



# **Handbook for Workshops**

**A handbook on  
how to organize workshops  
aimed at teaching digestive endoscopy**

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# Table of contents

- I. Introduction**
- II. Definitions of workshops**
- III. Aims and outline of handbook**
- IV. General aspects of planning and implementation**
  - A. Organization and time frame**
  - B. Preparation of teachers and tutors**
  - C. Budget planning**
- V. Specific aspects of implementation**
  - A. Equipment skills workshop**
  - B. Dummy workshops**
  - C. Live demonstrations**
  - D. ESGE workshops with live demonstrations**
- VI. Assessment and evaluation of workshops**
  - A. Assessments of learning outcomes**
  - B. Evaluation of event**
- VII. Authors**
- VIII. Definitions and terminology**
- IX. Appendices**
  - Appendix 1 Workshop planning template**
  - Appendix 2 Teacher's personal session plan (part 1) – Organizational planning**
  - Appendix 3 Teacher's personal session plan (part 2) – Implementation schedule**
  - Appendix 4 Budget planning template**
  - Appendix 5 Workshop planning template for equipment skills workshops**
  - Appendix 6 Plan: How to make "home-made dummies"**
  - Appendix 7 List of commercially available dummies**
  - Appendix 8 Workshop planning template for dummy workshops**
  - Appendix 9 Workshop planning template for live demonstrations**
  - Appendix 10 ESGE–ESGENA workshops in advanced therapeutic endoscopy – Volunteer form**
  - Appendix 11 Internal evaluation form**
  - Appendix 12 External evaluation form**

# I. Introduction

Over the past 30 years, endoscopy has become an essential tool in the diagnosis and therapy of digestive diseases. Technical developments in endoscopes and devices and the introduction of completely new and complex procedures characterize the field of digestive endoscopy. Therefore, both endoscopists and nurses seek educational opportunities, through lectures, seminars, workshops or fellowships, to obtain and maintain relevant knowledge and technical skills, and ultimately, to gain competencies relevant to their clinical work in endoscopy.

Although it is recognized that full competence requires practice with patients in a clinical setting, workshops provide good learning environments to start the process of training technical skills.

In response to this, the Education Working Group of the European Society of Gastrointestinal Endoscopy Nurses Associations (ESGENA) and the Educational Committee of the European Society of Gastrointestinal Endoscopy (ESGE) have developed this handbook, which aims to provide a **framework** to support national societies, educational institutes and individual departments in:

- Planning, delivering and evaluating different types of workshops for teaching digestive endoscopy, namely **equipment skills workshops, dummy workshops** and **live demonstrations**
- Advancing their structures for practical training for both nurses and doctors, working in this field.

Workshops included in this handbook may stand alone or may be part of a longer teaching programme incorporating other teaching methods.

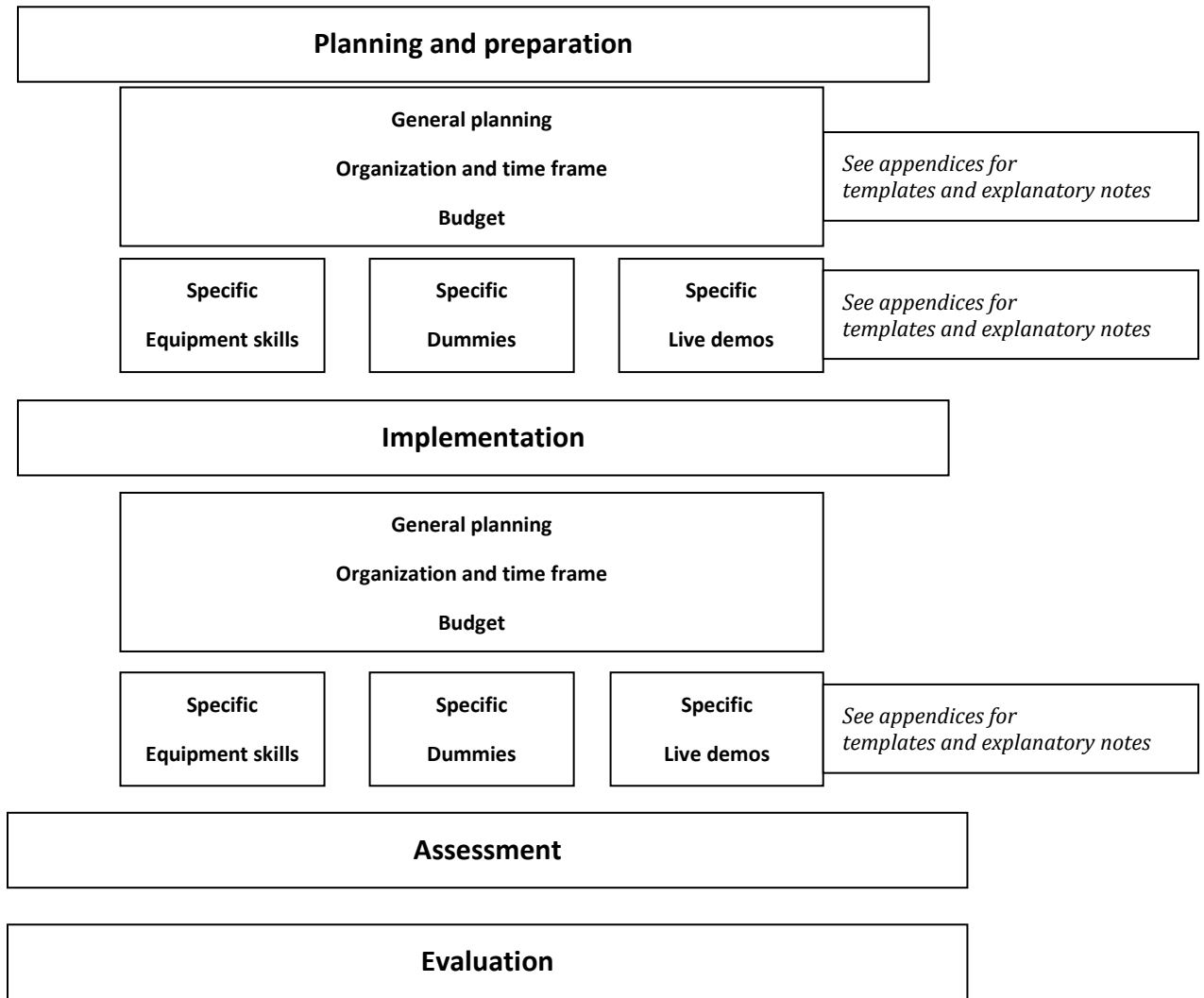
General aspects of organizing and implementing a workshop as well as specific aspects according to the different types of workshops are described. Methodology for assessment of the desired learning outcomes and the evaluation of workshops are presented. Moreover, the handbook also includes the manual for ESGE-endorsed workshops with live demonstrations. Several appendices with checklists and templates support the implementation of workshops (see **Figure 1**).

This handbook reflects the experience of both endoscopists and nurses who have organized workshops at the national and European level under the auspices of ESGE and ESGENA. It does not pretend to be exclusive and it is open for review by the endoscopic community. The authors believe that the handbook provides useful information for daily clinical training as well as for educational events on the occasion of conferences or courses. By implementing them in daily use and with relevant studies their validity will be proven. This handbook would also be the ideal support for future train-the-trainer-courses on “How to organize a workshop”.

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**Figure 1: Structure of the *Handbook for Workshops***



## II. Definitions of workshops

### 1. Workshop

A workshop is a training session that may last from several minutes to several days. It emphasizes problem solving, practical demonstration and hands-on training and requires the involvement of the participants.

Workshops in Endoscopy are a means to:

- Train new staff, students and visitors
- Update / refresh staff
- Train on new equipment
- Train new procedures
- Train new techniques.

### 2. Equipment skills workshops

Equipment skills workshops are mainly focused on the technical aspects of endoscopic procedures.

### 3. Dummy workshops

Workshops that include any type of dummy are defined as “dummy workshops”.

### 4. Workshops with live demonstrations

Workshops that include patients are defined as “workshops with live demonstrations”.

To achieve the best integrated learning outcome, a combination of workshop types should be used, i.e. both skills and technical workshops combined with those that also include patient care.

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## III. Aims and outline of handbook

After working through this handbook, individuals, societies, departments or institutes should be:

- **Aware of different types** of workshops, their characteristics and educational benefits
  - **Able to choose the appropriate type of training** for the respective target group and expected learning outcomes
  - **Able to create an overall implementation plan** for the specific workshop
  - **Able to define aims and learning outcomes** for each workshop session
  - **Able to create a teaching plan**
  - **Able to assess workshops** with reference to the expected learning outcomes.
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## IV. General aspects of planning and implementation

### A. Organization and time frame

The organizational efforts and scale of planning actions differ for each workshop type. **Irrespective of the type of workshop chosen**, the organization of any teaching event has uniform organizational steps that need to be clarified and should be performed in chronological order. Explanatory notes relevant for each workshop are included in **Table 1**. Specific issues relevant for different types of workshops are described in **Chapter V**.

A uniform blank template is provided in **Appendix 1**, which can be used to plan the individual workshop.

**Table 1: Organizational steps relevant for all types of workshops**

Organizational steps	Detailed issues and notes
1. Planning	
What	<p><b>Topic</b></p> <ul style="list-style-type: none"> <li>The topic of the workshop has to be chosen and presented in a precise and short title</li> </ul> <p><b>Aims of workshop</b></p> <ul style="list-style-type: none"> <li>The overall aim describes the focus / target of the workshop</li> </ul> <p><b>Learning outcomes</b></p> <ul style="list-style-type: none"> <li>The detailed listing of expected learning outcomes is the prerequisite for target-oriented learning</li> <li>Learning outcomes need to be SMART:               <ul style="list-style-type: none"> <li>S = Specific</li> <li>M = Measurable</li> <li>A = Attainable</li> <li>R = Realistic</li> <li>T = Timely</li> </ul> </li> </ul>
Who	<p><b>Target group / participants</b></p> <ul style="list-style-type: none"> <li>Workshops can be organized for one profession (doctors or nurses) or for a group of professions. If the workshop is open for different professions, it is of benefit to organize it as a team training that reflects daily work in a multidisciplinary team</li> <li>In order to meet the needs of the different participants, it is educationally worthwhile to split attendees according to basic, intermediate and advanced experience, knowledge and skills</li> <li>Ideally attendees on one work station should have a similar level of experience and knowledge</li> </ul> <p><b>Organizing body</b></p> <ul style="list-style-type: none"> <li>The organizing body can be:</li> </ul>

	<ul style="list-style-type: none"> <li>○ Endoscopy departments, hospitals, healthcare providers, etc.</li> <li>○ Teaching institutes, universities, etc.</li> <li>○ Medical or nurses societies and nursing associations</li> <li>○ Conference organizations</li> <li>○ Companies producing endoscopes, accessories, drugs, reprocessing devices, process chemicals, etc.</li> </ul> <ul style="list-style-type: none"> <li>● The different organizers have different recourses and organizational structures that can be used for organizing the workshop</li> </ul> <p><b>Teaching team</b></p> <ul style="list-style-type: none"> <li>● The teaching team should comprise experts in the field who have teaching skills</li> <li>● The teaching team can include different professions, acting as speakers, tutors, chairs</li> </ul> <p><b>Supporting team</b></p> <ul style="list-style-type: none"> <li>● The supporting team (e.g. hospital staff, technicians, representatives of industry) supports the teaching team with clinical infrastructure, technical equipment or endoscopy-related equipment. Especially in bigger events, presentation and transmission require specially trained personnel</li> <li>● Organizational staff (e.g. secretary, congress organizations) provides support for registration, accommodation, catering, etc.</li> </ul>
<p><b>When</b></p>	<p><b>Date and duration</b></p> <p>Workshops can cover time slots from several minutes (e.g. when new staff/new equipment is trained) to several days in bigger events</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>● Start time needs to fit the distance attendees have to travel</li> <li>● Workshops longer than one day may require additional cost e.g. accommodation, time away from work, etc.</li> </ul>
<p><b>Where</b></p>	<p>Venue and space requirements depends on the aims, type and length of the workshop as well as on the number of participants.</p> <ul style="list-style-type: none"> <li>● Workshops can be organized: <ul style="list-style-type: none"> <li>○ In own department / hospital</li> <li>○ In host department / hospital</li> <li>○ In teaching centres</li> <li>○ During formal courses and specialist education at hospitals, institutes or universities</li> <li>○ During conferences and regional meetings</li> <li>○ Independently (i.e. by companies, commercial institutes)</li> </ul> </li> </ul>
<p><b>How</b></p>	<p>Workshops can be organized into three different types:</p> <ul style="list-style-type: none"> <li>● <b>Equipment skills workshops</b> are mainly focused on technical aspects of endoscopic procedures</li> <li>● <b>Dummy workshops</b> include any type of dummy</li> <li>● <b>Workshops with live demonstrations</b> include patients who are treated in real time during the workshop</li> </ul> <p>To achieve the best integrated learning outcome, a combination of workshop types</p>

	<p>should be used, i.e. both skills and technical workshops combined with live workshops that include patient care</p> <p>Depending on the type of workshop, its aims and number of participants, the venue and equipment requirements will differ</p>
<b>2. Finances</b>	All costs of the workshop should be included in one budget plan covering fixed and variable expenses, as well as income from registration and sponsorship. <b>Chapter IV C</b> gives detailed information about different financial aspects
<b>3. Preparation</b>	
<b>Participants</b>	<p><b>Announcements and advertising</b></p> <ul style="list-style-type: none"> <li>• If a workshop is organized for external participants, announcements in print and electronic media are very useful in addition to the postal distribution of invitation flyers</li> <li>• The recruitment depends on the catchment area and the size of the event</li> </ul> <p><b>Prerequisite of participants</b></p> <ul style="list-style-type: none"> <li>• Prerequisites for participants (qualification, knowledge, experience, etc.) should be announced in the announcements and invitations</li> </ul> <p><b>Number of participants</b></p> <ul style="list-style-type: none"> <li>• The number of participants should be limited in order to provide efficient practical training and assessment of learning outcomes. The number of attendees depends on: <ul style="list-style-type: none"> <li>○ Type of workshop</li> <li>○ Number of teaching staff and number of training stations</li> <li>○ Venue and equipment resources</li> </ul> </li> </ul>
<b>Teaching and supporting team</b>	<ul style="list-style-type: none"> <li>• The teaching and supporting team will be invited</li> <li>• After compiling the schedule of the workshop, speakers and tutors will prepare session plans. A structured plan is a helpful tool for a structured preparation <b>(see Chapter IV B)</b></li> </ul>
<b>Venue</b>	<p>Depending on the workshop type and number of participants, the venue has to fulfil different requirements concerning:</p> <ul style="list-style-type: none"> <li>• Number, type and size of room(s): lecture halls, examination rooms, preparation room, storage, rooms for catering, etc.</li> <li>• Furniture (tables, chairs, trolleys, endoscopic equipment)</li> <li>• Technical support (electricity, water, light, etc.), especially important for workshops outside the clinical setting</li> <li>• Health and safety aspects</li> <li>• Audio visual aids (e.g. for presentations and transmission)</li> <li>• Catering, accommodation</li> </ul>
<b>Equipment and supporting material</b>	Depending on the workshop type and number of participants, the equipment and supporting material will differ according to:



	<ul style="list-style-type: none"> <li>• Endoscopic / medical equipment</li> <li>• Technical equipment (microphones, flipchart, beamer, transmission, etc.)</li> <li>• Personal protective equipment</li> <li>• Teaching aids (handouts, electronic presentation techniques, maps, posters, videos, etc.)</li> <li>• Conference registration, badges, bags (for bigger events)</li> </ul>
<b>Time schedule</b>	Workshops also need a detailed programme and schedule. When calculating the time, additional time for preparation and setting up of equipment as well as time for clearing up after the event has to be taken into account
<b>4. Delivery</b>	<ul style="list-style-type: none"> <li>• Time keeping and group management are important for the group dynamic</li> <li>• Technical aspects, team work, hygiene and safety issues as well as troubleshooting are essential for workshops</li> <li>• Catering, accommodation and the overall workshop organisation influence the welfare of participants</li> </ul>
<b>5. Assessment</b>	<ul style="list-style-type: none"> <li>• Assessment of learning outcomes is standard for structured recognized training courses and specialist education. It should be obligatory for any type of workshop (see <b>Chapter VI A</b>)</li> <li>• The use of credit points differ from country to country. In the majority of countries they are used for university-based courses and degrees. They are also established for structured training programmes for doctors and nurses</li> <li>• Universities set out credit points according to the Bologna process. If credit points are to be used for workshops, an early application may be necessary</li> </ul>
<b>6. Evaluation</b>	Formal and structured feedback is essential in order to evaluate the events from different point of views (participants, organizers and teaching team). It is a tool to identify weaknesses and problems as well as recourses and areas of improvement (see <b>Chapter VI B</b> )

## B. Preparation of teachers and tutors

An essential part of preparing a workshop is the specific preparations of the teaching staff. According to the defined aims and learning outcomes of the respective workshop, teachers and tutors should plan their sessions, irrespective of the type of workshop. **Table 2** covers the organizational preparation for teachers and tutors. A blank template is provided in **Appendix 2 and 3** which can be used to plan individual sessions.

**Table 2: Teachers’ organizational preparation**

<b>Duration of event and number of participants</b>	<ul style="list-style-type: none"> <li>• Teaching and allowing for hands-on practice takes time. This has to be taken into account when preparing the schedule and planning the hands-on sessions</li> <li>• Use realistic time frames for what you want to teach</li> <li>• The more students trying to learn a skill, the longer you need for hands-on practice and for assessment of skill learned (if applicable)</li> <li>• Work out how long it will take one student to practice, trouble shoot, and – if applicable – get assessed, and then multiply by the number of students attending</li> </ul>
<b>Pre-requisites of participants</b>	<p>Teachers and tutors have to take into account:</p> <ul style="list-style-type: none"> <li>• Basic and specialist qualifications of participants</li> <li>• Experience and knowledge of participants</li> <li>• Different professions (workshops for one profession only or for teams)</li> <li>• Skill mix during workshop</li> <li>• Catchment area (local, regional, national, international workshop)</li> </ul>
<b>Aims and learning outcomes</b>	<p>The overall aim is specified in detailed learning outcomes</p> <p>“At the end of this session the participants should be able to:</p> <ol style="list-style-type: none"> <li>1) ...</li> <li>2) ...</li> <li>3) ...”</li> </ol> <p>Detailed learning outcomes need to be measurable</p>
<b>Preparation of venue</b>	<p>Teachers might have special requirements for lecture halls or hands-on areas</p>
<b>Preparation of equipment</b>	<p>The preparation of endoscopic and technical equipment depends on the subject and technique to be trained</p>
<b>Preparation of staff</b>	<p>Teachers and tutors have to define what type of support they need (e.g. from technical and clinical staff during live demos)</p>
<b>Preparation of Participants</b>	<p><b>Pre-reading</b></p> <ul style="list-style-type: none"> <li>• A pre-reading might be helpful to update and harmonize the theoretical</li> </ul>

	<p>background</p> <ul style="list-style-type: none"> <li>• A pre-reading is often obligatory for recognized courses</li> <li>• Material for pre-reading should be compiled by the teaching staff in co-operation with the organizer</li> <li>• The material has to be distributed to the participants before the workshop. An adequate period of time has to be calculated for reading and learning</li> </ul>
<b>Schedule</b>	It is helpful to define the activities of teachers and participants in each teaching session and the material required for each time slot ( <b>see Table 3</b> )
<b>Assessment</b>	Teachers define the assessment before the workshop (e.g. written or practical exam). The assessment needs to be announced as it might require some learning by participants
<b>Evaluation</b>	Evaluation forms are prepared by the organizers
<b>References / guidelines etc.</b>	Teachers and tutors should be aware of guidelines and relevant laws for the specific topic or technique

**Table 3: Example of a teacher's implementation schedule**

Time	Teacher activity	Student activity	Equipment used
	Introductory talk with expected learning outcomes	Listen and ask questions	e.g. Projector, flip chart, OHP
	Demonstration and explanation	Observe, ask questions	Relevant equipment ± dummies
	Supervise practice	Hands-on practice	Relevant equipment ± dummies
	Review of what has been learned	Discussion	Flip chart
	Demonstration of trouble shooting Addressing issues raised by review	Observe, ask questions Hands-on practice	Relevant equipment ± dummies
	Assessment (of skills learned) (only possible for very small groups)	Demonstration of practical skill and relevant knowledge	Relevant equipment ± dummies

	Summary and conclusion	Listen, ask questions	e.g. Projector, flip chart
	Assessment and evaluation	<b>See Chapter VI</b>	
	Break (coffee / tea, lunch) (if session is more than 2 hours)	Break (coffee / tea, lunch) (if session is more than 2 hours)	

## C. Budget planning

All costs of a workshop should be included in one budget plan covering fixed and variable expenses, as well as income from registration and sponsorship.

### 1. Expenses

**Fixed costs** are calculated irrespective of the number of participants and cover all required facilities as well as required staff:

- Average costs are calculated per teacher
- Additional furniture might be necessary for dummy workshops
- Additional technical support may be needed for bigger events and specially for live demonstration
- Larger events may require special insurances according to local and national regulations.

**Variable costs** are calculated per delegate, covering for example paperwork, registration and catering:

- It is necessary to estimate the number of people expected to attend the workshop in order to prepare everything for each participant (e.g. registration, bags, catering, etc) and to produce all written documents for each participant (e.g. certifications, pre-reading, syllabus, etc.)
- Catering during the event includes not only catering for participants, but also catering for teachers and supporting staff.

As the workshop is planned in advance, costs may increase and unexpected additional costs may be incurred. Deadlines for application of credit points and official recognition of courses have to be taken into account. Costs for receiving credit points or course recognition can either be calculated per participant or per event.

### 2. Income

- Income of workshops can come from fees or from sponsorship.
- In-house training usually has no registration fees (e.g. for new staff or if new equipment is presented).
- Workshops that stand alone are usually financed by a combination of fees and industry sponsorship.
- If hands-on-training is part of recognized courses (e.g. for endoscopy specialist nurse education), these fees are usually calculated in the overall course fees.

**Appendix 4** provides a blank template for budget planning, which may be helpful to plan larger events. Moreover, it also makes sense to calculate the costs for smaller events such as costs for equipment, as these costs have to be calculated in the annual budget plan of the department.

## V. Specific aspects of implementation

### A. Equipment skills workshops

#### 1. Introduction

Equipment skills workshops are primarily focused on technical aspects of endoscopic procedures. They also cover aspects of patient care relevant to the respective technique, health and safety issues for patients and staff (e.g. for diathermia, handling of sharp instruments, personnel protection measures) and hygiene aspects (e.g. disposal, reprocessing).

#### 2. Aims and learning outcomes

Their **overall aims** are to familiarize staff with the safe use of equipment and to provide basic practice on the equipment.

At the end of equipment skills workshops the participants should be able to:

- Demonstrate understanding of use of equipment (construction, safe use, practice during procedure)
- Demonstrate understanding of theory (theory-practice-transfer)
- Demonstrate understanding of advantages, risks, limitations and possible complications of equipment
- Demonstrate understanding of possible alternatives, knowledge of trouble shooting and treatment of complications
- Choose the appropriate equipment
- Be aware of their competencies and limitations.

#### 3. Target group

An equipment skills workshop is an optimal tool for training new staff or training the use of new equipment in endoscopy. It can easily be organized as short training sessions in daily routine, as it requires a low level of preparation.

If new staff members are to be trained, equipment skills workshops should be part of a structured teaching plan for new staff. New staff members require intensive training with a tutor:student ratio = 1:1.

Advanced staff who are trained on new equipment or who are receiving updates, do not need the same intensive attention. Therefore, a tutor:student ratio of 1:5–10 may be sufficient.

#### 4. Different types of equipment skills workshops

Equipment skills workshops can be offered as:

- In-house workshops in the clinical setting (e.g. in endoscopy unit)
- Commercial workshops, organized by industry
- Workshops during conferences and local meetings (organized by medical and nurses society with or without support of industry)
- Part of formal courses and specialist education.

Each type has different advantages and limitations, which are listed in **Table 3**.

**Table 3: Advantages and limitations of equipment skills workshops**

Type of workshop	Advantages	Limitations
<b>In-house workshop</b> <ul style="list-style-type: none"> <li>• New staff</li> <li>• Updates</li> <li>• Refreshers</li> <li>• Students</li> <li>• Visitors</li> <li>• New equipment</li> <li>• New procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate to local area</li> <li>• Address individual needs</li> <li>• In-house mentorship</li> <li>• Supervision</li> <li>• Easy access</li> <li>• All equipment on-site</li> <li>• Health and safety issues easy to follow</li> <li>• Staff familiar with environment</li> <li>• Combination with DOPs (direct observation of practice)</li> </ul>	<ul style="list-style-type: none"> <li>• Limited variety of equipment</li> <li>• Staff levels</li> <li>• Time constraints</li> <li>• Interruption of daily routine</li> <li>• Difficult to plan in daily routine</li> <li>• Number of tutors is often limited</li> </ul>
<b>Commercial workshops organized at regional meetings or conferences</b>	<ul style="list-style-type: none"> <li>• Away from hospital</li> <li>• Pre-arranged</li> <li>• Fixed time and duration</li> <li>• Greater insight (broader view)</li> <li>• Peer support (interchange of experience, discussion)</li> </ul>	<ul style="list-style-type: none"> <li>• More organization</li> <li>• Fees, accommodation, travel</li> <li>• Costs for rooms, technique, catering,</li> <li>• Time away from unit</li> <li>• Staffing level</li> </ul>
<b>Workshops as part of formal courses and specialist education</b>	<ul style="list-style-type: none"> <li>• Integrated</li> <li>• Official recognition</li> <li>• Formal assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Limitations depend on location and organization of formal courses</li> </ul>

## 5. Structure

Equipment skills workshops can have the following structure:

### Theory

- Introduction into procedure
- Related patient care (pre-, intra-, post-procedure care)
- Equipment (constructions, functioning and use of equipment)
- Safety measures
- Risk and complications including their prevention and treatment / actions to be taken
- Aftercare, safe disposal of equipment.

### Practice

- Preparation of equipment
- Handling during procedure including safety aspects
- Trouble shooting including management of complications
- Aftercare, safe disposal of equipment.

If workshops are performed at hospitals, it is useful to have observed the equipment in use during real procedures.

The workshop planning for equipment skills workshops is described in **Appendix 5**.

## **B. Dummy workshops**

### **1. Introduction**

Dummy workshops offer practical training of technical skills on any type of dummy. Dummy training enables the training of technical skills, which combines handling of equipment and assistance during procedures. The use of special equipment can be trained under realistic simulations. The effect of endoscopic techniques becomes transparent. Single procedures or scenarios can be simulated.

### **2. Aims and learning outcomes**

Dummy workshops are aimed at familiarizing staff with safe use of equipment and to provide basic and advanced practical training.

Following the dummy workshop the participants should be able to:

- Demonstrate understanding of the procedure
- Demonstrate understanding of the assistance-related tasks and skills including preparation of the equipment, use of equipment during the procedure, co-operation with the endoscopist
- Demonstrate understanding of advantages, risks, limitations and possible complications of the procedure
- Demonstrate understanding of possible alternatives and treatment of complications during the procedure
- Choose the appropriate equipment
- Be aware of their competencies and limitations.

### **3. Target group**

Dummy workshops are helpful tools to train new staff and to train specific techniques.

- If new staff members are to be trained, dummies can be used as the second level of a structured programme, after becoming familiar with the equipment itself. It is recommended that new staff receive intensive training (tutor:student ratio = 1:1).
- Advanced staff, who are trained on new equipment or who are receiving updates, do not need the same intensive attention as new staff, because they already have key competencies in endoscopy. Therefore a tutor : student ratio of 1:5–10 per dummy may be sufficient.
- A mix of experience should be avoided on one dummy. Beginners, experts, new staff and students should be split into different groups, if possible.

### **4. Different types of dummy**

After defining the aims and objectives, target group and location, the dummy type can be chosen.

#### ***Home-made dummies***

Home-made dummies are simple dummies, which are prepared directly before the teaching session. The simple models combine meat, vegetables (e.g. pepper), fruits (e.g. oranges, strawberries, grapes), sweets (e.g. wine gum), foreign bodies (e.g. coins, marbles, stones, nuts), tubes, medical equipment (e.g. bowls) or paper (e.g. boxes or parcels). Their use is described in **Table 4**.

Michael Ortmann from the University Hospital in Basle, Switzerland, developed effective and simple dummies. Their construction is described in **Appendix 6**.

### **Commercial dummies**

Commercial dummies are simple and advanced dummies that are commercially available. Manufacturers produce plastic dolls to demonstrate the easy and effective use of their equipment or to train endoscopists and nurses in the use of equipment. Artificial and computerized dummies are available as plastic dolls or single organs. Endoscopists and surgeons have developed examples of biological and artificial dummies. Their construction and contact addresses are listed in **Appendix 7**.

**a) Biological dummies** are bio simulators that combine plastic dolls with organic material and organs. Organs are available as:

- Upper GI models consist of oesophagus, stomach and duodenum
- ERCP models consist of oesophagus, stomach duodenum and liver
- Lower GI tract models consist of the whole colon
- Bronchoscopy models consist of trachea, lung with lymph nodes
- Single pieces of meat are part of PEG models.

**b) Artificial dummies** combine plastic dolls with artificial material that simulate organs:

- Upper GI models consist of oesophagus, stomach and duodenum
- ERCP models consist of oesophagus, stomach duodenum and liver
- Lower GI tract models consist of the whole colon
- PEG models consist of oesophagus, stomach and duodenum.

**c) Computerized systems** simulate complex body functions in order to train whole endoscopic procedure rather than single techniques. Computerized systems combine routine diagnostic procedures with related advanced therapeutic techniques.

**d) Live animal models**, mostly pigs, are only used for training of complex techniques, e.g. Natural Orifice Transluminal Endoscopic Surgery (NOTES) or Endoscopic Submucosal Dissection (**ESD**). These trainings are performed in dedicated training centres.

Advantages and limitations of different types of dummy workshops are listed in **Table 5**.

## **5. Structure**

Dummy workshops can be held as training sessions (continuing training). They can also be used for practical exams and can easily be combined with equipment skills workshops.

Dummy workshops should have a theoretical introduction, followed by intensive practical training on dummies.



The specific planning issues for dummy workshops are described in **Appendix 8**.

**Table 4: Choice of dummies**

<b>Procedure to be trained</b>	<b>Choice of dummy</b>
<b>Hot biopsy</b>	Meat, biological dummies
<b>Biopsy, brushing</b>	Meat (with lumen), wine gums, tubes, biological dummies
<b>Injection</b>	Orange, white wine gums, meat with lumen, biological dummies
<b>Haemostasis (clipping, APC, ligation, loops, bicap, etc.)</b>	Meat, biological dummies, wine gums
<b>Polypectomy, EMR, ESD</b>	Meat and biological dummies (to train in cutting) Wine gums (to test the closing of the snare) Mushrooms
<b>Endoloop</b>	Meat, wine gum, biological dummies, mushrooms
<b>Ligation</b>	Meat, biological dummies, mushrooms
<b>Dilation, stenting</b>	Plastic models, tubes, biological dummies
<b>PEG</b>	Simple plastic model, dolls, biological dummies, artificial dummies
<b>Foreign body removal</b>	Pepper, plastic tubes and boxes filled with wine gums, marbles, stones, coins, etc.
<b>FNA, fine-needle biopsy</b>	Orange with thick skin
<b>ERCP</b>	Biological dummies, plastic models from industry and home made

**Table 5: Advantages and limitations of dummy workshops**

<b>Dummy</b>	<b>Advantages</b>	<b>Limitations</b>
<b>Home-made dummies</b>	<ul style="list-style-type: none"><li>• Cheap</li><li>• Easy to prepare</li><li>• Always available</li><li>• Realistic</li><li>• Useful for in-house training in own department</li></ul>	If meat is used in home-made dummies, dedicated “animal endoscopes” need to be used
<b>Biological dummies</b>	<ul style="list-style-type: none"><li>• Very realistic</li><li>• Advanced workshops with training of complex therapeutic procedures, scenarios and management of complications are possible</li></ul>	<ul style="list-style-type: none"><li>• Expensive</li><li>• More time planning for preparation</li><li>• Animal endoscopes are required</li><li>• Technical support is necessary for dummies</li><li>• Cultural limitations (pig models)</li></ul>
<b>Artificial dummies</b>	<ul style="list-style-type: none"><li>• Realistic</li><li>• Advanced workshops with training of complex therapeutic procedures, scenarios and management of complications are possible</li></ul>	<ul style="list-style-type: none"><li>• Expensive</li><li>• More time planning for preparation</li><li>• Special order of dummies</li><li>• Technical support is necessary</li></ul>
<b>Computerized dummies</b>	<ul style="list-style-type: none"><li>• Realistic</li><li>• Advanced workshops with training of complex therapeutic procedures, scenarios and management of complications are possible</li></ul>	<ul style="list-style-type: none"><li>• Expensive</li><li>• More time planning for set-up</li><li>• Special order of dummies</li><li>• Technical support is necessary</li><li>• Specific needs of specific equipment must be taken into account</li></ul>
<b>Live animal models</b>	<ul style="list-style-type: none"><li>• Realistic</li><li>• Advanced workshops with training of complex therapeutic procedures, scenarios and management of complications are possible</li></ul>	<ul style="list-style-type: none"><li>• Expensive</li><li>• More time planning for preparation</li><li>• Special order of dummies</li><li>• Technical support is necessary</li><li>• Support of veterinarian is necessary</li></ul>

## C. Live demonstrations

### 1. Introduction

Any teaching event involving patients is called a “live demonstration” as the “observer/student” is a person not directly involved in the care and treatment of the patient. This includes events such as:

- Teaching a new member of staff or a visiting nurse/doctor in the procedure room
- Clinical teaching demonstration of new equipment by an industry representative with additional staff attending
- Demonstrations in the clinical room
- Endoscopic procedures transmitted into a local seminar room during a course or workshop
- Live demonstrations transmitted into a lecture hall during a conference, such as ESGE workshops with live demonstration on advanced endoscopy (see **Chapter V D**).

### 2. Aims and learning outcomes

Live demonstrations are aimed at introducing participants to endoscopic procedures, the use of relevant equipment and the appropriate patient care during these procedures.

At the end of the workshop participants will:

- Be aware of indications and contraindications for procedures
- Appreciate the complexity of the demonstrated procedures and relevant equipment
- Be aware of the “tricks of the trade” used by experts
- Be aware of alternative approaches to solve a procedural problem
- Appreciate problem-solving interventions when aspects of the procedure go wrong
- List appropriate hygiene and infection control measures (if covered e.g. in lectures)
- List appropriate patient care (if covered e.g. in lectures)
- List appropriate equipment selection and care (if covered e.g. in lectures).

### 3. Target group

- A live demonstration can give new staff a first impression about a procedure/technique, but live demonstrations should not be the first step in a structured training programme. Equipment skills workshops and dummy workshops are better options for the training of initial technical skills.
- If new staff members are to be trained during a procedure, the trainee needs intensive hands-on training (tutor:student ratio = 1:1).
- Teaching a new member of staff during a routine endoscopy should not pose any additional problems as teaching occurs during a routine procedure booked on that day.
- If students and visitors directly observe a procedure, a limited number of observers are acceptable in the procedure room. The number depends on the size of the room and the complexity of the procedure.
- However, when patients are specifically chosen for live demonstration, additional organization, expenses and considerations are involved; and, above all, serious consideration must be given to the ethical aspects of live demonstrations.

### 4. Different types of live demonstration

**Table 6** lists some of the benefits and limitations / problems of live demonstrations.

**Table 6: Benefits and limitations of different types of live demonstrations**

Type of live demo	Good for / benefits	Limitations / issues
<p><b>In-house departmental training of member(s) of staff</b></p>	<p><b>Cost</b> No additional cost to daily practice</p> <ul style="list-style-type: none"> <li>• No need for transmission equipment</li> <li>• No cost for external teachers</li> </ul> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• “Real” live demonstration as student is in the room with the patient</li> <li>• Live demo is relevant to practice of student</li> <li>• Allows assessment of individual learning needs that can be met, and skills taught, which can be practised later</li> </ul> <p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• Department’s own patients</li> <li>• Risk is not increased by live demo</li> </ul>	<p><b>Cost</b> If hospital is paid per procedure – longer procedure may mean fewer patients on that day</p> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• Limited to patients scheduled on the day</li> <li>• Only local expertise</li> <li>• Patients need to give separate consent to have their procedure observed and may decline</li> </ul> <p><b>Patient issues / ethics</b> Procedure may take longer due to explanation and slower demonstration</p>
<p><b>New product: team teaching by company representatives with live demonstration element</b></p>	<p><b>Cost</b> Company carries cost of new equipment used for teaching</p> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• Allows team teaching</li> <li>• Department benefits directly</li> <li>• Company expert present during procedure – can trouble shoot on the spot</li> </ul> <p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• Company expert present during procedure – can trouble shoot on the spot.</li> <li>• If new equipment/procedure fails to deliver, conventional equipment is available within the department</li> </ul>	<p><b>Cost</b> If hospital is paid per procedure – longer procedure may mean fewer patients on that day.</p> <p><b>Educational</b> Team needs may take precedence over individual educational needs</p> <p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• Procedure may take longer due to explanation and slower demonstration</li> <li>• Presence of industry rep may compromise patient confidentiality and therefore needs special patient consent</li> </ul>
<p><b>Common aspects of all live demos for courses and conferences</b></p>	<p><b>Cost</b> If costs are incurred – the larger the group the cheaper per person</p> <p><b>Educational</b> More than one person can observe procedure</p>	<p><b>Cost</b> Expensive and complex to organize</p> <p><b>Educational</b> Does not teach competence, just gives an impression about the procedure</p> <p><b>Patient issues / ethics</b></p>

	<p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• Clinical staff being observed may be more focused.</li> <li>• Patients may be treated by endoscopist with expertise and/or equipment not available locally</li> <li>• Patients on waiting list with particular condition needed for live demo may be seen earlier and therefore jump the waiting list</li> </ul>	<ul style="list-style-type: none"> <li>• Needs advance planning of patient selection</li> <li>• May delay procedures as patients have been selected for live demo and have to wait for live demo event</li> <li>• Pressure on endoscopist to succeed – may take more risks during procedure</li> <li>• Procedure may be prolonged due to endoscopist trying for longer, or spending time explaining, etc. This may result in additional sedation / anaesthesia to be given to patients</li> <li>• Arrangements need to be made for all patients not treated during live demo</li> <li>• If transmission equipment is not pre-installed, technical and equipment company staff will be present in the procedure room and may jeopardize privacy and dignity</li> </ul>
<p><b>Additional issues for live demos during conferences</b></p>	<p><b>Cost</b> Large groups</p> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• See procedures not done in own department</li> <li>• Demonstration of new methods / equipment</li> <li>• Panel Discussion by multiple experts in the field</li> </ul> <p><b>Patient issues / ethics</b> Patients may be seen by experts not normally available in their own hospital</p>	<p>Most time consuming and difficult to organize</p> <p><b>Cost</b> Expensive:</p> <ul style="list-style-type: none"> <li>• Technically (equipment, live transmission, etc.)</li> <li>• Experts' expenses</li> <li>• May need to hire large lecture room</li> </ul> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• Often no defined aims and learning outcomes</li> <li>• Cannot evaluate learning outcomes, only event</li> <li>• Directed more at learning needs of endoscopist rather than endoscopy assistants</li> </ul> <p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• May need transfer of patients from other hospitals</li> <li>• May increase risk to patients as procedures are done by endoscopists not usually working in that department (different environment and staff, unfamiliar</li> </ul>

		<p>equipment)</p> <ul style="list-style-type: none"> <li>• Aftercare is left to local doctors often without relevant procedural experience</li> <li>• Risks are reduced if live demo procedures are done by staff of the transmitting department.</li> </ul>
<b>Additional issues for local courses</b>	<p><b>Cost</b></p> <ul style="list-style-type: none"> <li>• Cost–benefit balance is maintained</li> <li>• Transmission equipment into a seminar room might already be installed</li> </ul> <p><b>Educational</b></p> <ul style="list-style-type: none"> <li>• Teaching of more than one person</li> <li>• transmission into seminar room</li> </ul> <p><b>Patient issues / ethics</b> Observers are not inside the procedure room – protects privacy and dignity</p>	<p><b>Cost</b> Additional cost if transmission equipment is not already installed</p> <p><b>Educational</b> Group’s educational needs are more important than individual educational needs</p> <p><b>Patient issues / ethics</b></p> <ul style="list-style-type: none"> <li>• As above</li> <li>• Procedure may take longer due to explanation and slower demonstration</li> </ul>

## 5. Structure

All live demonstrations are skills focused because the “observer” is not involved in the procedure. Therefore live demos **DO NOT TEACH COMPETENCE**. Consequently they should be part of a larger skills training programme. An example of a teaching session including live demos is provided in **Table 7**.

**Table 7: Example of teaching session including live demonstration**

Time	What	How
	Introduction Aims and objectives Indications / contraindications	Talk
	<b>Live demo</b> – “See one” for novices	<b>Live demo</b> – One case, live discussion
	Seminar session on equipment	Skills workshop ± dummies
	Theory	Talk
	<b>Live demo</b> – Cases	<b>Live demo</b>
	Seminar session	Discussions on what was seen, clarification
	Managing complications and trouble shooting	<b>Live demo</b> and/or video ± skills workshop ± dummies
	Summary and conclusion	Talk
	Evaluation	See Section VIII

**6. Potential problems / additional considerations**

Teaching a new member of staff during a routine endoscopy should not pose any additional problems as teaching occurs during a routine procedure booked on that day. However, where patients are specifically chosen for live demonstrations, additional organization, expenses, and considerations are involved; and, above all, serious consideration must be given to the ethical aspects of live demonstration.

The specific planning issues for workshops with live demonstrations are described in **Appendix 9**.

**D. ESGE workshops with live demonstrations****1. Introduction**

ESGE supports the organization of international live demonstration workshops on advanced endoscopy, by providing basic funding and logistical support to one host centre per year. Please note that funding raised by the ESGE is limited and will be specified once the final selection regarding the venue has been made. Countries wishing to apply are asked to consider the contents of the following manual carefully when preparing their proposal.

National Societies who wish to host a live demonstration workshop in conjunction with a local organizer (medical school, department and unit) should submit a written application to the Education Committee of the ESGE care of the ESGE Technical Secretariat. The proposal must contain the information detailed in **Table 9**.

**Table 9: Essential information required when applying for funding of live demonstration workshops**

Items	Comments
Type of workshop	Video demonstration or live demonstration
Proposed date and place of the Workshop	At least 15 months' notice must be given
Workshop venue	Including endoscopy unit and lecture rooms
List of local medical personnel	Endoscopic experts and nurses
Hotel accommodation and transport	
Preliminary programme of the workshop	
Preliminary budget of the workshop*	
Previous experience	Experience in organizing national or international scientific meetings, particularly with live demonstrations

\*The preliminary budget must also cover the travel and accommodation of six ESGE international faculty (live demonstration) or four ESGE international faculty (video demonstration)

Applications should be submitted at least 15 months before the scheduled workshop, the deadline being June 30 each year. The successful applicant will be chosen by the Education Committee and the Governing Board of the ESGE.

## 2. Aims and learning outcomes

Workshops with live (and video) demonstrations are aimed at achieving the following goals:

- To promote the teaching and practice of gastrointestinal endoscopy
- To enhance and assist in the control of quality of endoscopic procedures
- To target their activities to any persons involved in endoscopic procedures
- To introduce participants to (advanced) endoscopic (therapeutic) procedures, relevant equipment and appropriate patient care.

All Live demonstrations are skills focused but **DO NOT TEACH COMPETENCE**. ESGE live demonstration workshops give the audience an impression about the endoscopic technique.

At the end of the ESGE live workshop participants will:

- Be aware of indications and contraindications for procedures
- Appreciate the complexity of the demonstrated procedures and relevant equipment
- Be aware of the “tricks of the trade” used by experts
- Be aware of alternative approaches to solve a procedural problem
- Appreciate problem-solving interventions when aspects of the procedure go wrong
- List appropriate hygiene and infection control measures (if covered e.g. in lectures)
- List appropriate patient care (if covered e.g. in lectures)
- List appropriate equipment selection and care (if covered e.g. in lectures).



### **3. Structure**

#### ***Date and place of the workshop***

- The workshop must be organized in a country and city that is politically and militarily stable and can guarantee the safety of the participants.
- The workshop must be organized by a local organizing body (medical school, department or unit) that can guarantee the highest medical and scientific standards.
- The workshop should last for two and a half or three days.
- The workshop must not be undertaken in conjunction with a meeting of the hosting national Society.
- The time interval between the workshop and the other large scientific meetings (WCOG, UEGW, DDW, etc.) must exceed two weeks.
- The time interval between other educational courses under the auspices of the ESGE must be a minimum of two weeks.

#### ***Workshop venue***

- The workshop must be organized in a (teaching) hospital with a purpose-built endoscopy unit. Close liaison with departments (units) of gastroenterology, gastrointestinal surgery, anesthesiology (intensive care unit), and radiology are essential on the part of the local organizing committee.
- The endoscopy unit should consist of at least five rooms (upper gastrointestinal, lower gastrointestinal, ERCP, disinfection, closed-circuit TV studio). At least one basic video-endoscopy system should be available. At least one automatic or semi-automatic cleaning and disinfection system must be available.
- The lecture room should have a minimum capacity of 200 seats. Two rooms of smaller capacity are acceptable, but this is better avoided.
- The transfer of pictures from the operating rooms to the audience should be provided by a closed-circuit TV system. The sound system should allow continuous contact between the experts in the endoscopy unit and the audience. Full-time recording facilities for endoscopic procedures should be available in at least S-VS standard.

#### ***Local medical personnel***

- At least three or four local endoscopic experts are required, each of whom should be competent to perform therapeutic endoscopies and/or act as medical coordinators (fluent English is absolutely necessary).
- At least six or seven trained and competent nurses and/or assistants are necessary to assist with the procedures and to undertake the reprocessing of equipment (fluent English is required for at least three nurses/assistants).

#### ***Faculty***

- At least three or four external endoscopic experts are required, each of whom should be competent to perform therapeutic endoscopies.

- At least three or four external trained and competent nurses and/or assistants are necessary to assist with the procedures
- Experiences and competencies of faculty can be assessed with the Checklist in **Appendix 10**

### ***Hotel accommodation and transport***

- A sufficient number and variety of hotel accommodation (one- to four-star accommodation) must be available. The price of the cheapest overnight stay (at least 50% of total beds) should not exceed € 40 per night. Otherwise, the local organizing committee must raise funds to cover the difference.
- Accommodation in youth hostels and/or student houses is acceptable, if these are of a sufficient standard.
- Free transportation between hotels and the workshop venue should be provided by the local organizing committee.

### ***Preliminary programme of the workshop***

- A preliminary programme must be included with the initial bid and must include a list of topic priorities).

Workshop programmes shall include the following.

- Live demonstration (at least 8 per day / 20 per whole workshop).
- Lectures (at least 2 per day / 5 per whole workshop).
- Live demonstrations should present the treatment of gastrointestinal haemorrhage, upper and lower gastrointestinal polypectomy, treatment of esophageal varices, dilation of upper and lower gastrointestinal strictures, esophageal stenting, endoscopic sphincterotomy with stone removal, and biliary stenting.
- Laser procedures, esophageal and biliary stenting with self-expanding metallic stents, pancreatic stenting, electrohydraulic lithotripsy, and echo-endoscopy are not essential, but may be included.
- At least one lecture should be devoted to the safety aspects of endoscopy (sedation and monitoring, cleaning and disinfection).
- Other contributions (videotape presentations, round-table sessions, quizzes for participants, etc.) are not necessary, but would be highly appreciated if possible within the time schedule.
- English must be the official language of the workshop. Simultaneous translation into a national language may be provided. The costs of such simultaneous translation should be borne by the local organizing committee.
- The opening and closing ceremonies, as well as the informal get-together party, should be organized free of charge for all participants.
- Complimentary lunches and coffee breaks (at least two per day) shall be organized adjacent to the exhibition area.
- A separate programme for accompanying persons does not need to be provided.

### ***Preliminary budget of the workshop***

Income from the workshop shall be drawn from:

- Participants
- Rental fees for exhibition space

- Sponsorship by local sponsors, organized by the local organizing committee
- Support from the local biomedical industry, arranged by the local organizing committee
- Support from the international biomedical industry, organized by the Governing Board of the ESGE.

Expenditure will include:

- Secretariat costs (printed material, communications, travel, etc.)
- Technical preparation of the workshop venue (medical, audiovisual, security, etc.)
- Close-circuit TV transmission
- Scientific preparation (tapes, slides, etc.)
- Local transportation
- Costs for provisions to participants (bag, programme, badge, luncheons and coffee breaks)
- Costs for invited experts (travel and accommodation)
- Grants for a limited number of participants from other countries (accommodation and fees, no travel expenses)
- The informal get-together party.

The purchase of endoscopic equipment will not be accepted as allowable expenditure of the workshop. The equipment necessary for the live demonstrations shall be provided by the international and local biomedical industry, under the supervision of the Education Committee and Governing Board of the ESGE.

The expected number of participants (numbers from the host country and abroad) shall be stated. Thirty to fifty (depending on the total number of participants) delegates from all Eastern and Central European countries must be invited free of charge (excluding travel expenses). The number of participants from each country shall be appropriate for the country's population and the number of active endoscopists.

**The preliminary budget must also cover the travel and accommodation of six ESGE international faculty (live demonstration) or four ESGE international faculty (video demonstration)**

A larger number of participants may be invited free of charge by the local organizing Committee, but the additional expenses shall be borne by the local organizing committee.

The workshop registration fee should not exceed half the average local monthly salary of a young doctor.

Any financial surplus accruing shall be divided between:

- The ESGE (10%)
- The national host society (20%)
- The local organizer (70% )
- Any financial gain to the local organizer should be invested to support the growth of local gastrointestinal endoscopy facilities (equipment, teaching, scientific projects).

# VI. Assessment and evaluation of workshops

## A. Assessment of learning outcomes

### 1. Aims of assessment

The overall aim of assessment is to promote good practice in the field of gastroenterology and endoscopy. The assessment establishes whether or not the learning outcomes have been met. Conception of the learning outcomes, teaching and assessment methods should be inspired by the constructivist approach to adult learning (Bloom, 1956; Atherton, 2002).

Assessment of learning outcomes enables students to:

- Stimulate an enquiring, analytical and creative approach, encouraging independent judgment and critical self-awareness
- Develop skills of clear communication and logical argument
- Translate what s/he has learned to actual patient care situations
- Develop the personal skills to reflect on practice to ensure that medical / nursing practice is constantly reviewed and evaluated.

### 2. Quality criteria for assessment

Assessment should be (Plymouth University 2009):

- Theoretical and practical
- Reliable
- Valid
- Explicitly and accessibly presented with enough information
- Relevant to the teaching contents and methods by adequate and varied tools
- Followed systematically with feedback
- Documented (portfolio of evidence).

Assessment of knowledge and skills of attendees will need to be specific to the type of workshop. The larger the group, the more difficult skills assessment will be, as it requires considerable time per student/attendee.

### 3. Assessment methods

Assessment of students may be achieved through a variety of methods, which may vary across Europe.

**Table 9** is designed to help in the selection of the most appropriate methods in different situations.

**Table 9: Suggested assessment methods**

	Area		Students	
	Theory (oral or written)	Practice	Group	Individual
Debate (pros and cons)	X		X	
Direct observation of practice		X	X	X
Discussion	X		X	
Interviews	X			X
Multiple choice questionnaires	X		X	X
Practical examination		X	X	X
Presentation to peer group	X	X		X
Quizzes and games	X		X	
Self-assessment	X	X		X
Simulation (e.g. dummies, simulators, models, role play)		X	X	X
Video-recorded performance		X	X	X

## B. Evaluation of event

### 1. Aims of evaluation

The evaluation provides feedback on what participants, organizers and the teaching team think about the event and its outcome.

- The event (content, whether aims and objectives / learning outcomes were met, etc.)
- The teachers (teaching quality, time keeping, etc.)
- The organization (environment, communication before the event, refreshments, etc.).

The overall aim of the evaluation is to improve future events by addressing aspects of the teaching event / course that were unsatisfactory.

Examples of different evaluation forms to be included as **Appendix 11** and **Appendix 12**.

## VII. Authors

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## VIII. Definitions and terminology

This section presents the definitions of terms used in this handbook.

<b>Assessment</b>	A measurement process of the learning that has taken place. Usually measured against stated learning outcomes
<b>Competency</b>	Areas of personal capability that enable people to perform successfully in their jobs by completing task effectively. A competency combines knowledge, attitudes, skills, values, or personal values to carry out tasks effectively. Competency comprises the specification of knowledge and skill and the application of that knowledge and skill to the standard of performance required in employment
<b>Competency-based instruction</b>	Instruction that is organized around a set of learning outcomes based upon the knowledge, skills and attitudes required to perform a set of skills called competencies. Evaluation of student success is based on competent performance of the skills
<b>Constructivism</b>	<p>School of human learning, which believes in the need to identify current learning prior to constructing new meaning. Knowledge is seen as a mental construct that is built on and added to. Learners create an image of what the world is like and how it operates and they adapt and transform their understanding of new experiences in light of what they already “know”</p> <p>This theory of learning has consequences for teaching and learning strategies. It means that trainers must recognize how a learner already sees the world, and how that learner believes it to operate. New information presented to the learner will be modified by what the learner already knows and believes. By starting “where the learner is at”, that is, engaging prior knowledge with present learning, the trainer assists the students to build on her understanding of the world and its workings</p>
<b>Education</b>	The development of knowledge, skills and attitude not necessarily related to one’s job
<b>Evaluation</b>	<p>The process of gathering information in order to make good decisions. It is broader than testing, and includes both subjective (opinion) input and objective (fact) input. Evaluation can take many forms including memorization tests, portfolio assessment and self-reflection. There are at least six major reasons for evaluating training, each requiring a different type of evaluation:</p> <ul style="list-style-type: none"> <li>• Improve the instruction (formative evaluation)</li> <li>• Promote individual growth and self-evaluation (evaluation by both trainer and learner)</li> <li>• Assess the degree of demonstrated achievement (summative evaluation attained by the teacher)</li> <li>• Diagnose future learning needs (of both trainer and learner)</li> <li>• Enhance one's sense of merit or worth (learner)</li> <li>• Identify or clarify desired behaviours (trainer)</li> </ul>
<b>Experiential Learning</b>	A learning activity having a behavioural-based hierarchy that allows the student to experience and practice job-related tasks and functions during a training session
<b>Facilitator</b>	A person who makes it easier for learners to learn by attempting to discover what a

	learner is interested in knowing and then determining the best way to make that information available to the learner by providing the knowledge, systems or materials that enable the learner to perform a task more effectively. This is done by listening, asking questions, providing ideas, suggesting alternatives and identifying possible resources
<b>Handbook</b>	A document prepared specifically to provide guidance information
<b>Handout</b>	Supporting information to be used by the learner as reference material in a training programme
<b>Hands-on</b>	Student practice on actual equipment, simulators or training aids
<b>Instruction</b>	The delivery of information to enable learning. The process by which knowledge and skills are transferred to students. Instruction applies to both training and education
<b>Learner-centred instruction</b>	An instructional process in which the content is determined by the student's needs, the instructional materials are geared to the student's abilities and the instructional design makes the students active participants
<b>Learning outcomes</b>	Clear statements of behaviour that learners are to demonstrate as a result of instruction
<b>Learning taxonomy (Bloom's Hierarchy)</b>	<p>A taxonomic classification of cognitive, affective and psychomotor behaviours for the purposes of test design invented by Benjamin Bloom and his colleagues. Learning is broken down into three domains:</p> <ul style="list-style-type: none"> <li>• Affective: the manner in which we deal with things emotionally – our feelings, values, appreciation, enthusiasms, motivations and attitudes</li> <li>• Cognitive: the recall or recognition of specific facts, procedures, concepts and universals that serve in the development of intellectual abilities and skills</li> <li>• Psychomotor: involves physical movement, coordination and use of motor skill areas</li> </ul>
<b>Levels of competence</b>	<p>There are four levels of competence:</p> <ul style="list-style-type: none"> <li>• Unconscious incompetence: the learner is unaware that he cannot do a task</li> <li>• Conscious incompetence: the learner is aware of the task, but cannot do it</li> <li>• Conscious competence: the learner is able to think through a task step-by-step and do it</li> <li>• Unconscious competence: the learner can do the task without thinking about intermediate steps</li> </ul>
<b>Performance criteria / standards</b>	Part of a learning outcome that describes the observable learner behavior (or the product of that behavior) that is acceptable as proof that learning has occurred
<b>Performance measures</b>	The actions that can be objectively observed and measured to determine whether a task performer has performed the task to the prescribed standard
<b>Psychomotor domain</b>	Involves physical movement and coordination. The major categories of taxonomy in order of ascending difficulty are:



	<ul style="list-style-type: none"> <li>• Imitation: observes skill and tries to repeat it</li> <li>• Manipulation: performs skill according to instruction rather than observation</li> <li>• Precision: reproduces a skill with accuracy, proportion and exactness. Usually performed independent of original source</li> <li>• Articulation: combines one or more skills in sequence with harmony and consistency</li> <li>• Naturalization: completes one or more skills with ease and becomes automatic</li> </ul>
<b>Session plan</b>	A written guide for trainers in order to achieve the intended learning outcomes. It provides specific definition and direction on learning outcomes, equipment, instructional media material requirements and conduct of the training
<b>Skills</b>	General capacities to perform a set of tasks developed through the acquisition of experience and/or training, which require more than just knowing about the subject
<b>Skills transfer</b>	Ability acquired for the performance of a task that may be used in the performance of a different task
<b>SMART goals</b>	S = Specific M = Measurable A = Attainable R = Realistic T = Timely
<b>Target population</b>	The total collection of a population that is scheduled to enter a given instructional programme
<b>Teaching methods</b>	The approach used to present information in a manner that achieves learning. Approaches include lectures, tutorials, role play, simulation, etc. Aspects of teaching strategies include the order of presentation, level of interaction, feedback, testing strategies and the medium used to present the information.
<b>Training</b>	The systematic process of developing knowledge, skills and attitudes for current or future jobs.

# IX. Appendices

## Appendix 1: Workshop planning template

WORKSHOP PLANNING	
Title of event	
Date of event	
Organizing body	Name: Address: Tel: Fax: E-mail:
Duration	
Type of event / workshop	
Aims of event	
Expected learning outcomes of event	
Level of workshop	
Target audience	
Number of attendees	
Personnel	
Location	
Room arrangements	
Equipment	
Finances	
Welfare	
Course administration	

## Appendix 2: Teacher’s personal session plan (part 1) – Organizational planning

TEACHER’S PERSONAL SESSION PLAN (PART 1) – ORGANIZATIONAL PLANNING	
Date	
Time and duration of event	
Venue	
Teacher’s name	
Title of session	
Target group / participants	
<ul style="list-style-type: none"> <li>• Number of participants</li> </ul>	
<ul style="list-style-type: none"> <li>• Professions allowed as participants</li> </ul>	
<ul style="list-style-type: none"> <li>• Basic and specialist qualifications, Level of experience and knowledge</li> </ul>	
<ul style="list-style-type: none"> <li>• Catchment area</li> </ul>	
Aim of session	
Intended learning outcomes	<p><i>At the end of this session the participants should be able to:</i></p> <ol style="list-style-type: none"> <li>1)</li> <li>2)</li> <li>3)</li> </ol>
Preparation of the room	
Preparation of equipment	
Preparation of staff	
Preparation of participants	
Schedule / timetable	
Assessment	
Evaluation	
References / guidelines, etc.	

**Appendix 3: Teacher’s personal session plan (part 2) – Implementation schedule**

TEACHER’S PERSONAL SESSION PLAN (PART 2) – IMPLEMENTATION SCHEDULE			
Time	Teacher activity	Student activity	Equipment used

## Appendix 4: Budget planning template


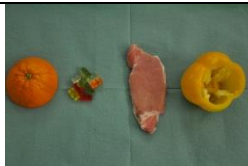








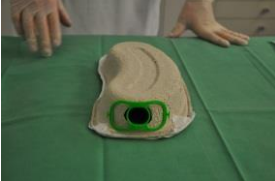

BUDGET PLANNING				
	Number	Price per item	Tax	TOTAL
<b>FIXED EXPENSES – (irrespective of number of people attending)</b>				
Teachers (travel / hotel / registration /gift or fee)				
Room hire				
Furniture (e.g. tables)				
Technical personnel				
Technical support (LCD screen, microphones, transmission)				
Administration cost (e.g. postage / tel / fax / stationery)				
Indemnity insurance				
<b>VARIABLE EXPENSES (per delegate and teachers)</b>		per person		
Workshop documentation				
Attendance certificates				
Cost for credit points or official recognition of courses				
Catering				
Evaluation forms				
Name badge				
<b>TOTAL</b>				
<b>Add: 10% contingency/inflation + 3% bank and credit card charges</b>				
	<b>TOTAL</b>			
<b>TOTAL EVENT COST</b>				
<b>INCOME from registration</b>				
<b>INCOME from sponsorship</b>				
<b>Profit / Loss</b>				

## Appendix 5: Workshop planning template for equipment skills workshops

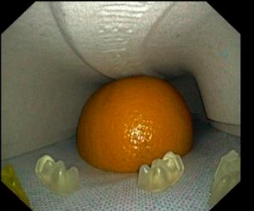
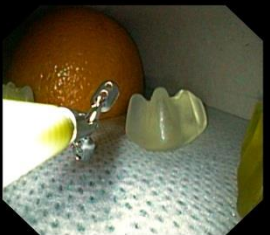
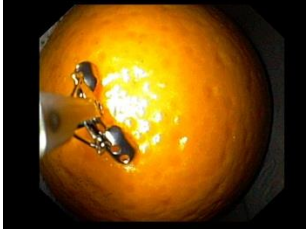






WORKSHOP PLANNING FOR EQUIPMENT SKILLS WORKSHOPS		
	<ul style="list-style-type: none"> <li>• In house workshops</li> <li>• Workshops as part of formal courses and specialist education in a clinical setting</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial workshops</li> <li>• Workshops during conferences and local meetings (organized by medical and nurses society with or without support of industry)</li> </ul>
<b>Title of event</b>		
<b>Date of event</b>		
<b>Organizing body</b>		
<b>Duration</b>	Small teaching sessions of some minutes to full day	Single hours to full day
<b>Type of dummy workshop</b>	<ul style="list-style-type: none"> <li>• New staff member teaching</li> <li>• Team teaching</li> <li>• Part of practical exam</li> </ul>	<ul style="list-style-type: none"> <li>• Stand alone as single event, or</li> <li>• Part of conferences and study days</li> </ul>
<b>Aims of event</b>	<ul style="list-style-type: none"> <li>• Limited procedures</li> <li>• New procedures and equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Limited procedures</li> <li>• New procedures and equipment</li> </ul>
<b>Expected learning outcomes of event</b>	Varies with aims and objectives of event	Varies with aims and objectives of event
<b>Level of workshop</b>	<ul style="list-style-type: none"> <li>• Beginners to advanced</li> </ul>	<ul style="list-style-type: none"> <li>• Beginners to advanced</li> </ul>
<b>Target audience</b>	<ul style="list-style-type: none"> <li>• Single profession or team training</li> </ul>	<ul style="list-style-type: none"> <li>• Single profession or team training</li> </ul>
<b>Number of attendees</b>	<ul style="list-style-type: none"> <li>• One person to small group</li> </ul>	<ul style="list-style-type: none"> <li>• Small groups, limited by size of seminar room</li> </ul>
<b>Personnel</b>	Tutor / teacher	<ul style="list-style-type: none"> <li>• Industry representatives</li> <li>• Doctors and nurses as tutors</li> </ul>
<b>Location</b>	In-house (endoscopy room, seminar room)	Conference location, hotels, rooms at company headquarters, etc.
<b>Room arrangements</b>	Endoscopy unit or seminar rooms in hospital	Note: waste organization for sharp instruments
<b>Endoscopic equipment</b>	<ul style="list-style-type: none"> <li>• No extra equipment required</li> <li>• Expired accessories can still be used for training without patients</li> <li>• If endoscopes are used for training, they need to be reprocessed before use at patients</li> </ul>	Endoscopic equipment provided by industry


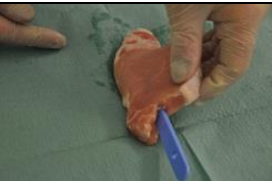



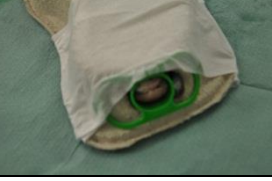




<b>Finances</b>	No fees for in-house training	Financed by registration fee and sponsorship
<b>Sponsors</b>	No additional finance needed	Financial support from: <ul style="list-style-type: none"> <li>• Industry (money and equipment)</li> <li>• National societies</li> </ul>
<b>Welfare staff</b>	No additional arrangements needed	No additional arrangements needed
<b>Course administration</b>	None needed	For workshops at conferences or stand-alone workshops: <ul style="list-style-type: none"> <li>• Advertising and announcements</li> <li>• Registration</li> <li>• ± Accommodation / refreshments</li> <li>• Documentation (e.g. handouts, material for assessment and evaluation, etc.)</li> <li>• Application for credit points</li> </ul>

## Appendix 6: Plan: How to make “home-made dummies”

Preparations		Description
		<p>Equipment needed:</p> <ul style="list-style-type: none"> <li>• Gloves</li> <li>• Table with water resistant covering</li> <li>• Kidney basin, made out of paper / board</li> <li>• Mouth guard</li> <li>• Scalpel / Scissor</li> <li>• adhesive film</li> <li>• Neutral plates (when using HF-surgery)</li> <li>• Oranges, wine gums, Pepper,</li> <li>• Meat (2cm thick)</li> </ul>
		<ul style="list-style-type: none"> <li>• Make a hole in the kidney basin</li> <li>• In the size of the mouthguard</li> <li>• Fix the mouthguard in the hole</li> </ul>
		<ul style="list-style-type: none"> <li>• mouthguard protects the endoscope from any damages</li> </ul>
		<ul style="list-style-type: none"> <li>• Measure the size of film to close the dummy</li> </ul>
		<ul style="list-style-type: none"> <li>• Peel away / remove protective film</li> </ul>
<b>Dummy for Biopsy, injection and foreign body removal</b>		
		<ul style="list-style-type: none"> <li>• Fix half of an orange or wine gums on the adhesive film</li> <li>• put the kidney basin over the film</li> </ul>
		<ul style="list-style-type: none"> <li>• close the basin by fixing the film on the side</li> </ul>
		<ul style="list-style-type: none"> <li>• Insert an Endoscope via the mouthguard</li> </ul>



		<ul style="list-style-type: none"> <li>• Orange and wine gum</li> </ul>
<b>Example for biopsy</b>		
		<ul style="list-style-type: none"> <li>• Wine gums and oranges can be used for taking biopsies</li> </ul>
<b>Example for injection techniques</b>		
		<ul style="list-style-type: none"> <li>• Injection into wine gum</li> <li>• Simple ink, indigo carmine or methylene blue make the injection more visible</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>		
<b>Example for Clipping</b>		
		<ul style="list-style-type: none"> <li>• Wine gums can be used for injection techniques and clipping</li> </ul>
<b>Example for polypectomy</b>		
		<ul style="list-style-type: none"> <li>• Wine gum can be used for polypectomy</li> </ul>
<ul style="list-style-type: none"> <li>•</li> </ul>		

<b>Dummy for Polypecty, Ligation</b>		
		<ul style="list-style-type: none"> <li>• Make a hole in the meat</li> </ul>
		<ul style="list-style-type: none"> <li>• Fix the meat at the mouthguard</li> </ul>
		<ul style="list-style-type: none"> <li>• Fix the meat inside the kidney basin with an adhesive film</li> <li>• And close the whole basin with another film</li> </ul>
		<ul style="list-style-type: none"> <li>•</li> </ul>
		<ul style="list-style-type: none"> <li>• Insert the endoscope via the mouthguard and use air insufflation to blow up the meat inside the basin</li> </ul>
		<ul style="list-style-type: none"> <li>•</li> </ul>
<b>ERCP Dummy</b>		
		<ul style="list-style-type: none"> <li>• Tubes in different sizes are used for the ERCP Dummy</li> <li>• The larger tubes are used in anesthesiology</li> <li>• The Y-part is used in thoracic drainages</li> <li>• Cut a lateral hole in the bigger tube</li> <li>• Fix the thinner tube in the hole</li> <li>• Use a paper handkerchief as a papilla</li> <li>• Fix the handkerchief on the connector</li> </ul>
		<ul style="list-style-type: none"> <li>• Example of a plastic stenting</li> </ul>

## Appendix 7: Some commercially available dummies

Dummies	Company	Material
<b>Biological dummies</b>	Erlanger Chirurgie und Endoskopie Training GmbH www.endo-trainer.de	Different models using pig organs
	EASIE Training www.easie.com	Different models using pig organs
<b>Artificial dummies</b>	KOKEN modules	<ul style="list-style-type: none"> <li>• Plastic organs</li> <li>• Upper and lower GI tract</li> </ul>
	Frimberger ERCP Model www.frimberger.net	Plastic models with DHC
	Grund model	Different models available: <ul style="list-style-type: none"> <li>• Upper and lower GI tract</li> <li>• ERCP</li> <li>• PEG-module</li> </ul>
<b>Computerized models</b>	Simbionix GI Mentor www.simbionix.com	
	AccuTouch computer simulator	

## Appendix 8: Workshop planning template for dummy workshops

WORKSHOP PLANNING FOR DUMMY WORKSHOPS		
	Home-made dummies	Biological dummies, artificial dummies, computerized dummies
<b>Title of event</b>		
<b>Date of event</b>		
<b>Organizing body</b>		
<b>Duration</b>	Small teaching sessions of some minutes to full day	<ul style="list-style-type: none"> <li>• Single hours to full day</li> <li>• Dummy preparation requires additional time</li> </ul>
<b>Type of dummy workshop</b>	<ul style="list-style-type: none"> <li>• New staff member teaching</li> <li>• Team teaching</li> <li>• Part of practical exam</li> <li>• Stand alone as single event, or</li> <li>• Part of conferences and study days</li> </ul>	<ul style="list-style-type: none"> <li>• Stand alone as single event or</li> <li>• Part of conferences and study days</li> </ul>
<b>Aims of event</b>	<ul style="list-style-type: none"> <li>• Limited procedures</li> <li>• New procedures and equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Basic and advanced endoscopy</li> <li>• New procedures and equipment</li> </ul>
<b>Expected learning outcomes of event</b>	Varies with aims and objectives of event	Varies with aims and objectives of event
<b>Level of workshop</b>	<ul style="list-style-type: none"> <li>• Basic</li> <li>• Intermediate</li> <li>• Advanced (for new equipment)</li> </ul>	<ul style="list-style-type: none"> <li>• Basic</li> <li>• Intermediate</li> <li>• Advanced (complex scenarios)</li> </ul>
<b>Target audience</b>	<ul style="list-style-type: none"> <li>• Single profession or team training</li> </ul>	<ul style="list-style-type: none"> <li>• Single profession or team training</li> </ul>
<b>Number of attendees</b>	<ul style="list-style-type: none"> <li>• Individual training of single person</li> <li>• Small groups</li> </ul>	<ul style="list-style-type: none"> <li>• Circular training</li> <li>• Small groups – 5–10 per dummy</li> </ul>

<b>Personnel</b>	<p>Expert nurses and / or doctors</p> <ul style="list-style-type: none"> <li>• Supporting team not necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Technical staff for respective dummy</li> <li>• Industry representatives</li> <li>• Doctors and nurses as tutors</li> <li>• Briefing for tutors</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• Endoscopy units</li> <li>• Any lecture halls</li> </ul>	<ul style="list-style-type: none"> <li>• Endoscopy unites</li> <li>• Lecture halls, conference location, hotels</li> <li>• Rooms at company headquarters, etc.</li> </ul>
<b>Room arrangements</b>	<ul style="list-style-type: none"> <li>• Endoscopy unit require no extra preparation</li> <li>• Hygiene and safety aspects, protection measures are already available in endoscopy units</li> </ul>	<ul style="list-style-type: none"> <li>• Special preparation of the rooms (floor covering, electricity, technical support)</li> <li>• Waste organization for sharp instruments and biological material</li> <li>• Hygiene and safety aspects, protection measures</li> <li>• Reprocessing of endoscopes and equipment</li> </ul>
<b>Endoscopic equipment</b>	<ul style="list-style-type: none"> <li>• No extra equipment required</li> <li>• Expired accessories can still be used for training without patients</li> </ul>	Endoscopic equipment provided by industry
<b>Endoscopes</b>	<ul style="list-style-type: none"> <li>• If endoscopes are used for training, they need to be reprocessed before next use in patients</li> <li>• If meat is used in dummies, dedicated endoscopes (animal / training) should be used</li> </ul>	If endoscopes are used on biological dummies, special dedicated endoscopes (animal / training) should be used
<b>Dummies</b>	Home-made dummies need a short time for preparation	<ul style="list-style-type: none"> <li>• Commercial dummies can be bought or rented for event</li> <li>• Preparation and set-up of commercial dummies have to be included in schedule of workshop</li> <li>• Dummies require intensive technical support and special preparation</li> </ul>
<b>Finances</b>	<ul style="list-style-type: none"> <li>• No fees for in-house training</li> <li>• External training financed by registration fee and sponsorship</li> </ul>	<ul style="list-style-type: none"> <li>• Financed by registration fee and sponsorship</li> <li>• Dummies are expensive</li> </ul>

<b>Sponsors</b>	No additional finances needed for dummies	Financial support from: <ul style="list-style-type: none"> <li>• Industry (money and equipment)</li> <li>• National societies</li> </ul>
<b>Welfare staff</b>	No additional arrangements needed depending on duration of workshop	No additional arrangements needed depending on duration of workshop
<b>Course administration</b>	For workshops at conferences or stand-alone workshops: <ul style="list-style-type: none"> <li>• Advertising and announcements</li> <li>• Registration</li> <li>• ± Accommodation / refreshments</li> <li>• Documentation (e.g. handouts, material for assessment and evaluation, etc.)</li> <li>• Application for credit points</li> </ul>	For workshops at conferences or stand-alone workshops: <ul style="list-style-type: none"> <li>• Advertising and announcements</li> <li>• Registration</li> <li>• ± Accommodation / refreshments</li> <li>• Documentation (e.g. handouts, material for assessment and evaluation, etc.)</li> <li>• Application for credit points</li> </ul>

## Appendix 9: Workshop planning template for live demonstrations

WORKSHOP PLANNING TEMPLATE FOR LIVE DEMONSTRATIONS		
	<ol style="list-style-type: none"> <li>Teaching a new member of staff in the procedure room</li> <li>Clinical teaching demonstration of new equipment by an industry representative with additional staff attending</li> </ol>	<ol style="list-style-type: none"> <li>Live demonstrations in the clinical room</li> <li>Procedure transmitted into a local seminar room <b>DURING A COURSE</b></li> </ol>
<b>Title of event</b>		
<b>Date of event</b>		
<b>Organizing body</b>	Name: Hospital/Institute/Conference centre/Company: Address: Tel: Fax: E-mail:	Name: Hospital/Institute/Conference centre/Company: Address: Tel: Fax: E-mail:
<b>Duration</b>	<ol style="list-style-type: none"> <li>One procedure or one patient</li> <li>One Clinical session</li> </ol>	Duration of course
<b>Type of live demo event / workshop</b>	<ul style="list-style-type: none"> <li>New staff member teaching</li> <li>Team teaching by industry rep</li> <li>Stand alone (e.g. single event)</li> <li>Part of bigger skills training programme</li> </ul>	<ul style="list-style-type: none"> <li>Stand alone (e.g. Single Event)</li> <li>Part of larger skills training programme</li> <li>Small group (part of larger course) or larger audience</li> <li>With or without external teachers</li> </ul>
<b>Aims of event</b>	Varies with aims and objectives of event	Varies with aims and objectives of event
<b>Level of workshop</b>	Beginners to advanced	Beginners to advanced
<b>Expected learning outcomes of event</b>	Varies with aims and objectives of event	Varies with aims and objectives of event
<b>Target audience</b>	<ul style="list-style-type: none"> <li>Doctors</li> <li>Nurses (+/- nursing aids)</li> <li>Teams</li> <li>With relevant experience (announcement)</li> </ul>	<ul style="list-style-type: none"> <li>Doctors</li> <li>Nurses (+/- nursing aids)</li> <li>Teams</li> <li>With relevant experience (announcement)</li> </ul>
<b>Number of attendees</b>	One or two people	<ul style="list-style-type: none"> <li>Small groups</li> <li>Limited by size of procedure room (in-room live demo) or seminar room</li> </ul>
<b>Personnel</b>	<ol style="list-style-type: none"> <li>Local endoscopy staff</li> <li>Industry rep (supply equipment, support</li> </ol>	<ul style="list-style-type: none"> <li>Industry (supply equipment, support on day, staff teaching)</li> </ul>

	on day, staff teaching)	<ul style="list-style-type: none"> <li>• Local endoscopy staff</li> <li>• Hospital clinical staff (wards, patient care)</li> <li>• Hospital management</li> <li>• Technical staff: <ul style="list-style-type: none"> <li>○ Transmission team</li> <li>○ Hospital technical staff</li> <li>○ Sterilization department (expedited processing)</li> </ul> </li> <li>• Clinical support services: <ul style="list-style-type: none"> <li>○ Radiology</li> <li>○ Anaesthetic department</li> <li>○ Pathology (expedited reporting)</li> </ul> </li> <li>• Clinical emergency management: <ul style="list-style-type: none"> <li>○ ITU</li> <li>○ Surgery</li> </ul> </li> <li>• Technical emergency management, e.g.: <ul style="list-style-type: none"> <li>○ Power failure</li> <li>○ Medical gases</li> </ul> </li> </ul>
<b>Clinical personnel extra consideration</b>	No extra considerations/organization	<ul style="list-style-type: none"> <li>• Permission of hospital</li> <li>• Indemnity / contract (external teachers)</li> <li>• Extra patient accommodation and nursing staff</li> <li>• Patient transport if coming from other hospital</li> <li>• Uniforms (external teachers)</li> <li>• Catering, etc</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• In-house</li> <li>• Endoscopy room, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• In-house</li> <li>• Endoscopy or seminar room, etc.</li> </ul>
<b>Room arrangements</b>	<ul style="list-style-type: none"> <li>• Environmental planning</li> <li>• Sockets, transmission</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental planning</li> <li>• Sockets, transmission</li> <li>• Seminar room</li> <li>• Transmission room (technical staff, endoscopist editor)</li> </ul>
<b>Equipment clinical</b>	<ol style="list-style-type: none"> <li>1. No extra equipment required</li> <li>2. Provided by industry rep</li> </ol>	<ul style="list-style-type: none"> <li>• Depends on aims and objectives of course</li> <li>• May require additional endoscopy equipment relevant to procedures demonstrated</li> </ul>



<b>Equipment transmission</b>	No transmission needed	Seminar room: <ul style="list-style-type: none"> <li>• Transmission equipment</li> <li>• 2-way communication</li> <li>• Projection equipment</li> <li>• ± Chairmen's monitor</li> </ul>
<b>Finances</b>	No additional finance needed	Financed by registration fee and sponsorship
<b>Sponsors</b>	No additional finance needed	Financial sponsorship: <ul style="list-style-type: none"> <li>• Industry (money and equipment)</li> <li>• National and/or professional societies</li> </ul>
<b>Welfare – staff</b>	No additional arrangements needed	Invited clinical teachers' welfare: <ul style="list-style-type: none"> <li>• Uniform</li> <li>• Breaks / rest room</li> <li>• Refreshments</li> <li>• Legal (external teachers): <ul style="list-style-type: none"> <li>○ Temporary professional registration (if foreign)</li> <li>○ Indemnity / insurance</li> </ul> </li> <li>• Temporary hospital contract</li> </ul>
<b>Welfare – patients / ethical considerations</b>	<ol style="list-style-type: none"> <li>1. Informed consent (to procedure AND to live demo)</li> <li>2. Informed consent to have industry rep present</li> </ol>	<ul style="list-style-type: none"> <li>• Recruitment of patients (caution: coercion)</li> <li>• Delaying procedures (wait for expert doing live demo or postponed to next day)</li> <li>• Informed consent (to procedure AND to live demo)</li> <li>• Health insurance implications</li> <li>• Transport if coming from afar (incl. clinical chaperone and relatives)</li> <li>• Quality of patient care should not be less than in experts own department and published guidelines</li> <li>• Adequate sedation and pain control (e.g. prolonged procedure) without increase of risk from additional medication</li> <li>• Alternative arrangements for “leftovers” and patients deemed unsuitable for live demo</li> <li>• Appropriate arrangements for follow-up and complication management (local skills appropriate)</li> <li>• Patients should be able to meet the experts</li> </ul>

		<p>before the event (ward round day before)</p> <ul style="list-style-type: none"> <li>• Patient safety and dignity and privacy during live demo</li> </ul>
<b>Scheduling day management</b>	<p>Do not book too many patients – allow enough time per patient for:</p> <ul style="list-style-type: none"> <li>• Discussion of indication and pre-procedure investigations, choice of procedure and relevant: <ul style="list-style-type: none"> <li>○ Equipment</li> <li>○ Patient preparation</li> <li>○ Intra-procedural care (incl. monitoring)</li> </ul> </li> <li>• Post-procedural patient care</li> <li>• Demonstration of equipment (e.g. accessories)</li> <li>• Questions and answers</li> <li>• Discussion of: <ul style="list-style-type: none"> <li>○ What happened</li> <li>○ What could be done differently</li> </ul> </li> <li>• What if.....(trouble shooting)</li> <li>• Summary of learning points</li> </ul>	<p>Do not book too many patients – allow enough time per patient for:</p> <ul style="list-style-type: none"> <li>• Discussion of indication and pre-procedure investigations, choice of procedure and relevant: <ul style="list-style-type: none"> <li>○ Equipment</li> <li>○ Patient preparation</li> <li>○ Intra-procedural care (incl. monitoring)</li> </ul> </li> <li>• Post-procedural patient care</li> <li>• Demonstration of equipment (e.g. accessories)</li> <li>• Questions and answers</li> <li>• Discussion of: <ul style="list-style-type: none"> <li>○ What happened</li> <li>○ What could be done differently</li> </ul> </li> <li>• What if.....</li> <li>• Summary of learning points</li> </ul>
<b>Case conference (day before)</b>	<p>Not needed as patients are not specifically scheduled for teaching event</p>	<p>Case conference (day before):</p> <p>Key staff:</p> <ul style="list-style-type: none"> <li>• Local doctors (patient presentation)</li> <li>• Visiting endoscopists (patient selection, equipment preference)</li> <li>• Local nurses (scheduling of transport, equipment, etc.)</li> <li>• Visiting nurses (patient selection – advocacy, skills allocation, equipment listing)</li> <li>• Industry (prepares required equipment for each procedure and room)</li> </ul> <p>Outcome:</p> <ul style="list-style-type: none"> <li>• Patient selection and scheduling</li> <li>• Equipment selection</li> <li>• Team formation</li> <li>• Allocation of procedures</li> <li>• Allocation of rooms</li> <li>• Ward round (to meet the patient)</li> </ul>

		<ul style="list-style-type: none"> <li>• Contingency planning</li> <li>• Equipment familiarization session (with industry)</li> </ul>
<b>Contingency planning</b>	Not needed as patients are not specifically scheduled for teaching event	<ul style="list-style-type: none"> <li>• Routine endoscopies (e.g. GI bleeders)</li> <li>• Remaining procedures not done</li> <li>• Patients unsuitable for live demo</li> <li>• Follow-up</li> <li>• Surgery</li> <li>• ITU</li> </ul>
<b>Course administration</b>	None needed	<ul style="list-style-type: none"> <li>• Advertising and announcements</li> <li>• Registration</li> <li>• ± Accommodation / refreshments</li> <li>• Documentation (e.g. handouts, material for assessment and evaluation, etc.)</li> <li>• Application for credit points</li> </ul>

## Appendix 10: ESGE–ESGENA workshops in advanced therapeutic endoscopy

ESGE–ESGENA WORKSHOPS IN ADVANCED THERAPEUTIC ENDOSCOPY	
VOLUNTEER FORM	
NAME	
DEPARTMENT	
HOSPITAL	
STREET	
POSTCODE AND CITY	
COUNTRY	
TELEPHONE (INCL. COUNTRY CODE)	
FAX	
E-MAIL	
POSITION (JOB TITLE)	
QUALIFICATIONS	
NUMBER OF YEARS WORKED IN: GASTROENTEROLOGY	
NUMBER OF YEARS WORKED IN: ENDOSCOPY	
<p><b>DO YOU HAVE PREVIOUS EXPERIENCE IN LIVE DEMONSTRATION WORKSHOPS?</b>            NO <input type="checkbox"/>                      YES <input type="checkbox"/> → please specify: e.g. <i>hands-on work in own hospital etc.</i></p>	
<p><b>DO YOU SPEAK ANY LANGUAGES OTHER THAN ENGLISH?</b>            NO <input type="checkbox"/>                      YES <input type="checkbox"/> → please specify:</p>	
<p><b>DO YOU FEEL CONFIDENT AND EXPERIENCED ENOUGH TO GIVE LECTURES IN ENGLISH?</b>            NO <input type="checkbox"/>                      YES <input type="checkbox"/> → please specify <b>TOPICS</b> of expertise:</p>	

**HOW MUCH NOTICE DO YOU NEED TO HAVE TO BE ABLE TO TAKE SEVERAL DAYS OFF WORK:**

(Workshops usually require travel on Wednesday, preparation day on Thursday, workshop on Friday and Saturday):

**DOES YOUR NURSE REGISTRATION AND PROFESSIONAL INDEMNITY INSURANCE PERMIT YOU TO WORK IN ANOTHER COUNTRY?**

**NO**  **YES**

**You may have to check with your insurance company and your national nurse registration authority**

**IN WHICH PROCEDURES HAVE YOU HAD ENOUGH EXPERIENCE THAT YOU FEEL CONFIDENT AND ABLE TO ASSIST FOREIGN EXPERTS**

<b>Procedure</b>	<b>NOT experienced</b>	<b>Experienced</b>	<b>VERY experienced</b>
<b>Upper GI (UGI) tract</b>			
Variceal banding			
Stricture dilation – balloon / bougienage			
Stenting in oesophageal cancer (please specify the metal stents you are familiar with)			
Endoscopic treatment of GERD (please specify the treatment you are familiar with)			
Polypectomy / mucosectomy			
ESD			
Chromoendoscopy			
APC (e.g. in GAVE)			
Urgent haemostasis in non-variceal bleeding			
Clip application			
Histoacryl glue			
PEG placement			
Enteroscopy			
Capsule endoscopy			
Other – please specify			

<b>Lower GI (LGI) tract</b>			
Polypectomy / mucosectomy			
Polypectomy – piecemeal			
ESD			
APC (e.g. in colonic angiodysplasia)			
Ileoscopy / difficult colonoscopy			
Other – please specify			
<b>EUS</b>			
Gastric / esophageal submucosal tumor			
Pancreatic tumor with biopsy			
CBD stones			
Celiac plexus block			
EUS-controlled pancreatic cyst treatment (e.g. stenting, nasocystic drainage, cysto-gastrostomy)			
Other – please specify			
<b>ERCP</b>			
Endoscopic sphincterotomy (ES) and stone removal			
ES and stone removal and mechanical lithotripsy			
Biliary stenting in benign disease – post-surgical stricture			
Biliary stenting in CBD / pancreatic malignancy (SEMS)			
Balloon dilation of benign stricture			
Pancreatic cyst treatment (e.g. stenting / cysto-duodenostomy) – please state which			
Urgent ERCP / ES in acute pancreatitis			
Other – please specify			
<b>Other procedures – please specify</b>			

## Appendix 11: Internal evaluation form

<b>INTERNAL EVALUATION FORM FOR TEACHERS AND ORGANISERS</b>					
TO HELP US TO IMPROVE THE EVENT, WE WOULD BE GREATFUL IF YOU COULD COMPLETE THE FOLLOWING QUESTIONS					
<b>DID THE EVENT MEET YOUR EXPETCTATIONS ?</b>					
<b>COULD YOU MEET YOUR YOUR INTENDED AIMS &amp; LEARNING OUTCOMES AS A TEACHER / TUTOR</b>					
<b>ANY COMMENTS</b>					
<b>HOW INTERESTING WAS THE COURSE?</b> PLEASE CIRCLE THE APPROPRIATE NUMBER	1 BAD	2	3	4	5 EXCELLENT
<b>ANY COMMENTS</b>					
<b>HOW WAS THE QUALITY OF:</b> PLEASE CIRCLE THE APPROPRIATE NUMBER					
<b>OVERALL ORGANISATION</b>	1	2	3	4	5
<b>PREPARATION OF WORKSHOP</b>	1	2	3	4	5
<b>Onsite organisation</b>	1	2	3	4	5
<b>Catering</b>	1	2	3	4	5
<b>Location and room arrangements</b>					
• <b>lecture hall</b>	1	2	3	4	5
• <b>workshop facilities</b>	1	2	3	4	5
• <b>clinical setting</b>	1	2	3	4	5
<b>Technical support</b>					
• <b>In lecture hall</b>	1	2	3	4	5
• <b>In clinical setting</b>	1	2	3	4	5
• <b>During live transmission</b>	1	2	3	4	5
<b>Equipment for hands-on training</b>					
• <b>Endoscopes</b>	1	2	3	4	5
• <b>Accessories</b>	1	2	3	4	5
• <b>Dummies</b>	1	2	3	4	5
<b>Personel</b>					
• <b>Administrative staff</b>	1	2	3	4	5
• <b>Supporting technical staff</b>	1	2	3	4	5
• <b>Clinical staff</b>	1	2	3	4	5
• <b>Others:</b>					

<b>Audience / participants</b> <ul style="list-style-type: none"> <li>• Adequate number od participants</li> <li>• Expected level</li> <li>• Others:</li> </ul>	1	2	3	4	5
<b>Programme</b> <ul style="list-style-type: none"> <li>• Overall quality</li> <li>• Balance between theory and practice</li> <li>• Selectin of cases</li> <li>• Others:</li> </ul>	1	2	3	4	5
<b>ANY COMMENTS TO THE ABOVE:</b>					
<b>DO YOU HAVE ANY SUGGESTIONS FOR IMPROVEMENTS?</b>					
<b>ANY OTHER COMMENTS</b>					



## Appendix 12: External evaluation form

<b>EXTENAL EVALUATION FORM FOR PARTICPANTS</b>					
TO HELP US TO IMPROVE THE EVENT, WE WOULD BE GREATFUL OF YOU COULD COMPLETE THE FOLLOWING QUESTIONS					
<b>DID THE EVENT MEET YOUR INTENDED LEARNING OUTCOMES</b>					
<b>HOW INTERESTING WAS THE COURSE?</b> PLEASE CIRCLE THE APPROPRIATE NUMBER	1 BAD	2	3	4	5 EXCELLENT
<b>ANY COMMENTS</b>					
<b>LIST THREE THINGS YOU LEARNED FROM THIS EVENT</b>	1. 2. 3.				
<b>WERE THERE ANY ASPECTS THAT YOU HAD HOPED TO LEARN THAT WERE NOT COVERED ?</b>					
<b>WERE THERE ANY ELEMENTS OF THE EVENT THAT COULD HAVE BEEN OMITTED WITHOUT DETRACTING FROM ITS OVERALL VALUE?</b>					
<b>HOW WAS THE QUALITY OF:</b>	PLEASE CIRCLE THE APPROPRIATE NUMBER				
<b>OVERALL ORGANISATION</b>	1	2	3	4	5
<b>PREPARATION OF WORKSHOP (INVITATION, PREREADING, COURSE MATERIAL)</b>	1	2	3	4	5
<b>Onsite organisation</b>	1	2	3	4	5
<b>Catering</b>	1	2	3	4	5
<b>Location and room arrangements</b>					
• lecture hall	1	2	3	4	5
• workshop facilities	1	2	3	4	5
• clinical setting	1	2	3	4	5
<b>Quality of teaching staff</b>	1	2	3	4	5
<b>Programme</b>					
• Overall quality	1	2	3	4	5
• Balance between theory and practice	1	2	3	4	5
• Selection of cases	1	2	3	4	5
• Others:					

<b>Which speakers / tutors did you enjoy most?</b>	
<b>Which talks did you enjoy most?</b>	
<b>Suggested topics for next workshops</b>	
<b>DO YOU HAVE ANY SUGGESTIONS FOR IMPROVEMENTS?</b>	
<b>ANY OTHER COMMENTS</b>	