Simulation-Based Training: Modeling the Activity of Trainers during Post-Simulation Debriefing

Duvivier, V., Derobertmasure, A., Lothaire, S., Demeuse, M.
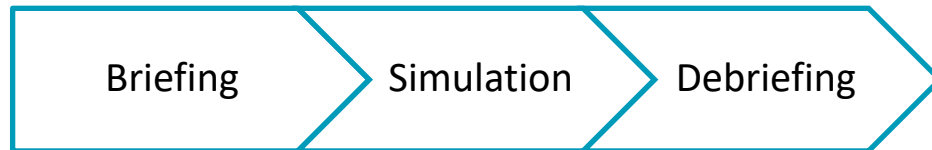
PCE 2023 – 18.06.2023 – communication n°69204

Plan

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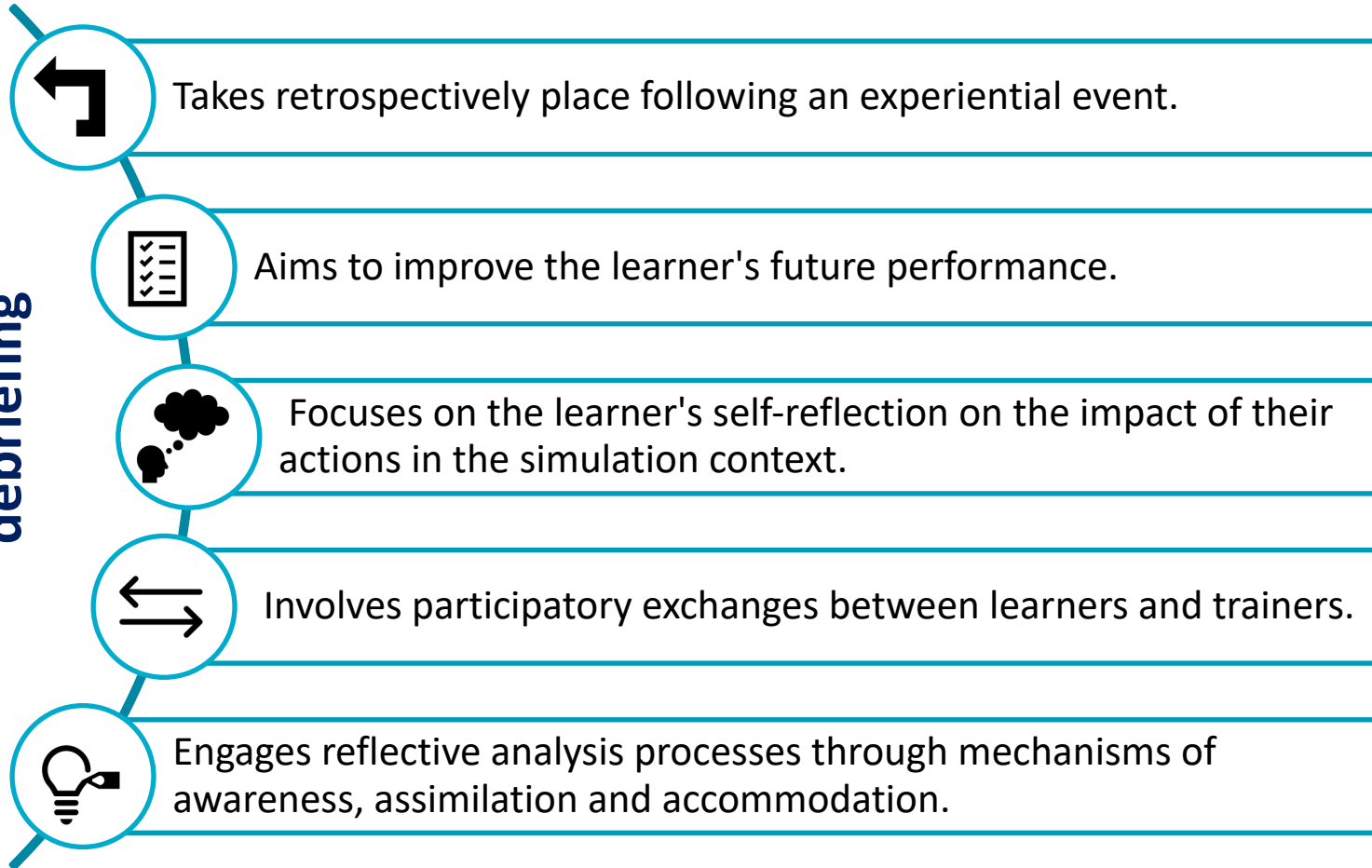Duvivier, Derobertmasure, Lothaire, Demeuse | INAS

1. Introduction

- One of the "dominant models in education" according to Horczik (2014, p.1) is simulation.

- It enables the creation of authentic and safe learning environments in which participants can develop their skills through realistic simulations (Duvivier et al., 2023).

- Generally, simulation is structured on the basis of three phases: briefing, simulation session, and debriefing (Fanning & Gaba, 2007).

| Briefing | Simulation | Debriefing |

1. Introduction

A simulation debriefing

Takes retrospectively place following an experiential event.

Aims to improve the learner's future performance.

Focuses on the learner's self-reflection on the impact of their actions in the simulation context.

Involves participatory exchanges between learners and trainers.

Engages reflective analysis processes through mechanisms of awareness, assimilation and accommodation.

Duvivier et al. 2023

1. Introduction

- For many authors, the work of reflexivity conducted during debriefing is the main pedagogical challenge of the simulation format (e.g., Fanning & Gaba, 2007; Issenberg et al., 2005; Raemer et al., 2011; Oriot et Alinier, 2018, 2019; Raemer et al., 2011; Oriot et Alinier, 2018; Secheresse, 2020; Pastré, 2008; Galland, 2020).

- Other authors indicate that the effectiveness of learning largely depends on the quality of post-simulation debriefing (e.g., Savoldelli, 2011; Savoldelli & Boet, 2013; Rouge, 2016; Oriot & Alinier, 2018; Galland, 2020).

Learners	Trainer	Learning objectives

Level of facilitation	Effect on learning
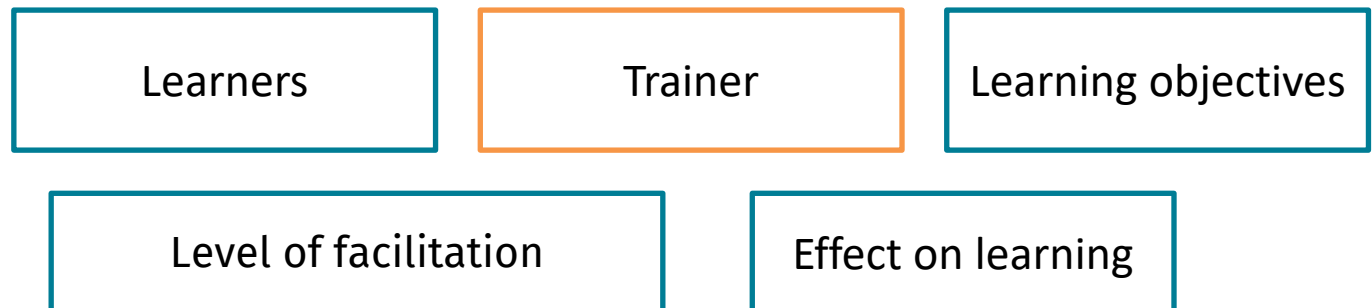
2. Results

"teacher",
"mediator",
"instructor",
"mentor", »
« debriefer »
...
(Jones, Reese et Shelton
(2013)

Results

A trainer-facilitator in post-simulation debriefing has a <u>dual role</u>.

Facilitator encourages and assists the learner to engage in action

To recognise and solve problems linked to their professional field.

Facilitator guides the learner in an in-depth reflection on this action

To enable them to develop operational models that can be transferred to similar real-life situations in the future.

2. Results

- Facilitator's activity is recognized as complex (Pastré, 2008; Policard, 2018; Bastiani, 2017, 2020).
- Facilitator has to leave his comfort zone for many reasons (Pastré, 2008).

2. Results

- Facilitator has the responsability to select and to mobilize the appropriate debriefing approach based on various factors (Abulebda et al., 2021; Bauchat & Seropian, 2020).

- But facilitator have difficulties to understand the various approaches and methods of debriefing for several reasons.

2. Results

Wide methodological range

Abulebda et al. (2021)

Training a long time attached to superficial formats and contents

Abulebda et al. (2021); Cheng et al. (2015)

Professional profile with a minor educational background

Dubois (2017) Bastiani (2017)

Difficulties to adopt the position of trainer instead of the position of expert

Bastiani (2017) Policard (2018)

Wide variety of debriefing formats

Sawyer et al. 2016 Duvivier et al. 2023

2. Results

The facilitator is situated in a state of unstable equilibrium (Policard, 2018) between:

• making a cognitive control on the situation as it is perceived or supporting a certain level of autonomy for the learners.

•(re)actualizing the elements

•maintening coherence between the pedagogical objectives and the discussion elements.
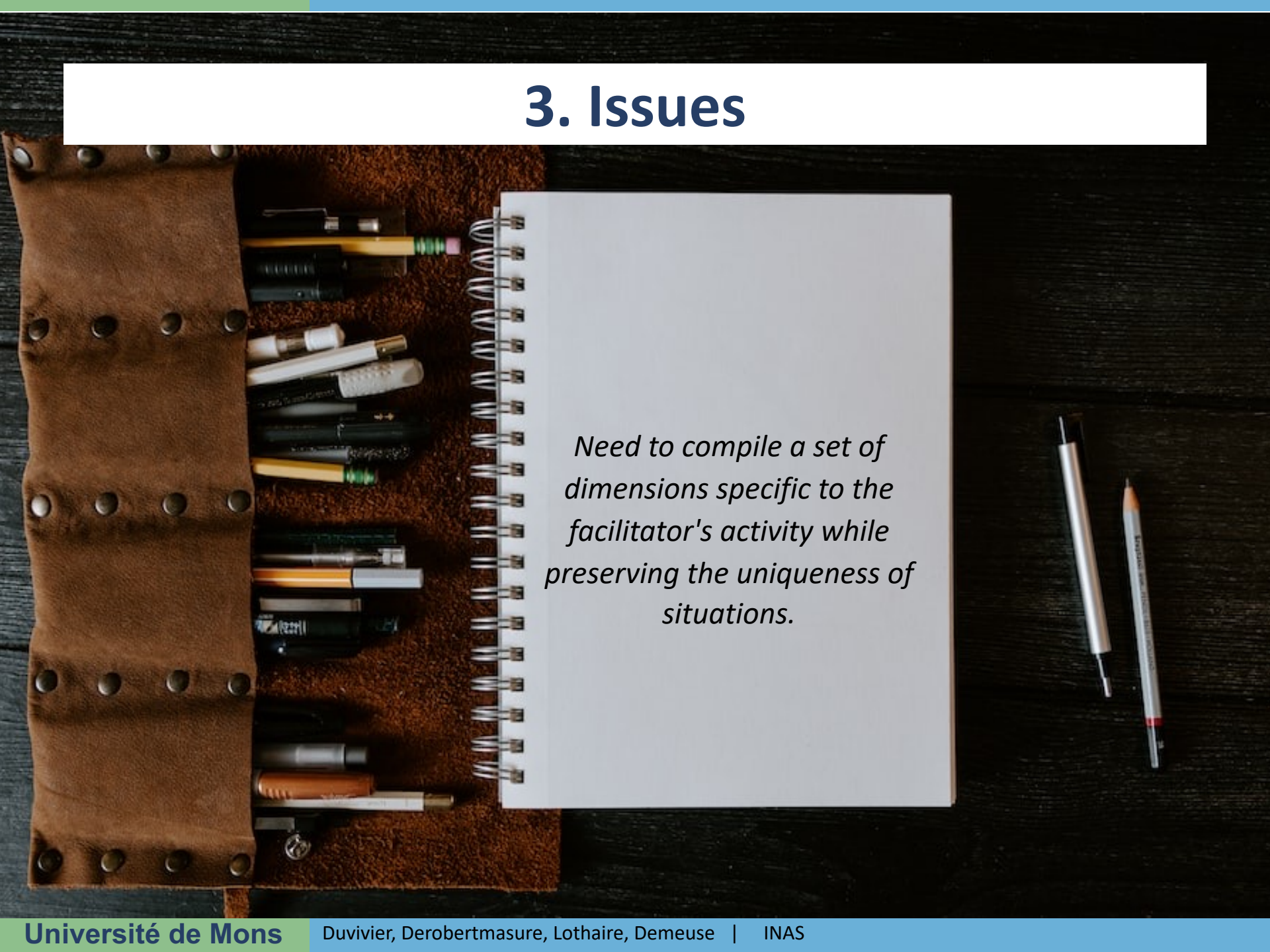
2. Results

- Debriefing can lead to a significant mental burden on the facilitator

- There are support tools, including digital tools, but they have little impact to reduce the trainer's mental load.

2. Results

- The way in which the facilitator approaches the simulation object and uses it to educate the learners, as well as the way in which the facilitator supports the learners' activity during debriefing, is still underexplored.

- When they are studied, <u>the reported elements :</u>
- tend to be prescriptive in nature
- have limited generalizability
- are difficult to operationalize
- focus more on the "what" (products and GAP) rather than the "how" and the "why" (processes)
- are difficult to connect with a comprehensive theoretical model of trainer guidance.

3. Issues

Need to compile a set of dimensions specific to the facilitator's activity while preserving the uniqueness of situations.

4. Methodology

Integrative literature review

- Literature review on Faciliator-trainer
- ✓ Objective : to examine the activity of trainers from the perspective of input variables and process variables
- Key words
- Languages: French and English

- Literature review on Facilitator - trainers in video-assisted debriefing (DAV)
- ✓ Objective: to study the activity of trainers implementing DAV
- Keys words
- Languages: French and English

- 9 databases or search engines in French (n=5) and in English (n=4) in the fields of professional training in medical, crisis management, and education context.

Springer, Cairn - Psychology and Education section, Open Edition, Eric, PubMed, Semantic Scholar Paper Corpus, Google Scholar, Pascal and Francis, and ERUDIT

4. Methodology

DATA	FIRST ROUND	SECOND ROUND	RETAINED
Open Edition	18	3	1
PubMed	86	10	5
ERUDIT	23	6	1
CAIRN	475	7	3
Pascal & Francis	34	6	0
Google Scholar	371	12	6
Springer	861	2	2
ERIC	156	14	1
SCOPUS	765	22	4
Ajout à la marge			9
TOTAL	3439	87	33

33 papers

4. Methodology

For each paper retained in phase 3

•Thematic analysis method derived from "Phases of Thematic Analysis" by Braun & Clarke (2006) (p.35)

Synthesis of the main domains of factors involved in the activity of the trainer, based on 3 domains.
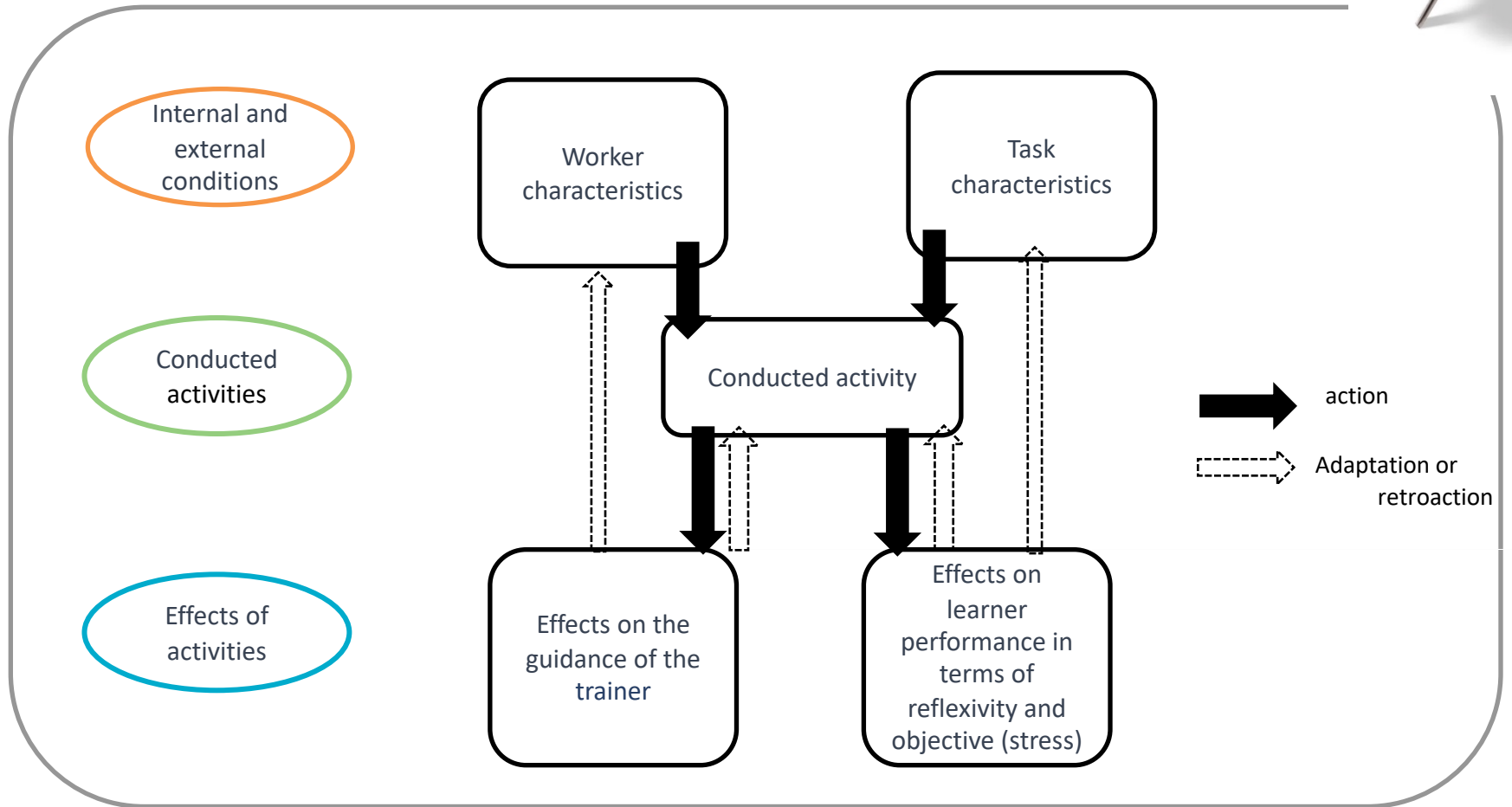
Phase	Description of the process
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

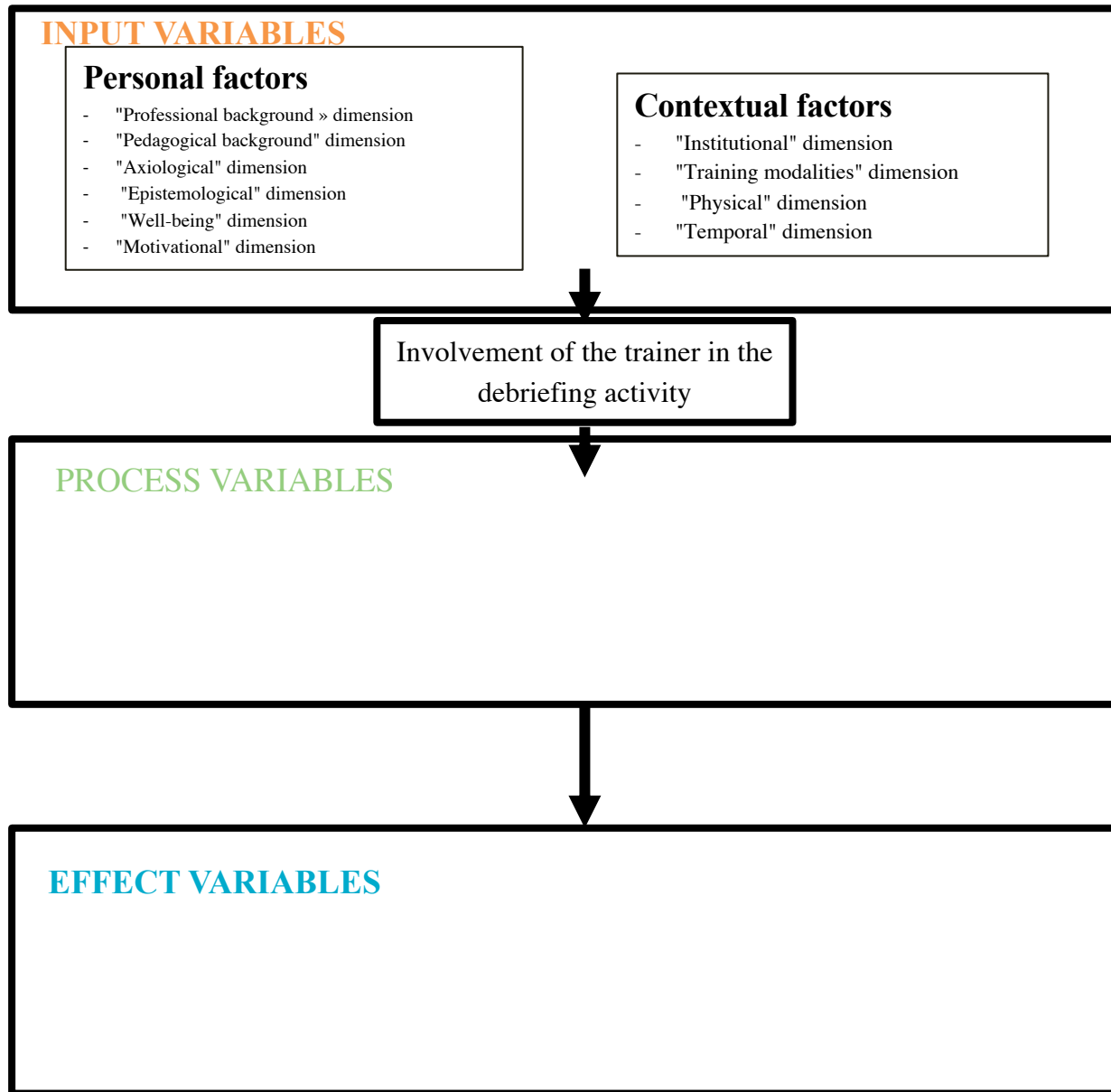Phases of Thematic Analysis (Braun & Clarke, 2006, p.35)

4. Methodology

Internal and external conditions   = input variables

Conducted activites   = process variables

Effects of activities
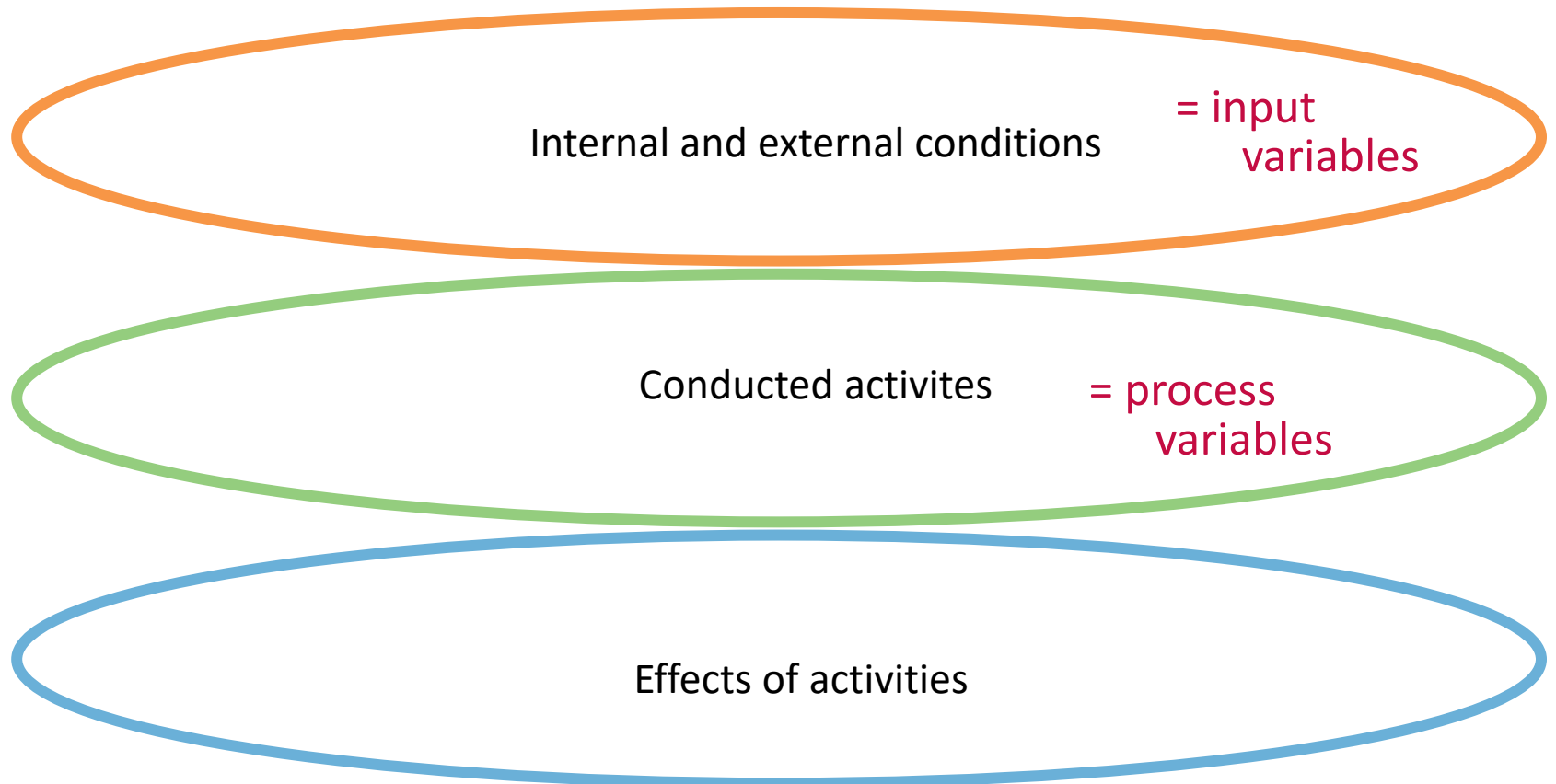
5.1. Frame of reference

The "five squares" model by Leplat and Cuny (1974)

INPUT VARIABLES

Personal factors

- "Professional background » dimension
- "Pedagogical background" dimension
- "Axiological" dimension
- "Epistemological" dimension
- "Well-being" dimension
- "Motivational" dimension

Contextual factors

- "Institutional" dimension
- "Training modalities" dimension
- "Physical" dimension
- "Temporal" dimension

Internal and external conditions

Involvement of the trainer in the debriefing activity

PROCESS VARIABLES

Conducted activities

EFFECT VARIABLES

Effects of activities

D. STAM (Debriefing. Simulation Trainer Activity Model)

INPUT VARIABLES

Personal factors
- Professional background » dimension
- "Educational background" dimension
- "Pedagogical background" dimension
- "Axiological" dimension
- "Epistemological" dimension
- "Well-being" dimension
- "Motivational" dimension

Contextual facors
- "Institutional" dimension
- "Training modalities" dimension
- "Physical" dimension
- "Temporal" dimension

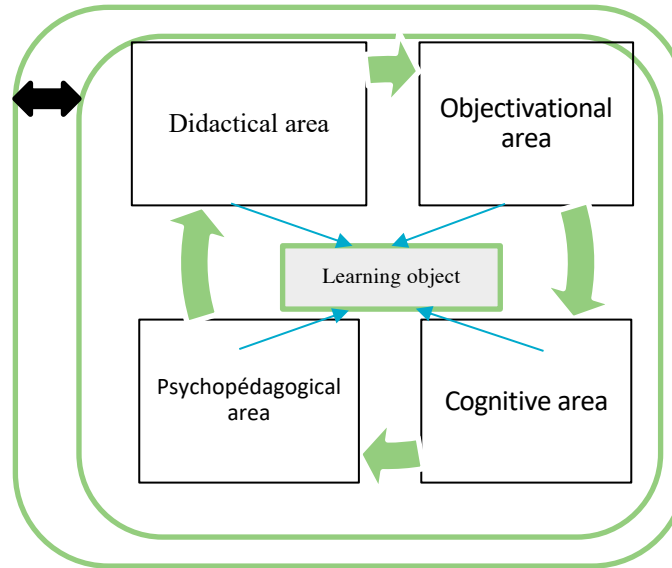Involvement of the trainer in the debriefing activity
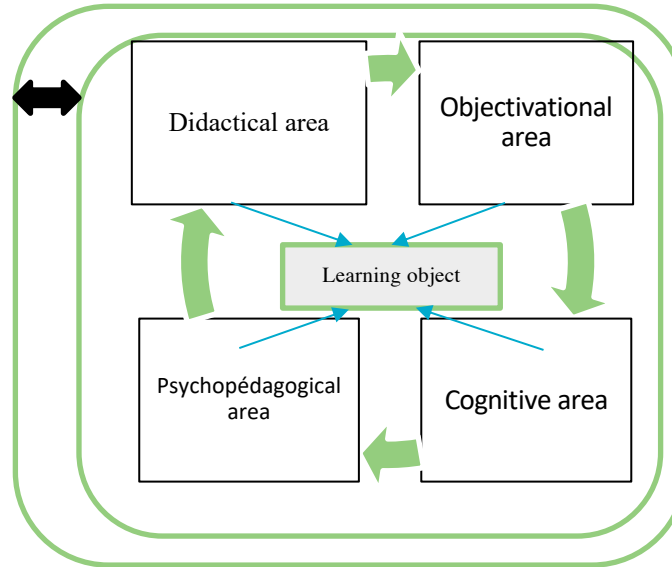
PROCESS VARAIBLES

Instrumental factor

Flexibility

Regulation factor

Anticipatory/regulatory activity

Adaptation activity

Didactical area

Objectivational area

Learning object

Psychopédagogical area

Cognitive area

EFFECTS VARIABLES
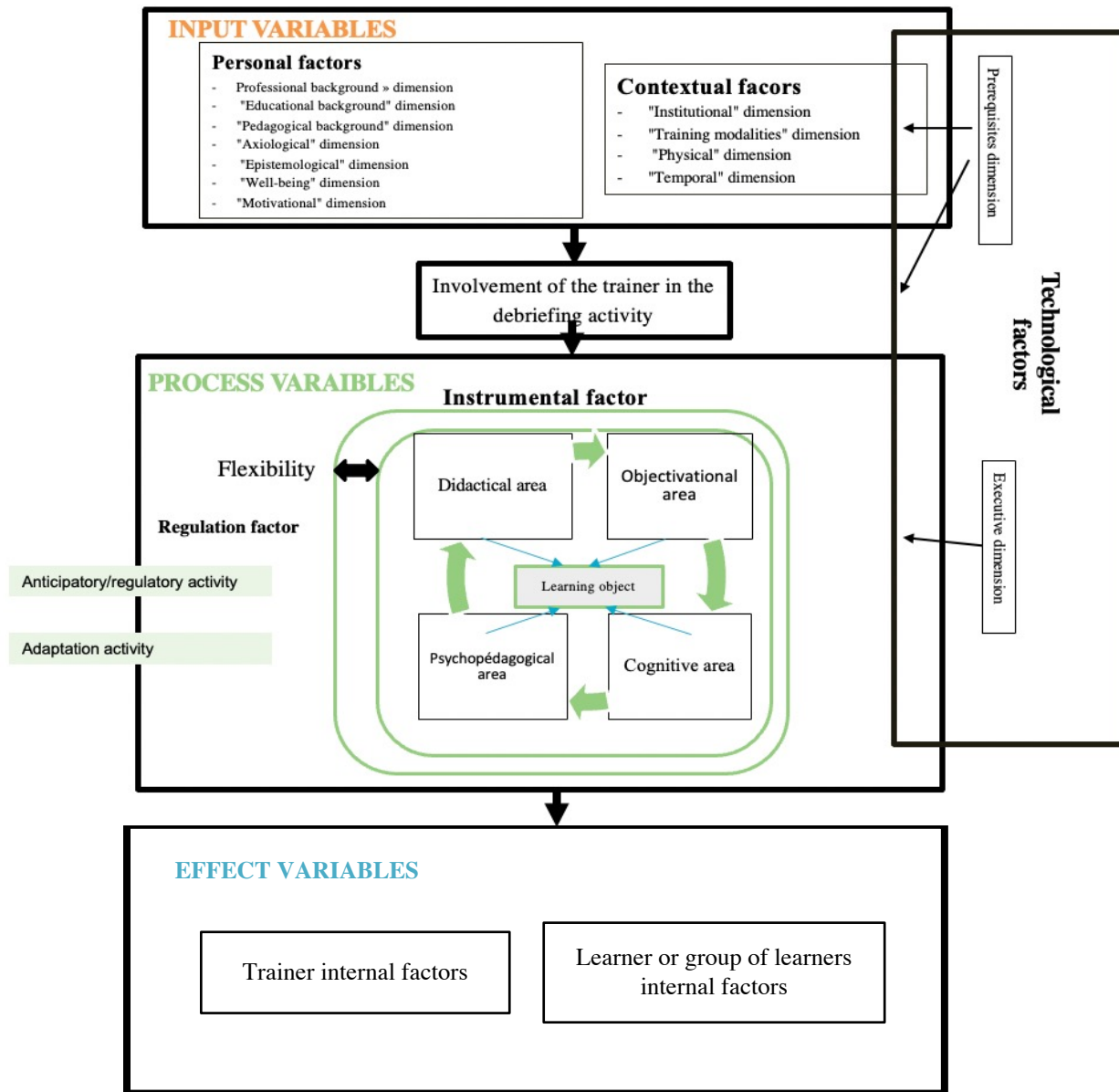
D. STAM (Debriefing. Simulation Trainer Activity Model)
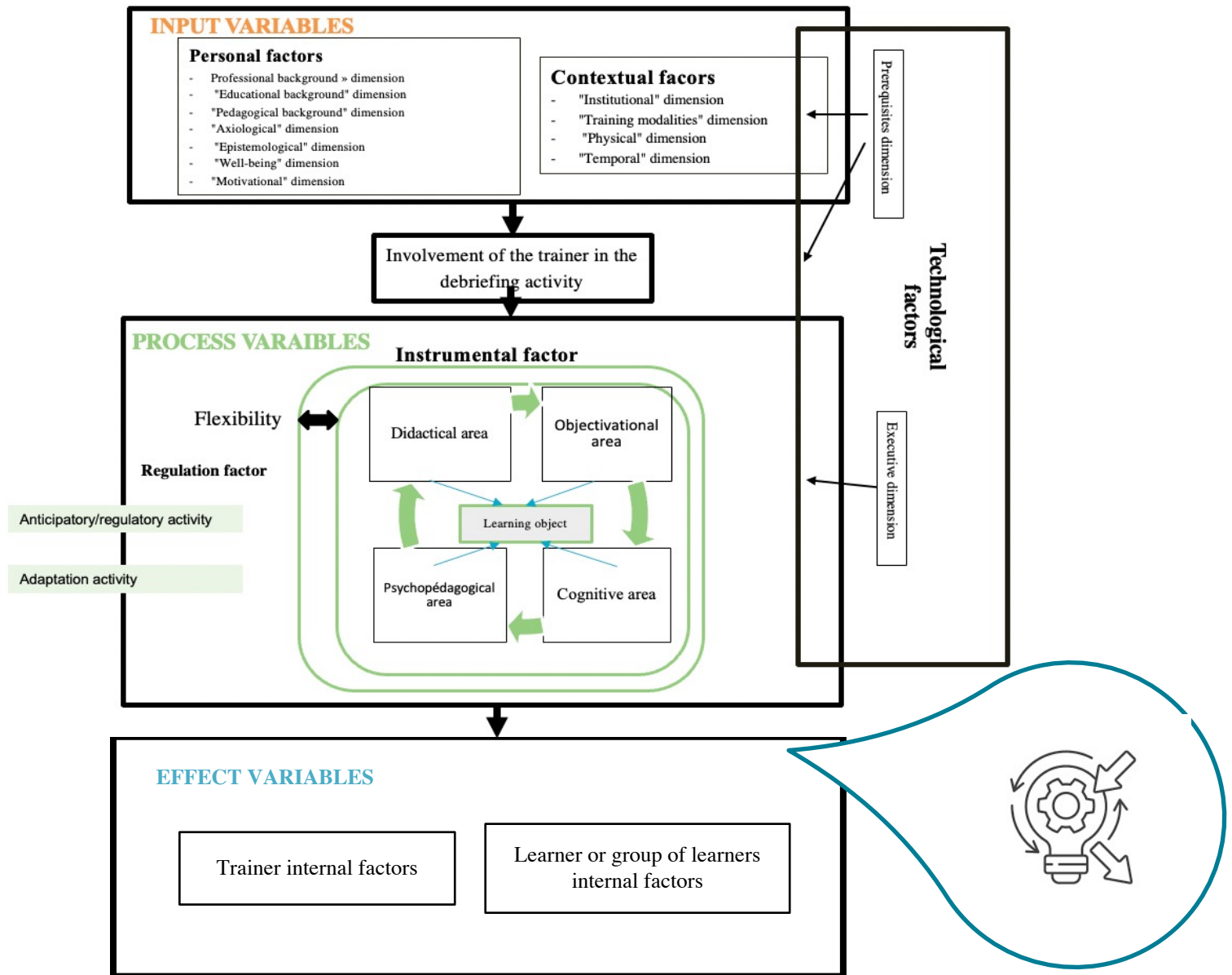
D. STAM (Debriefing. Simulation Trainer Activity Model)

6. Conclusions and prospects

- Being a debrieifer is complex

- There is no model related to the activity of the trainer in post-simulation debriefing, unlike the simulated time.

- The communication introduces a synthesis model, **D. STAM (Debriefing. Simulation Trainer Activity Model).**

- D. STAM provides a framework for understanding how trainer debriefs.

- D.STAM identifies key dimensions specific to the trainer's role at three levels:

1.Initial characteristics (input variables).

2.Process mechanisms to implement debriefing (process variables).

3.The effect of input and process variables.

6. Conclusions and prospects

A number of perspectives can help us to better understand, describe and evaluate debriefing activity.

- *Which are the professional actions implemented by trainers during debriefing?*

- *Do the actions vary depending on the phase of debriefing in which the trainer is engaged?*

- *Which are the effects of guidance actions on the level of reflectivity engaged by learners?*

- *Are there differences between the actual guidance practices implemented by trainers and the ones they claim to use?*

- *Which are the input factors that can influence the effectiveness of guidance actions during debriefing? For example, trainer experience, group size, training context, etc.*

- *How can trainers be trained in the use of guidance actions during debriefing?*

6. Conclusions and prospects

- Our prospects ?

-> Operationalise the process factors of the 4 areas and create a tool to report on these factors.

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VIRTUAL PRESENTATION

11TH ECE LONDON 2023

Observation Grid for Guiding Modalities. A Tool for the Training of Trainers in Post-simulation Debriefing

Duvivier, V.; Merchez, F.; Lothaire, S.; Demeuse, M.

ARC Sim'Pro
La simulation au cœur de la formation

Thank you

Contact
Valerie.duvivier@umons.ac.be

Cite

Duvivier, V.; Derobertmasure, A.; Lothaire, S.; Demeuse, M. (2023). Simulation-Based Training: Modeling the Activity of Trainers during Post-Simulation Debriefing. Paper present at the 2nd Paris Conference on Education (PCE2023), Paris, France.

To be continued …
At the FOE London 2023 (Virtual Presentation)

Vidéo des premiers résultats	Vidéo de présentation de la recherche et de l'équipe	Site du projet

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