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The "scenario" as a key educational tool in the simulation centre

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ABSTRACT

Using simulations is considered an effective tool in training and instructional processes. At the core of the process is the 'scenario'. The objective of the current research was to shed light on the elements that affect the development of the scenario topic and all that relate to its operation during a simulation. With a mixed method based on grounded theory, we analysed the characteristics of 74 simulation workshops and 150 scenarios between the years 2019–2020 carried out in our college's simulation centre. Findings point to a need to construct clear criteria and rules for preparing scenarios for simulation training. Issues such as the active simulation participants' selection process, the scenario writer's identity, the time of exposure to the scenario before arriving at the simulation centre, and how the scenario is mediated may also contribute to the simulation's effectiveness.

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Introduction

Teachers constitute the core of the school system, and their training is crucial to their competencies and ability to last on the job. Klassen et al. (2011) and Goodwin and Kosnik (2013) found that one of the main difficulties of new teachers is bridging the gaps between their theoretical learning and their encounter with the field. It appears that many teachers attain their true teaching quality only in the third or fourth year of the job. However, some are unprepared for the job's strenuousness and demands and leave the profession sooner (Mizrav 2018).

Efforts to bridge the gap between teacher training and classroom practice have led to the introduction of various activities and a new curriculum emphasising discipline, education, instruction, and clinical training (Vadmany and Inbar 2020). This includes expanded joint work with schools, self-exploration of teaching philosophy, soft skills development, peer learning, and reflection (Shperling and Ben-Yehushua 2017). The Israeli Ministry of Education has also incorporated simulated training into the curriculum.

The use of simulation in a learning Simulation Centre (SC) is increasingly perceived as a powerful tool that enables addressing relevant and authentic situations in a protected and supportive environment for learning, eliciting insights, and analysing occurrences at the individual and group levels (McHardy and Allan 2000; Weissblueth

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and Linder 2020). While there are various types of simulations, what they all have in common is that they are based on creating an imaginary, controlled environment, which enables structured, safe learning while documenting, questioning, and providing immediate feedback to the trainees, all without unnecessary risk (Amaral and Fregni 2021; Amri et al. 2020; Friedman et al. 2018; Simanjuntak et al. 2021). The world of simulations is evolving rapidly, opening horizons in training and instruction. It now includes a variety of methods, from role-playing through simulators, computer games, and the use of dolls, up to the use of advanced actors and technologies such as in worlds of virtual reality.

One common simulation method uses actors representing one side of the interaction in front of professionals involved in the learning process. The practice of using actors began about 50 years ago, when Dr. Barrows (1928–2011), a professor of neurobiology at the University of Illinois School of Medicine, sought to develop skills of conversing with a patient in his students. He incorporated actors who played patients with neurological problems as part of the course. At the end of the simulation, he asked the actors to tell the students (who played the therapists) how they felt as patients during the interaction. The success of the course was due to the ability of the simulation to 'bring reality into the classroom' and tie it to the theoretical world (Davidovitch, Parush, and Shtub 2008; Zhang, Thompson, and Miller 2011).

Despite the lack of clarity in the use of the term simulation in the field of education, it is possible to distinguish three main types of simulations: clinical simulations that incorporate human interpersonal interaction, Computer-based simulations, and immersive simulations that include digital and human interactions.

The scenarios used in the clinical simulations focus on interpersonal relationships and portray realistic circumstances prevalent in the workplace, such as teacher training. In Israel, the simulations take place within the framework of the national programme for SCs following a model that includes several steps: writing the scenario, reading it, participating in the videotaped simulation in front of a professional actor, receiving individual and group feedback, reflection, investigation under the guidance of a professional facilitator, and discussion and concluding. The steps can repeat until a new scenario is created.

Another model for simulations in the teacher education programme represents a collaboration between the Simulation Center at Syracuse University School of Medicine and the university's Faculty of Education. There, experience in the simulations focuses on developing those training to teach skills in the interaction with parents in various coping situations such as student achievements, behaviour, social-emotional issues, curriculum choices, etc (B. Dotger 2013).

The clinical simulations in this model rely on the same theoretical framework and teaching strategies as the medical simulations: cognitive development and methodologies of experience with actors who play the 'standard other' in different scenarios. The model is based on the principle of problem-based learning: dealing with a problem, developing problem-solving skills, and adapting these skills if necessary. The model includes several steps: writing a scenario and sending it to the trainees, participation in the orientation the day before the experience, experience in small groups, personal reflection and watching the videotaped experience individually, a group meeting after a week with a group investigation and reflection and lastly learning the skill and a plan for self-improvement. This cycle of actions can be repeated.

Like the model of the national programme for simulation centres in Israel, the model at Syracuse University is also based on an integrated and dual-purpose learning mechanism in which learning is carried out as part of the experience (Lipshitz, Friedman, and Popper 2006). However, the group investigation in the Syracuse model is carried out separately and not as part of an integrated simulation workshop lasting several hours. In these two models, those who experience and observe the simulation are part of the learning mechanism, but the learning methods are different (observation vs. experience).

The latter model has been studied in recent years and found to be effective in various important skills for the teacher (B. Dotger et al. 2018; B. H. Dotger and Coughlin 2018; Gerich and Schmitz 2016). Accordingly, simulation training enables school principals, staff, and teacher trainees to practice challenging interactions in a safe space, thereby incorporating effective coping methods in the day-to-day school environment. Following Barrows as aforementioned, the simulation workshop facilitator uses actors who play one side of a given interaction facing one of the participants in the training. The actors rely on scenarios or accounts of incidents written in advance, according to which the learners practice their skills. In each simulation workshop, three simulations are held, i.e. role-playing three scenarios.

Several steps are involved in constructing the scenario (Hwang and Bencken 2008). First, identify the learning objectives that the scenario is designed to address. Second, the learning outcomes are defined to identify the specific knowledge, skills, and abilities the learners need to acquire. Third, developing and writing the scenario. The process is based on the learning objectives and outcomes. The scenario includes the participant's profile regarding a variety of characteristics (age, gender, education, family status, emotional state, etc.) and several possible outcomes. Fourth, prepare the actor who receives the detailed scenario with a detailed explanation of the learning objective and the required products. Fifth, a summary is written for the event on which the training will take place. The summary is the part shown to the trainees.

The scenario is perhaps the core component upon which the learning is based. A good scenario enables effective learning and a sense of progress; therefore, its proper construction and use are crucial. Thus, the current study aimed to examine the various ways of formulating scenarios and the factors contributing to them while seeking to understand the best procedure that contributes to increasing and improving the participants' performance. The research questions were:

(1) What are the topics, sources, and origins of the scenarios?
(2) What are the factors on which the scenario is based?
(3) How are the participants' selection and preparation associated with the scenario?

Material and method

Participants

Thirteen participants took part in the current study. Ten members of the SC staff worked as freelancers, of which 8 were facilitators who led and moderated the workshops, and 2 were actors. In addition, three lecturers from the college who came to the SC with their

students (group leaders) were randomly selected to be interviewed. The age range of all interviewees was 35 to 55, and all had at least one year of working experience in the SC.

The study was conducted in full compliance with the standards of the Helsinki Declaration. Before participating in the simulations and the interviews, each participant signed an informed consent form to participate in the study. References to participants in the simulation were made anonymously. The study received the approval of the Institutional Ethics Committee (4/2021–11).

Data collection and tools

As part of their training, groups of teachers attended a four-hour session during which they met actors who helped them role-play various incidents from the field of teaching. The sessions were video recorded and analysed verbally by the group in a session that anchored the learning outcomes based on theoretical perspectives.

In the 2019–20 school year, before the pandemic outbreak, 74 such workshops were held, with 150 scenarios that were acted out. Each workshop was preceded by preparation that included a discussion with the group leader, i.e. a college lecturer for teacher trainees or school principal. In this preparatory discussion, three things were determined: 1) the workshop's topic, 2) the goals of the workshop, and 3) the three scenarios to be simulated.

On the workshop staff's end, each scenario has a defined goal, i.e. 'What do we want to get out of the role-play vis-a-vis the overall goals of the workshop?' The foundation for the scenario of the incident is defined as the three options for the scenario's development process, i.e. if the trainee says X, the actor responds with Y. The SC provides each workshop group with a facilitator, an actor, and a technician. After coordinating the initial simulation details before the workshop, the SC's staff contacted the group leader and formulated the workshop content per the group's needs.

A facilitator who talked to whoever ordered the simulation workshop for the first time always asked what the purpose of the training should be. The purposes were a derivative of three factors: 1) The professional development phase that the group was in at that time (e.g. pre-service teachers, teacher trainees, beginning teachers, and veteran teachers' teams). 2) The organisation's needs (incorporating changes into the organisation, fostering teamwork, etc.). 3) The needs of the individuals in the group (varying from a need of the group leader or a need of a participant who encountered an issue seeking to address it in a protected environment). The purpose of a workshop in the SC might be, for example, 'to provide tools for engaging in assertive dialogue', 'improving the educator's listening and attention skills', or 'providing tools for peer work'.

The simulation workshop

Each simulation workshop combined experience in simulations alongside theoretical enrichment and conceptual discussions. In collaboration with the group leader, the SC facilitator built three scenarios that simulated situations relevant to the group members. Each scenario had two characters: One played by a professional actor and the other by a volunteer from the group (active participant). The simulation took place in a separate, isolated room, was recorded on video, and played simultaneously to the group members in the classroom. The active participant and the group were given a general description of

the situation, a definition of the active participant's role, and a definition of the purpose of the simulation for them. The actor has then described the situation with an explanation of the characteristics of the figure that they were to play, as well as several possible occurrences and their supposed reactions ('If the active participant acts this way, you may react that way', etc.). The Hagen approach was used to characterise the played figure in the scenario and summon up the conflict for the active participant, the dialogue with the actor, and the experience in interpersonal communication skills (Hagen, Pierce, and Frankel 2008). The actor was given information that helped them define and 'play' the character clearly and accurately.

About 15 participants attended each simulation workshop. The active participant was one of the group members who actively engaged in the scenario facing a professional actor. The active participants departed from their original group, moved to a simulation room equipped with closed-circuit cameras, and began to simulate their role with the professional actor in the pre-determined scenario. The active experience in the simulation is a powerful one that only two to three of the workshop participants get to experience in person. Studies have found that we better recall lessons learned when we experience them as a mental struggle. The active participant in the simulation undergoes a significant emotional and learning experience through the personal experience of the situation (B. H. Dotger, Dotger, and Maher 2010; B. H. Dotger et al. 2011).

Upon completion, the active participant returned to the classroom for group discussion and analysis of the situation. This was followed by extracting conclusions and formulating and presenting practical tools that could assist in addressing similar situations. Throughout the process, emphasis was placed on immediate feedback. To that end, the active participant received feedback from the actor before returning to the group. Group members who watched the simulation simultaneously filled out an electronic feedback form immediately after viewing each simulation, and the cumulative results were presented for discussion in the classroom.

The scenarios were classified as per their target audiences and the topics they engaged in (see Table 1). In addition, the facilitators and the actors were listed for each workshop and were interviewed in semi-structured interviews. To ensure validity and reliability in data collection by triangulation, we referred to the list of lecturers who had brought students to several workshops and contacted three who indicated their availability and who agreed to be interviewed. This was done to examine the points of view of the workshop attendees.

The study was conducted in two parts. The first part relied on a statistical quantitative descriptive analysis of the topics of the scenarios and their characteristics based on the workshops conducted throughout the 2019–2020 school year. Seventy-four simulation workshops were visually scanned, and 150 scenarios were analysed. They were classified according to the type of conflict and the issue around which each was centred. Table 1 presents the topic categories of the simulations.

The second part of the study was based on a qualitative method and included semi-structured interviews with facilitators, actors, and lecturers.

Data analysis

The interviews were analysed based on the Grounded Theory approach (Shimoni 2016; Shkedi 2003), wherein parts of the text were coded into categories via datum-to-datum

Table 1. Topics of the 150 scenarios by participants group types in simulations in the SC.

Scenario types	Participants
• Coping with a student's discipline problem • Motivating students • Assertiveness and Aggression in Discourse Management • Presenting an educational global perception to various functionaries	• Beginning teachers
• Trust in co-work processes • Problem-solving between individuals on an educational team	• Final-year pre-service teachers
• Increasing students' motivation • Developing teachers' creativity • Dialogue with superiors • Issues between the veteran and the mentor	• Student teachers
• Recruitment of partners for an educational initiative • Recruitment of a support superintendent. • Ability to present an agenda. • Discourse in the Preschool Community	• In-service teachers' professional development
• Building partnerships • Responsibility and authority in a multi-professional team • Fundraising • Discourse that recruits staff/colleagues • Delivering clear messages	• Non-teachers

comparison and identification of common meanings and patterns (Corbin and Strauss 1990; Glaser and Strauss 2017; Strauss 1987). The interviews with the facilitators, actors, and lecturers were recorded and transcribed. Data were coded by repeated ideas and themes and then code-grouped to form concepts and categories by the prime researcher on the first interview. This procedure created an inside codex that included the themes and the phrases accordingly. An external and capable research assistant examined the interview with the codex. After 95% agreement was reached between the researcher and the assistant, the codex was used to analyse the rest of the interviews.

Findings

Research question 1

The scenario topics and the issues at their core

Examining 74 workshops and analysing 150 scenarios (Figure 1), it was found that 25% of the scenarios addressed the relationship between teachers and students, such as discipline problems or recruiting students for learning. 23% addressed peer relationships among classroom teachers or preschool teachers, mainly around role definitions or recruiting a colleague for a joint task. 19% of the scenarios addressed teacher and parent relationships. This included issues of the child's discipline problems, forging a partnership with the parent towards the child's success, getting parents to recognise their child's problem, and being willing to begin diagnostic or placement processes. 17% of the scenarios addressed coping with conflicts arising from the hierarchy (principal vs. teacher, Ministry of Education inspector vs. principal, Ministry of Education director vs. principal, etc.). Many of these scenarios were focused on feedback and evaluation conversations. In contrast, others were based on issues such as recruiting partnerships to make organisational changes or addressing an organisational or personnel problem. 5% of the scenarios

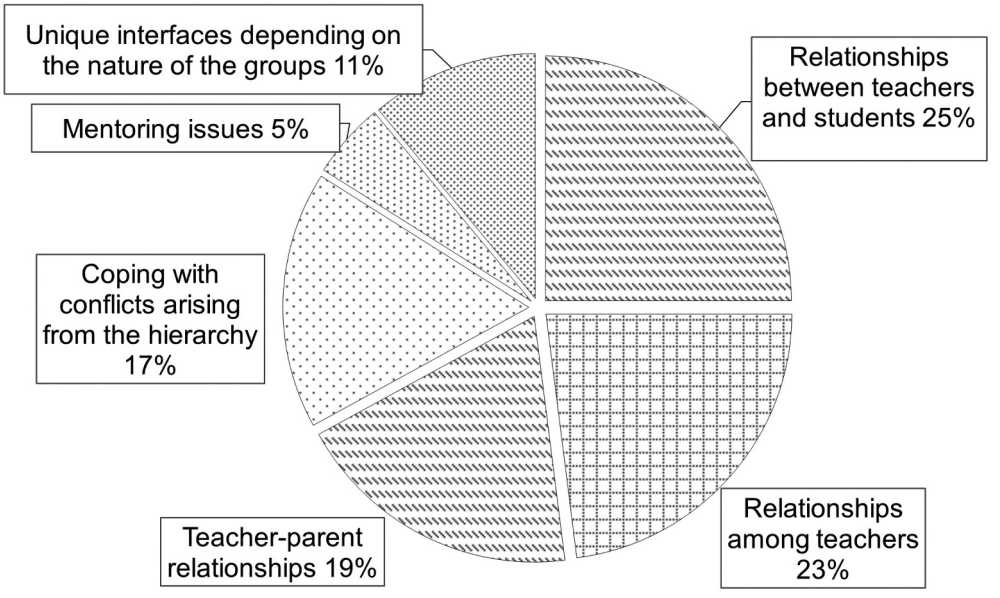


Figure 1. Relative proportions of various scenarios in the study.

addressed mentoring issues (new teacher and their mentors), wherein issues of granting autonomy and coordinating expectations in the mentoring process stood out. The remaining 11% addressed unique interfaces depending upon the nature of the groups that came to the SC (exam supervisor and a student, external instructor for the school while facing classroom staff, and the like).

In general, it was seen that the scenarios addressed all the relevant interfaces for teachers in the various phases of development: relationships with students, parents, colleagues, those in authority, and guidance counsellors. One may assume that the frequent appearance of specific scenarios indicates a general difficulty in that area, which can result from difficulty in dealing emotionally with a complex situation (e.g. a parent who needs to recognise their child's difficulty, a teacher coming for feedback, a struggle for territory between education staff who need to work together), of conflicting desires (in cases of organisational or personnel disagreement), or of teachers' need to 'crack' the source of resistance of their students and recruit them into learning.

The source of the scenario

Each scenario brought to the workshop was based on a relevant situation from the professional lives of the group members. The source of the story was found to be an incident that a group member experienced or one that they may encounter in the future. The one who ordered the workshop brought up a situation from their knowledge of the group members or a story from the accumulated scenario archive created over time in the SC (see Figure 2).

Most of the interviewees said that scenarios originating from the group members or the group leader are usually more effective: 'A good scenario should come from the field.

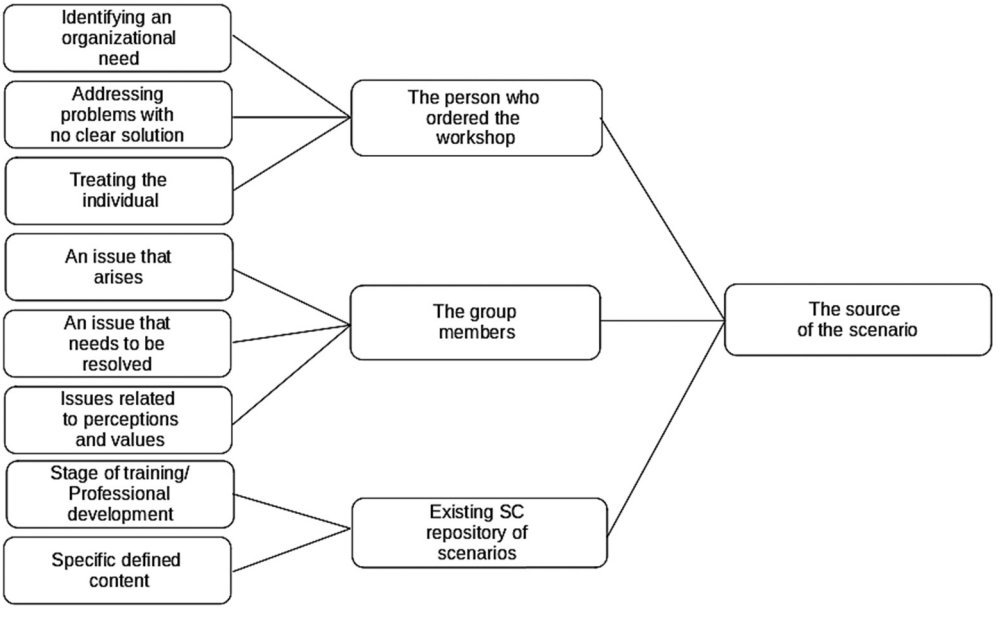


Figure 2. Possible sources for the scenarios in SC. Eight categories of scenario content were identified and grouped by three originating possible sources.

Start from there, even if you modify it …'; 'For a scenario to work in the team, it has to come from them'.

When those who ordered the workshop were also the actual group leaders (i.e. a principal who comes with her teachers, a subject coordinator who comes with her team, supervisor, and principals, etc.), they usually chose 'hot' issues that were on the agenda or issues that were connected to the organisation they represented.

A facilitator suggested the possibility that group leaders tend to bring issues to the SC that they do not know how to address out of a need to get help:

> Things they indicated to themselves that there is a problem. They would not bring a scenario that they 100% know how to address. The moment they bring up an issue in the scenario, it's a sign that it was not easy for them to address it.

One interviewee noted that sometimes the workshop served whoever ordered the workshop more than its group members:

> I think, from what I've seen, that group leaders have gone so deep into their role that they cannot see the forest for the trees, and I feel that the relevance of the topic is sometimes more important to them than it is relevant to the group.

Scenarios that originated from group members were usually used in groups of teachers who were in their student teaching stage, who came to the SC as part of their student teaching (sometimes only student teachers came with their supervisor, and sometimes a group of student teachers with their supervisors and their in-school coordinator). In such cases, the workshop facilitator recommended that the coordinator ask student teachers about incidents and issues that concerned them in the initial stages of school entry. One of

the facilitators said, for example: 'With student teachers, it's very personal and less organisational. This interests me, the matter of dealing personally with something'.

It seems, then, that the facilitators sought to direct the group members or leaders to be the ones to define the scenario based on the issues that concerned them. This finding is consistent with previous studies addressing the needs of the adult learner and the Andragogy approach, which contends that older learners act more out of student vs. teacher motives and that their motivation is higher when they identify learning as serving their needs and helping them solve problems relevant to their work or life; and that they feel the need to be active and a part of the planning of the learning process (Aviram 2006).

It was also found that the facilitators identified differences between the types of scenarios of groups that were at differing stages in their professional development. Those who ordered a workshop and came with teacher trainees (college lecturers) usually dictated addressing generic issues typical of the schools, i.e. discipline issues with students, working with parents, and with the school principal.

One of the lecturers who came to the SC with teacher trainees was interviewed and said that it was important for him that the scenarios be simple and that a preferred solution could be presented: 'It was important to me that the scenario be structured and uncomplicated and allow for students' confusion'.

Other lecturers argued that they prefer to control the situation:

> Lecturers will raise issues to which they know the possible solutions … and will usually choose not to raise issues that students suggested, as the lecturers cannot predict what will arise for fear of losing control.

Group leaders who came with teacher trainees during the latter's student teaching collected the topics for scenarios from the students and brought stories and incidents that they had experienced in the field or were expected to experience; those who ordered a workshop and came with their school teams (in-service training) raised more complex issues with a concrete organisational nature.

Research question 2

Defining goals in preparation for creating scenarios

The scenarios were constructed as per previously defined goals. Many of the interviewees indicated the goal-setting phase as a critical one for constructing the scenario. One said, 'The trick is to be as precise as possible with what whoever ordered the simulation workshop wants, assuming that s/he knows the group'. Another interviewee wrote:

> I seek to understand from him [the person who ordered the workshop] what issues are most relevant… We corresponded at least three times during the process until the scenario was precise to what he wanted to achieve.

Some of the interviewees indicated that those who ordered the workshops did not always know how to precisely define the goals that they wanted their groups to achieve. The interviewees attributed this to the group leaders' lack of understanding of the potential

inherent in the SC or even to a common difficulty among educators to articulate in abstract words:

> Group leaders, like educators, do not always know how to define. They are much better at processes and do not formulate what they want to achieve.

Often, those who ordered the workshops told a story about 'something that bothers them', and the facilitator, as part of their job, tried to be precise and elicit goals and objectives for the workshop.

Writing the scenario and scenario types

The scenarios presented to the groups were selected from the 'accumulated scenario archive' or 'constructed' in collaboration with the group leader. The latter was constructed to suit the dimensions and needs of the specific group. In some cases, one of the simulation participants raised a situation that they wanted to experience in the SC, or the facilitator described an incident that occurred. For example, one of the facilitators described the process:

> A woman who ordered the workshop wrote the scenario herself. She asked me if I had any examples, then I sent her some from the SC repository, and she made an adaptation with the structure to issues that she sought to address… she got ideas and she adapted [them] to her world.

Some of the 'constructed' scenarios underwent adjustments after initial use and were then placed in the 'accumulated scenario archive'. These scenarios were constructed based on the topics studied in the training and professional development processes and described generic incidents. Training developers mostly wrote scenarios of this type regarding the needs defined as part of the teacher training processes at the college. They were tried on several groups and became part of the 'accumulated scenario archive' from which a scenario could be extracted per the workshop's definitions and goals. In many cases, the incidents described in the scenario were those that appeared in the original but differed in their details, i.e. the names of the participants and characterisation of the conflicts while referring to the characteristics of the organisation from which the group came, etc.

In the process of writing the scenario, the facilitator spoke with whoever ordered the workshop and characterised narratives, stories, and case descriptions through which they described and interpreted reality as they experienced it. The facilitators learned about case studies where incidents were documented and helped characterise and differentiate the expectations of a participant from that of the 'service giver' (for example, a parent's expectation from a meeting with a teacher, i.e. how they would like to feel in such a meeting and what they wanted to get out of it). During the discussion, the facilitator identified collective and organisational narratives (shared views, common goals, needs, etc.), as these assisted in describing a possible occurrence of an incident. It was found that such a discussion helped the workshop facilitator direct and focus the one who ordered the workshop in defining the workshop's goals, guiding the actor in the playing of the scenario, and connecting the theoretical content domains that arise in the simulation process. The interviewees noted the high level of responsibility placed on their shoulders when writing the scenario accurately.

Research question 3

Choosing the active participants and the preparation for the simulation

One intriguing issue was understanding how the active participant from the group coming to the workshop was chosen for the simulation. In some cases, the scenario was based on a situation brought by one of the group members, who was then allowed to experience it in the simulation. However, in most cases, the scenario and the active participant were not associated. We found that in some of the workshops, the active participants were selected in advance, sometimes voluntarily during a preparatory meeting (active volunteer), and sometimes by choice of the group leader (selected volunteer). When we sought to find out based on which criteria the active participants were selected, the interviewers noted that these were usually more confident participants, older ones, and those who were less afraid of criticism: 'They take those who are more confident, not afraid of criticism. . .'.

One of the SC facilitators said:

> I don't know how he chooses them. Maybe the people closest to him will cooperate with him . . . I think usually those who are close to the group leader, dominant students in the class.

In cases where the active participants were selected before the workshop, they received the scenario in advance and could fine-tune it to their needs. One of the facilitators noted:

> I send each of the active participants the scenario in advance by e-mail or WhatsApp. . . send them a few days in advance – not many days in advance – because I don't want them to forget. . . .

In some cases, it happened that one of the selected volunteers did not attend the workshop, and the team leader chose someone else to replace her upon arrival at the SC, who was given the scenario a few minutes before the whole group convened. These incidents were rare and were mainly due to mishaps.

However, it was found that in most of the workshops, active participants were not selected in advance. At the convening of the workshop, the scenario was presented to the entire group, and the facilitator asked who wanted to participate actively (an active volunteer during the workshop). In the interviews, the facilitators described a situation wherein, if no one volunteered, a 'push' dynamic begins in the group:

> If no one volunteers, they start saying to someone, 'Well, you go' . . . As a facilitator, I don't like this, and I also told them that participants may only volunteer themselves. In my opinion, it creates the wrong pressure.

Globerson, Mor, and Shalmoni (2014) examined the characteristics of volunteer participation in active workshops and pointed out the issue of students' anxiety about 'performing in front of an audience' or about exposure and criticism, anxiety which affects the quality of the simulation workshop. This finding also appeared in a study by Levin and Frey-Landau (2019). While we sought to find out together with the interviewees whether it was possible to characterise an 'active participant' type, there was no unequivocal answer. One of the facilitators said:

> I cannot say. There can be someone who loves to learn, and when s/he tries, s/he learns from it. There may be someone with an ego who's certain that s/he can handle anything, and there are those who, with a little encouragement, try to. . .

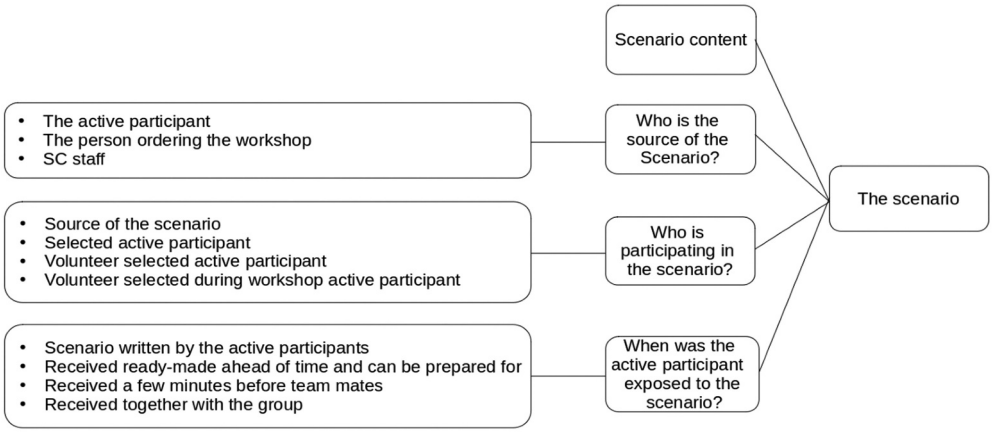


Figure 3. Variations imaging the scenarios. There are eleven possibilities for dealing with the scenario. Grouped according to the character that is the scenario's source, the participant's character in the scenario, and the timing of the exposure to the content of the scenario.Variations imaging the scenarios. There are eleven possibilities for dealing with the scenario. Grouped according to the character that is the scenario's source, the participant's character in the scenario, and the timing of the exposure to the content of the scenario.

Despite the experience of group pressure and the fear of not volunteering, some of the facilitators reported that they preferred this situation over 'volunteering in advance', arguing that this way, the authenticity of the response of the active participant is maintained. Thus, the situation is accompanied by uncertainty, similar to that which a teacher faces in school:

> I expect teachers to prepare themselves for a meeting with a parent, for example. However, they never really know, until they sit with the father or mother, which parent will come and how the meeting will go. At best, they know the subject matter.

One facilitator believed it important to read the scenario aloud together with the group even before selecting the active participant. In her view, reading aloud together was a form of mediation, and she enlisted participants to volunteer as it aided in understanding the situation.

One actor corroborated this position and argued that the facilitator should sharpen the conflict:

> The facilitator should involve them in the story … tell the conflict so that when the active simulation participant enters the [simulation] room, to me, s/he relives the story.

From the actors' points of view, no difference was found between active participants who prepared themselves in advance and those who received the scenario at the workshop. The actors were unaware of the difference and did not state they knew how to recognise it. It seems, therefore, that the early preparation of the active participant has both advantages and drawbacks and that the interviewees did not point to one optimal procedure in this regard (see Figure 3).

Discussion

The scenario is a key component in the process of designing the simulation workshop. How it is constructed, the degree of accuracy in its design, instructions to the actors, and the preparation of the active simulation participant all influence the scenario's effectiveness and, through it, the entire experience. In this paper, although limited mainly to the findings obtained from the interviews, we sought to identify the various factors that influence the scenario's design and search for optimal procedures that render it more effective.

About the first research question: What are the topics, sources, and origins of the scenarios? The analysis of 74 simulation workshops at the SC revealed a predominant focus on issues related to relationships between teachers, students, and parents. Additionally, scenarios originated from various sources, including the workshop organiser, participants, and a pre-existing repository within the SC. The emphasis on relationship dynamics aligns with the educational context, suggesting a practical orientation in scenario design (Ben-Amram and Davidovitch 2023; Levin and Flavian 2020; Levin and Paryente 2021). The diverse sources indicate a rich pool from which a scenario can be drawn and inspired. However, the potential influence of the source on scenario quality or diversity should be further explored in further studies.

As for the second research question, predefined goals and careful preparation shaped the scenario. It concerns the workshop facilitator-orderer conversation. The SC staff members interviewed stressed the importance of dialogue and coordination between the workshop facilitator and the workshop orderer for precise goal definition and scenario writing. The facilitator must sometimes extract the goals and clarify the scenario because the workshop organiser may not know how to define the group's needs. When writing scenarios, the facilitator must consult with the workshop orderer to accurately describe the situation so the group can relate. The simulation's effectiveness was driven by scenario connection and relevance (Kasperski and Crispel 2022; Salminen-Tuomaala and Koskela 2020). The emphasis on predefined goals suggests a purpose-driven approach, which may improve scenario relevance. However, meticulous preparation raises questions about the simulation design's structure-spontaneity balance.

Concerning the third research question of how the participants' selection and preparation are associated with the scenario, the participants were typically selected during the workshop, with no significant differences observed between those selected before and during the simulation. The lack of significant differences in participant selection timing is an interesting finding. Many facilitators noted that the active simulation participants from the group are the strongest members of the group, those who are not afraid to stand in front of an audience. It is worth examining here whether the pre-selection of the active simulation participants allows those who order the workshops to encourage the participation of more reserved members of the group or whether those who order the workshops prefer to choose in advance those whom they know will not fear the situation. An issue of importance that did not receive a clear answer is when to prepare the active simulation participants. On the one hand, preparation in advance prevents social pressure to volunteer on the spot, thus reducing stress and increasing participants' engagement. On the other hand, choosing an active simulation participant at the workshop leads to more authentic responses. It may positively impact the diversity of perspectives brought into the simulation. The facilitators disagreed on which is preferable, and perhaps the

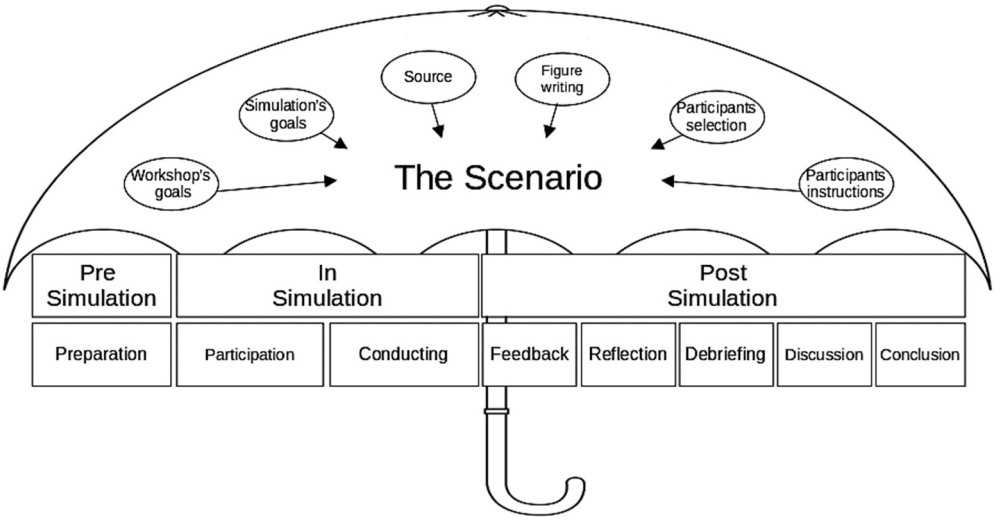


Figure 4. Scenario's role in the simulation workshop. An Umbrella conceptualised model. Portrays the phases and their respective activities.

answer varies between practising groups at differing stages of professional development. It was found (Avidov-Ungar et al. 2023; Maskit 2011; Salmerón Aroca, Abellán, and de Miguel López 2023) that in practice there are differences in the conduct between groups at differing stages of professional development (teacher trainees, educational staff). From this, it can be concluded that various optimal procedures may need to be defined as per the developmental stage. For example, in the case of students, it is more effective to use scenarios from the 'accumulated scenario archive', while professional teams would rather experience 'constructed' scenarios built on unique situations that they encounter.

It is accepted now (B. B. Dotger et al. 2018; Levin and Flavian 2020; Ran and Dalal 2020) that a simulation is comprised of three primary phases: Before (preparation), During (participation), and After (feedback, reflection, debriefing, discussion, and conclusions). The current study's findings attest to the role that the scenario plays in each of the stages and can be put together in an umbrella model (Figure 4). This model portrays the scenario as primary content closely related to phases of the simulation workshop and their respective activities while simultaneously being affected by the various factors found in the current study. The factors affecting the scenario used in the simulation contribute to a better-defined case-based or problem-based simulation, making it more suitable for participants in the simulation.

The study's limitations include focusing on workshops and simulations in a single SC and limited insight into participant perspectives. Strengths include a mixed-methods approach for clearer scenario understanding, focus on specific educational context simulations, and analysis of large sample size, enhancing practical relevance and generalisability. Further studies may incorporate participant feedback or reflections to provide a more comprehensive understanding.

Conclusion

In conclusion, the answer to the first research question of the current study concerning the topics, sources, and origins of the scenarios is that most of the topics of the simulations and their scenarios revolve around issues of relationships between teachers, students, and their parents. The sources for the scenarios may come from the person who ordered the workshop; group members engaged in the workshop, or an existing repository in the simulation centre. The factors on which the scenario is based relate mainly to their previously defined goals and their meticulous and serious preparation process. The question of how the participants in the simulation were selected and prepared received the answer that, in most cases, they were selected during the workshop, having no significant difference in the simulation than those selected before the simulation.

Although this study is limited, a more accurate simulation of the actual situation during the simulation workshop is influenced by many factors. The findings in this study support the need to formulate clear criteria and rules for preparing scenarios for simulation training. This may increase the effectiveness of simulated training, hence making teachers better prepared. Issues such as the active simulation participants' selection process, the scenario writer's identity, the time of exposure to the scenario before arriving at the SC, and the mediation of the scenario may also contribute to this indication. In doing so, we suggest further studies that will investigate the relative contributions of each of the identified aspects to the effectiveness of the simulation workshop and might elucidate its effect on the simulated training participants.

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