



Use and utility of Emergo Train System®

Senior Instructors' experiences from 24 different countries

Linnea Berggren, Alva Lindhagen, Peter Berggren

Summary

This study aimed to investigate how senior instructors around the world use and view the utility of the tool Emergo Train System® (ETS). This was achieved by gathering data through a survey that was responded to by 228 certified senior instructors from 24 different countries. The gathered quantitative data was examined descriptively, and the qualitative data was analysed through thematic analysis.

The results of the study show that ETS is a tool that is frequently used around the world and that circa 11 200 people have been trained using ETS only the last 12 months in 2019. The instructors report that they think ETS is a great tool that contribute to learning and support them in their role as an instructor. The instructors call for additional education in the ETS-material, methodology, and pedagogy. This education could partly be conducted online.

Contents

1 Introduction	4
1.1 Purpose	4
1.2 Research questions	4
1.3 Limitations	4
2 Method	5
2.1 Participants	5
2.2 Material	5
2.3 Procedure	5
2.4 Analysis	5
3 Results	6
3.1 Background questions	6
3.2 Self-evaluation questions	8
3.3 Open-ended questions	9
3.3.1 What should a refresher course for senior instructors cover?	9
3.3.2 Is there anything else you would like to add?	10
4 Conclusions	11
4.1 How is ETS used?	11
4.2 How comfortable are the instructors in their usage of ETS?	11
4.3 What should a potential refresher course for Senior instructors contain?	11
5 References	12
Appendix A - Survey background questions	13
Appendix B. Survey 1–7 open questions	15
Appendix C – Survey open questions	19
Appendix D. Usage of ETS	20

1 Introduction

Emergo Train System (ETS) is an analogue simulation tool that is used for education, exercise, and training within disaster medicine. The simulation tool is utilised to educate and train personnel to handle disastrous situations, including interventions, decision-making, cooperation, management, communication and coordination of resources and processes. ETS is simple, doctrine free and can be used in all organisations and systems. Organisational strengths and weaknesses are highlighted during exercises and subsequent evaluation contributes to valuable insights.

ETS is used in more than 35 countries around the world with more than 2000 instructors, which are certified to educate and train people using ETS. There are 13 faculties in different countries qualified in training and certifying new ETS Senior Instructors. ETS supports a Train the Trainer concept; knowledge about the simulation tool and how to use it is taught by ETS Educators to Senior instructors, which in turn can use the tool for exercises and education.

A senior instructor course includes training in usage of the ETS tool and its different modules, as well as planning, executing, and evaluating exercises with different forms of aims and objectives (Nilsson, 2012). The course is both theoretical and practical, all to prepare the future Senior Instructors to create and produce their own exercises after completing the course.

ETS is a human-centred simulation tool and is always performed in groups. ETS and the Senior Instructor courses emanate from, among other things, experiential learning (Kolb & Kolb, 2005). Experiential learning is the process of learning through experience and “reflecting by doing”. Kolb and Kolb’s learning model include four types of activities (1) concretely perceive an experience, (2) reflect upon experiences, (3) assimilate abstract concepts, and (4) actively experiment. This process is iterative and continuously lead to new experiences.

To extend the view of ETS and the learning perspective from an organisational point of view, ETS includes learning on several levels. The process of learning can be divided into four categories, or as it is more famously called within the field of organisational learning, the 4I (Chadwick & Raver, 2015). The four “I” are Intuition, Interpreting, Integrating, and Institutionalising. The first two categories are on an individual level and the second two are on an organisational level. In short, the experience on the individual level affects the organisational level and can become a part of the organisation holistically, creating long lasting learning. Thus, training individuals in handling disastrous situations with ETS can lead to organisational learning. Furthermore, educating individuals in educating others extends this notion and creates a broader influence in preparing personnel in crisis management.

1.1 Purpose

The purpose of this study is to evaluate how Senior instructors use and value the utility of ETS. This was done through a survey distributed to 1800 Senior Instructors around the world.

1.2 Research questions

- How is ETS used?
- How comfortable are the instructors in their usage of ETS?
- What should a refresher course in ETS include?

1.3 Limitations

This executive summary excludes the theoretical description.

2 Method

The research questions were answered through a survey collecting both qualitative and quantitative data.

2.1 Participants

Participants in this study were 229 senior instructors from 24 different countries. They were recruited through an email sent to 1800 certified Senior instructors. The study had a response frequency of 12,7 %.

2.2 Material

2.3 Procedure

The survey was constructed, pilot tested with two senior instructors, and revised. The survey was sent to all 1800 instructors and was open for answers for 30 days (during September 2018).

2.4 Analysis

The quantitative data was analysed using descriptive statistics and the qualitative data was analysed through thematic analysis (Braun & Clarke, 2006). The thematic analysis was conducted in six steps shown in Figure 1.



Figure 1. Method of thematic analysis.

3 Results

This chapter is divided in to three parts: background questions, questions about ETS with participant self-assessment on a Likert scale and open questions.

3.1 Background questions

The participants came from 24 different countries in the world (see Figure 2). The country with the most responders was Australia ($N=76$), followed by the Netherlands ($N=33$), and United Kingdom ($N=30$). 12 countries had only one respondent. Around half of the respondents (53 %) belonged to a faculty, and the other half did not (47 %).

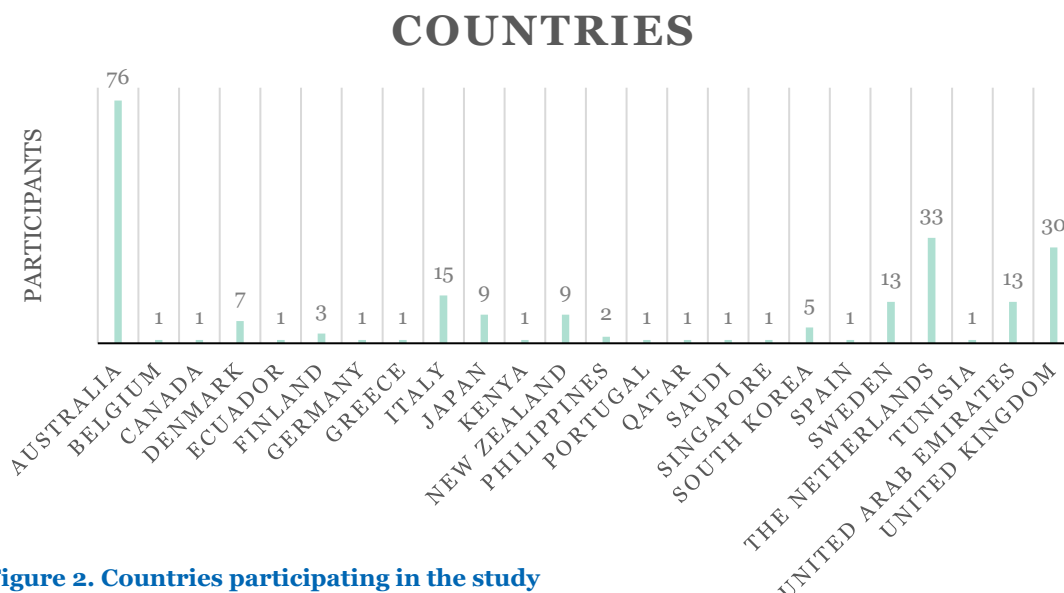


Figure 2. Countries participating in the study

The participants answered a question about when they received their certificate as senior instructors ($N=223$). The answers stretched between the years 2001 to 2018 (see Figure 3). Most of the respondents had taken the instructor course between the years 2014 and 2018 with a noteworthy number of participants receiving their certificate in 2017 (25,6 %).

What year did you get your ETS certificate?

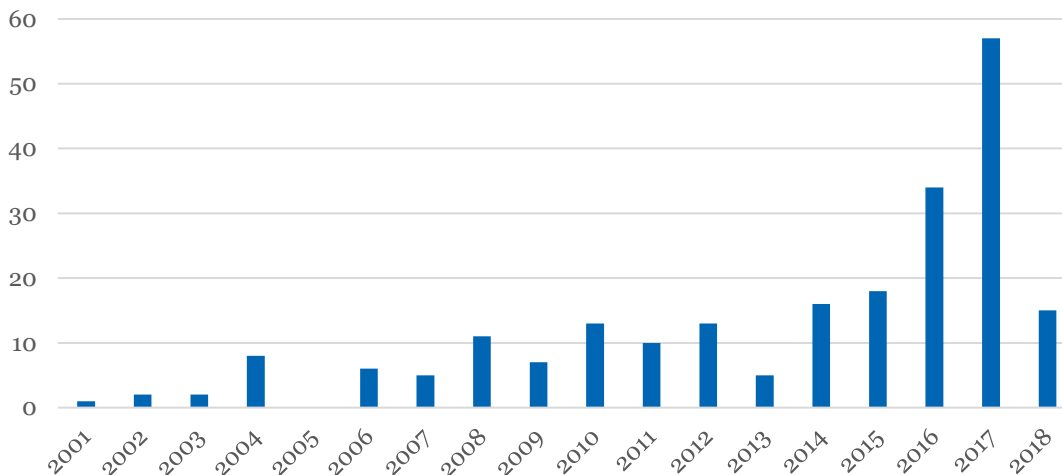


Figure 3. Answers to the question “What year did you get your ETS certificate?”. Y axis being the number of responders and the X-axis is the year the recipient got the certificate.

The responders answered the question “Do you, as an instructor, use ETS as a tool for education and training?” and were asked to state the last time they had used ETS. 191 out of the 214 respondents had used ETS for the last two years, 2017 and 2018. The instructors had all together used ETS 874 times during the last 12 months and estimated the number of people trained to around 11 200.

The respondents answered the question “Which ETS- packages do you master?” (see Figure 4). The module they mastered to the greatest extent was the basic set (66,8 %), which also was the second most used set for education (63,8 %). The module most used for education was the hospital set (76,9 %), but that set also was the set that the instructors mastered the least (7,4 %). The other sets were used and mastered in lesser extent, between 14,4 % and 8,3 %.

Which ETS- packages...

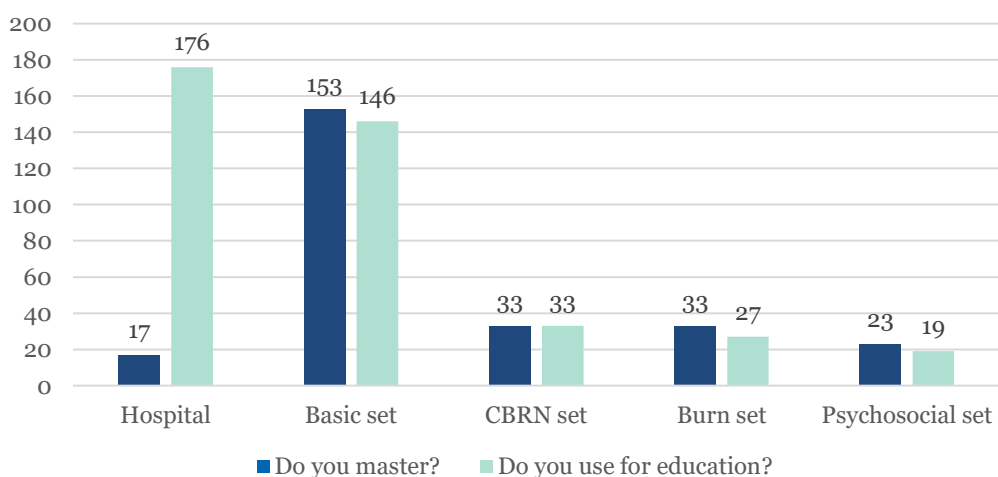


Figure 4. Feeling of mastering the packages and usage for education

3.2 Self-evaluation questions

The participants responded to 15 questions on a scale of 1-7. The results showed that the participants thought that ETS is useful for training, is useful for visualising a scenario and contributes to a better understanding (see Table 1).

Table 1. Questions from the survey with answers 1–7. Mean and standard deviation is shown in the column to the right (N=229).

Question	Mean	SD
1. To what extent do you master the ETS-material?	5,05	1,29
1. To what extent does the ETS material support you in your role as an instructor?	5,46	1,19
2. To what extent do you feel comfortable in using the ETS material for educational purposes?	5,67	1,11
3. To what extent does ETS support your pedagogical approach?	5,23	1,16
4. To what extent do you think that ETS contributes to what you want to teach the participants?	5,73	0,97
5. To what extent do you feel that you can influence the development of ETS material?	3,96	1,69
6. To what extent does the ETS material inspire you to create new exercises/scenarios?	5,32	1,25
7. To what extent does the ETS give you the opportunity to test different scenarios?	5,62	1,21
8. To what extent do you use ETS material during Courses?	4,87	1,6
9. Is ETS a useful tool for training?	6,26	1
10. To what extent is the ETS material flexible and adaptable to the courses you implement?	5,38	1,28
11. How useful is ETS for visualizing a scenario?	5,79	1,21
12. To what extent does the ETS contribute to a better understanding?	5,82	0,95
13. In your role as an instructor, would you benefit from a refresher course for senior instructors?	5,28	1,64
14. To what extent are you aware of the ETS Competence Center?	3,8	1,91

3.3 Open-ended questions

The survey ended with two open questions, and these have been analysed through thematic analysis. The first question was about a potential refresher course and what it should cover: “What should a refresher course for senior instructors cover?”. The second question was “Is there anything else you would like to add?”. Both questions produced answers that generated different themes. The answers will be presented next.

3.3.1 What should a refresher course for senior instructors cover?

The answers to the question above were analysed through thematic analysis and five themes were generated: Keeping updated, Material, Exercise planning, The instructor role and, Learn from others.

Keeping updated

A general comment given was “*Refresher course is useful if you don't train/exercise regularly*” – P48, indicating that exercise is required to remember the system. It is therefore necessary to use the system regularly to keep updated. Additionally, some respondents claimed the importance of ETS being updated to reflect the latest research.

Material

In a future refresher course, the respondents asked for additional updates on the basic principles of the tool ETS. This includes rules and functions of the material. Respondents said that they would also like to review new material and were interested in testing different types of sets or patient banks. The following is a quote to frame this notion:” *The updated kits - I was trained on the basic and hospital course. It would be great to run through the CBRN / pandemic / psychosocial kits (I would also be more likely to purchase them if I have played with them).*” - P95.

Exercise planning

Several responding instructors explained that they required additional exercise in planning and construction of exercises. A certain focus is directed towards larger exercises, in complexity, time, and number of people. An example: “*Set up a larger scenario together with an experienced supervisor*”- P149. The instructors state that they would like further understanding about what ‘aim’ and ‘objective’ actually mean, and how to link them to learning outcomes.

Evaluation

The respondents claimed they could need further assistance in how to gather data, manage evaluation and interpret the results. This was for example tied to interpreting patient outcome, but also regarding debriefing with the participants. Here are two gathered quotes: “*Clinical outcomes assessment*” and “*Briefing and debriefing*” – P41.

The instructor role

The respondents reported that they would like more teaching in pedagogical principles: “*Pedagogy, refresh of teaching technics*” - P214. This included different types of teaching and communication styles. The instructors also highlighted a need for guidance in handling group dynamics, for example how you activate participants. Additionally, the respondents posed questions about managing exercises with participants having different types of backgrounds and competences. For example, “*what to do with non-responders course participants and different levels of education*”-P105. Some reported they would like further education in running exercises.

Learn from others

There were many answers that highlighted the value of meeting other instructors and share

experiences. They believed that an opportunity to network with each other would be a valuable experience that could boost energy, ideas, and extend their knowledge. A way to meet is to exercise together: *”Review key aspects of using the system holistically and run a few different scenarios/exercises engaging the variety of instructor backgrounds”* – P151.

3.3.2 Is there anything else you would like to add?

The answers to the question above were analysed through thematic analysis and three themes were generated: A great tool, Web based and, New material.

A great tool

Several respondents emphasized that ETS is a great tool. One respondent wrote *“after all these years ETS is still a perfect system to use in exercises. ETS is not a goal, it is a perfect tool”* – P12. The respondents also wrote that courses should be held more often on more locations with different types of scenarios.

Web based

The respondents requested that more material should be web based. For example, using the tool on a web-based platform. It would enable more and broader usage. *“Think this tool is very usefull also with computer scenarios, to train schools and laboratory emergency plans also”* – P227. This includes having videos about ETS online, and tutorials to aid the instructors in their work.

New material

The respondents requested new material. It was important to both update the physical material that they had, and also to make the system suit current clinical practise. Added to this, respondents requested a broader set of modules and kits as well as more patients in their patient bank to create larger exercises in other types of settings. For example, *”I would lika more types of injuries like abdomen injuries and so on”* – P12. Respondents also said that it would be useful to have extra material in the training packs if something got lost. Some highlight that the kits are too expensive and that it affects the flexibility of the tool: *”The kits are too expensive, and therefore adding to our collection is not possible. It is frustrating to have to pay so much money for shipping and royalties, and then the kits themselves - it all adds up and makes Emergo less flexible.”* – P206.

4 Conclusions

In all, the Senior instructors reported that ETS is a great tool that is used by many to practise disaster management personnel. Further conclusions are presented here by answering the research questions.

4.1 How is ETS used?

ETS was used by many countries around the world. The results shows that 24 different countries had active Senior instructors, with a significant broad activity in Australia. Since most of the participants had used ETS the last year, the conclusion can be drawn that the tool was frequently used by many of the Senior Instructors. This was further emphasized by the result of 11 200 trained people with the tool last year.

The most used packages were the Hospital set and the Basic set. The usage of the hospital does not reflect the experience of mastering the set, when compared to the experiences of mastering the other sets and level of usage. The results imply that the hospital set is more complex than the other sets and should be reviewed or that it requires further instructor training.

4.2 How comfortable are the instructors in their usage of ETS?

The instructors are comfortable using ETS, based on the mean of the respondents' answers between 5,05-5,23 out of 7. They reported that they mastered the ETS-material rather well and that they felt safe using the material. The instructors also stated that the ETS-material support them in their role as an instructor and that ETS support their pedagogical method.

4.3 What should a potential refresher course for Senior instructors contain?

A potential refresher course for Senior instructors should review updates on the ETS-material, methodological aspects of how to conduct and especially plan and evaluate an exercise. It should also include time to share experiences and discuss the instructor role and pedagogy. The respondents also suggest more web-based solutions, which means that a potential refresher course could include online material.

5 References

Chadwick, I. C., & Raver, J. L. (2015). Motivating Organizations to Learn: Goal Orientation and Its Influence on Organizational Learning. *Journal of Management*, 41(3), 957–986.

<https://doi.org/10.1177/0149206312443558>

Kolb, A. Y., & Kolb, D. A. (2005). Learning Styles and Learning Spaces : Enhancing Experiential Learning in Higher Education, 4(2), 193–212.

Appendix A. Survey background questions

ETS Instructor Survey

2018-06-05 14:26

ETS Instructor Survey

Country

Are you a member of the ETS- faculty?
 Yes
 No

What year did you get your ETS certificate? (example 2001)

Which organization do you work for?

What is your occupational background?

Do you, as an instructor, use ETS as a tool for education and training?
 Yes
 No

When was the last time you used ETS (please state a date "yyyy-mm-dd")?

How many times have you, as an instructor, used ETS in the last 12 months?

How many persons have you trained during the last 12 months?

Which ETS- packages do you master?
 Hospital set
 Basic set
 CBRN set
 Burn set
 Psychosocial support set

Which ETS-packages do you use for education?
 Hospital set
 Basic set

https://enkatsvar.regionostergotland.se/survey/s_survey.asp?EID=BBAAD6&RID=720528&PV=False&TV=False&Type=

Sida 1 av 2

- CBRN set
- Burn set
- Psychosocial support set

Which course/courses do you provide?

[« Back](#) [Next »](#)

POWERED BY FUELECH

Appendix B. Survey 1–7 open questions

ETS Instructor Survey

Please respond with the number that corresponds with your opinion.
Take notice that **NOT** all questions are using the same scale for assessment.
Please respond as truthfully as possible.

All questions must be answered

1. To what extent do you master the ETS-material?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

2. To what extent does the ETS material support you in your role as an instructor?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

3. To what extent do you feel comfortable in using the ETS material for educational purposes?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

4. To what extent does ETS support your pedagogical approach?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

5. To what extent do you think that ETS contributes to what you want to teach the

participants?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

6. To what extent do you feel that you can influence the development of ETS material?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

7. To what extent does the ETS material inspire you to create new exercises / scenarios?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

8. To what extent does the ETS give you the opportunity to test different scenarios?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

9. To what extent do you use ETS material during Courses?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Always)

10. Is ETS a useful tool for training?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Very useful)

11. To what extent is the ETS material flexible and adaptable to the courses you implement?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Very flexible)

12. How useful is ETS for visualizing a scenario?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Very useful)

13. To what extent does the ETS contribute to a better understanding?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

14. In your role as an instructor, would you benefit from a refresher course for senior instructors?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (Very much)

15. To what extent are you aware of the ETS Competence Center?

- 1 (Not at all)
- 2
- 3
- 4
- 5
- 6
- 7 (To a large extent)

« Back Next »

POWERED BY FUELECH

Appendix C. Survey open questions

ETS Instructor Survey

2018-06-05 15:10

ETS Instructor Survey

Open text questions

16. What should a refresher course for senior instructors cover?

17. Is there anything else you would like to add?

[« Back](#) [Next »](#)

POWERED BY FUELECH

Appendix D. Usage of ETS

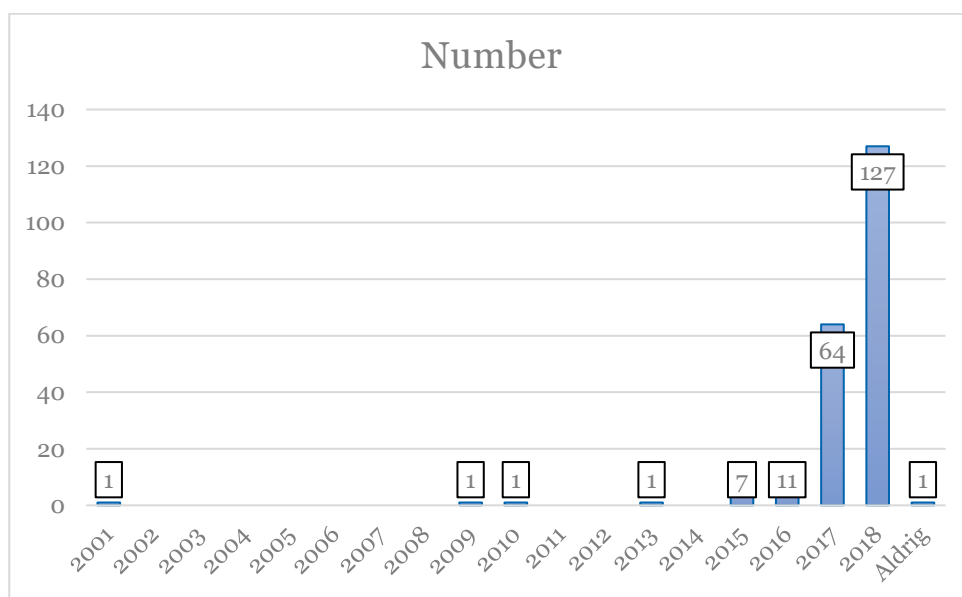


Figure D. The years the instructors last used ETS