimõtet nendes uutes pedagoogilistes käsitlustes. Ühelt poolt soodustab õppija toetamine tema reflektiivsetes otsustustes uute õppijale tähenduslike teadmiste loomist, kuna antud teadmised kasvavad välja õppijate enda praktilistest kogemustest. Teiselt poolt võib aga tulevastele professionaalidele anda rohkem vastutust valdkonnaspetsiifiliste mõistete ja põhimõtete õppimisel. Õppijad saavad läbi viia deduktiivseid otsustusi selleks, et välja selgitada, kuidas korrektselt nad erialaspetsiifilise raudvara põhimõtteid oma praktilises tegevuses rakendavad.

Teine oluline aruteluaspekt on seotud IKT toe kasutamisega refleksiooni toetamiseks igapäevases õppes. Oma kogemustest mõtlemine väljaspool etteantud raame ja nende nägemine objektiivselt vaatevinklist, justkui oleks need sooritatud kellegi teise poolt, on väljakutse mitte ainult tantsuõppijatele vaid inimestele üldisemalt. Lihtsam on teiste tegevusi sel moel näha, ja nii on ka lihtsam kogenud õpetajatele õppija tegevusi tagasi peegeldada. Samas seisneb siinkohal oht, et see võib muuta õppijad passiivseteks ja õpetajast sõltuvateks. See võib omakorda suurendada barjääri eneserefleksiooniks, kuna õppijad võivad pelgalt õpetajapoolseid parandusi ootama jääda selle asemel, et oma tegevusi ise hinnata. Enamgi veel, kuna õpetajad on konkreetse aine eksperdid, siis võib olla õppijatel raske õpetaja poolt antud korrigeerimiste ja kommentaaride osas küsimusi esitada. Seda hoolimata sellest, et tantsuõpetajate eesmärgiks, nagu nähtus antud väitekirja erinevate uurimuste raames läbiviidud intervjuudest, on üliõpilaste aktiveerimine õppimises ja üliõpilaste ärgitamine võtmaks oma õppimise ja õpitulemuste suhtes suuremat vastutust. Antud uurimuse tulemused on seega eriti olulised, kuna oleme näidanud, et oma tegevusele tagasisivaatamine videoülevõtete abil toetab õppijaid nägema oma tegevusi objektiivsemast vaatenurgast ja aitab märgata uusi elemente oma tegevuses. Kuigi enese vaatamine videoülevõtte vahendusel on tõhus abi eneserefleksiooniks, ei ole see siiski piisav. Videoülevõtetel nähtu üle reflekteerimiseks on vajalik, et üliõpilased valivad kõigepealt fookuse, mille üle reflekteerida, ning hindavad fookuspunkti raames oma tegevust. Siinkohal on väljakutseks see, et õppijad ei pruugi teada millised kriteeriumid on vajalikud antud tegevuse hindamiseks. Me oleme näidanud, et õpetajad saavad toetada õppijate enesehindamist sellega, et esitavad küsimusi ja jagavad hindamiskriteeriume. See omakorda toetab seda, et üliõpilased õpivad tundma ja kasutama erialaspetsiifilisi standardeid. Lisaks enese praktiliste kogemuste kirjeldusele ja hindamisele, hõlmab refleksioon ka erinevatesse seisukohtade teadvustamist ja nendesse suhestumist. Me nägime, et tantsuetendusest videoülevõtete vaatamine eelnevalt tagasiside andmisele toetas seda, et tagasiside kujunes

konkreetsemaks ja põhjalikumaks. Võttes arvesse, et refleksiooniga seotud raskused, mida antud uurimuses kirjeldasime, on sarnased raskustega teistes haridusvaldkondades ning näivad viitavat üldistele refleksiooniga seotud raskustele formaalhariduses, tõstatub küsimus sellest, kuidas õppijaid antud raskuste ületamisel toetada. Viimane on oluline ka väljaspool kõrgemat tantsuharidust. Kasutegurid, mis videopõhise DiViDU õpikeskkonna kohta tantsu üliõpilaste poolt välja toodi, on meie hinnangul asjakohased ka teistes kõrghariduse valdkondades.

Uurimuse empiiriliste tulemuste arutluse järgselt esitame uurimistulemustele tuginedes praktilisi juhtnööre. Need katavad soovitusi õppijate eneserefleksiooni toetamiseks ja praktilisi juhtnööre IKT rakendamiseks hariduses. Peatüki viimastes osades arutleme selle üle, kuidas sobilikud olid kasutatud uurimisdisainid ja uurimismeetodid väitekirjas püstitatud uurimisküsimustele vastuste leidmiseks. Samuti anname soovitusi edasisteks uurimusteks, mis keskenduvad järgnevatele teemadele: professionaalne identiteet, sotsiaal-kriitilise teooria roll refleksioonis, refleksiooni pedagoogika, refleksiooniga seotud raskused, IKT tugi, käesolevas väitekirjas leitud tulemuste sobilikkus teistele haridusvaldkondadele.

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### **Curriculum Vitae**

Äli Leijen (maiden name Rääsk) was born on March 19<sup>th</sup>, 1979 in Tartu, Estonia and completed her secondary education in 1997 at the Tartu Commerce Gymnasium. She studied Educational Sciences at the Tartu University and graduated 2001 *cum laude*. During 2002 – 2003 she worked as a child care specialist at the Jõgeva Rural Municipality. In 2003 she moved to the Netherlands, where in 2004 she earned an MSc degree in Educational and Training Systems Design from the University of Twente. Her master's thesis focused on the use of a virtual learning environment to support constructivist teaching and learning in a higher professional education institute in Estonia. In 2004 Äli Leijen started her PhD candidacy at the IVLOS Institute of Education, Utrecht University with a scholarship from the Archimedes Foundation in Estonia. Next to her studies, Äli Leijen worked from 2003 to 2008 as part-time curriculum specialist at the Viljandi Culture Academy of Tartu University in Estonia. During the last year of her PhD study Äli Leijen was also working as part-time researcher and educational advisor in the Educational Development team at IVLOS, where she was involved in a European project on professional development of trainers and different projects related to computer-based assessment and research intensive education. From March 2008 she is employed as a researcher at the Viljandi Culture Academy of Tartu University.



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