

Playing Positive Psychology: The Development of a Positive-Psychological Board Game for Team Building

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Abstract

Today's work is mostly organized in team structures, which makes successful teamwork a key factor for organizational success. To maximize the potential of teams, organizations use team building interventions. These can take a variety of forms, and also serious games are applied as team building tools. The present study shows the development of a board game for team building. The development of the game is based on approaches of positive-psychological research, such as character strengths, PsyCap, mindfulness or the flow experience. It aims to help team members to learn about their own strengths and those of the team in a playful way, thus improving communication and cooperation. In addition, the already known positive effects of the positive-psychological constructs incorporated in the game are supposed to be transferred to teamwork situations and help teams improve their well-being and performance.

Keywords 1

serious game, team building, positive psychology

1 Introduction

Do you know what your key strengths are? And how you can use them best at work? For many people, these questions are hard to answer, and they don't feel confident about their strengths. Individuals often tend to focus on their weaknesses and problems and forget about their strengths. However, at work, these strengths can have beneficial effects on our wellbeing and job satisfaction and be decisive when it comes to stressful situations. Research on character strengths, a set of 24 different strengths that are supposed to be found in every individual in different intensity [1], confirms their positive relation with different job performance indicators such as task performance and job dedication [2].

Today's oftentimes team-based work environments can also make it especially helpful

to know both one's own strengths and those of the team members in order to understand how best to accomplish common tasks as a team. In addition, other positive psychology approaches can have positive effects on people's working lives. For example, psychological capital (PsyCap), the interaction of the constructs hope, optimism, resilience, and self-efficacy, can help employees develop satisfaction and well-being at work [3]. Experiencing flow, i.e. feeling absorbed in an optimally demanding activity, or practicing mindfulness, a form of awareness of the present moment, is also considered beneficial at work [4, 5]. However, these topics are rarely discussed in everyday working life. The goal of this paper is to address this need with the development of a team building tool that aims to make teams get to know their own strengths and benefit from different positive effects. As the team building intervention is designed in the form of a board game, a creative

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and playful method is applied. Team members are encouraged to actively engage with various positive-psychological constructs and have the chance to get to know each other on a new level. In the game, various positive-psychological contents are introduced in a playful way, mainly regarding character strengths, psychological capital, flow experience and mindfulness, among others. Working on these topics by means of small tasks integrated into the game aims to improve variables of collaboration like for example well-being or flow experience at work. In the following sections, in which the positive-psychological contents are described, examples of tasks related to the constructs are included respectively. Within the game, these can be found in the form of playing cards with reflections, discussions and actions.

After a pilot study has already been conducted with the newly developed game, its potential but also its still existing weaknesses were revealed. In the context of this first study with the game, we evaluated its effect on flow and team flow, i.e. the individual and shared experience of absorption and focus when performing a task [6]. We now continue to further improve the content and design of the game. The present paper goes into detail about the development of the positive-psychological board game and gives an outlook on possible future applications in research and at the workplace.

1.1 Team building

To strengthen the performance and well-being of teams, organizations use various approaches and methods of team building. Team building interventions include all types of activities that are meant to help maintain and improve teamwork, i.e. team performance, achievement of common goals, wellbeing in the team and interpersonal relations among team members [7, 8]. Thus, team building can be used as a support tool for newly formed teams in order to support the natural team forming process as well as for the development of potentials in existing teams or the solution of problems and conflicts among team members [7]. However, for an effective team building intervention, it is crucial that it is designed in an evidence-based way with measurable outcomes [9]. Thereby, team building interventions can take on a variety of forms like classical trainings, outdoor adventures or online workshops, and also board games.

2 Positive psychology

Evidence-based activities for team building often include approaches of positive psychology [10]. Just like that, the board game of the present study is developed by applying various positive psychology concepts in the form of tasks on the different types of playing cards. At the same time, the game aims to enhance positive-psychological factors that can have a positive effect on team-related variables like well-being, team climate or team flow experience at work.

The term positive psychology refers to a research field, which focuses on the strengths, resources, and potentials of individuals, organizations, and societies. Its central concern is to explore how to support well-being and positive development [11]. Especially in the work context, this approach can play a crucial role [10, 12]. Positive-psychological interventions can be used at both the individual and team level and research has been able to show a long-term positive effect of positive-psychological interventions on the general well-being of individuals [13, 14].

In the following paragraphs, different positive-psychological concepts will be explored that are applied to the game. These are examples of some constructs among various approaches of positive psychology that are incorporated into the design of the game. It will be explained how they can benefit teamwork and examples of usage in the game will be given.

2.1 Character strengths

A central concept in positive psychology research are the character strengths. A classification system developed by Peterson and Seligman [1] differentiates between 24 character strengths that are present in different intensity respectively in every person, like creativity, gratitude, humor, honesty or social intelligence [1]. These strengths are described as positive traits that are personally satisfying and associated with positive outcomes for individuals and their environment [15].

All character strengths show interindividual stability but can be changed over time, for example due to changes in a person's social role. Furthermore, character strengths can be trained and enhanced through interventions [15].

Therefore, key elements of the game developed in the present study are based on the concept of character strengths. Through various

playing cards on character strengths, the players should become aware of their own strengths and those of the other team members. By displaying strengths cards with the own character strengths openly to everyone, players can compare their strengths to their team members' strengths and find similarities or differences. In addition, they are encouraged to make greater use of their character strengths and to develop them through different reflections and exercises. Different cards of the game ask players to think about past situations in which they actively used one or more of their strengths and reflect on how it felt to them. In addition, they are encouraged to reflect on how to improve the use of the own character strengths in future similar situations or even transfer further onto different situations. Figure 1 shows an example of a reflection card on character strengths that has been designed for the game.

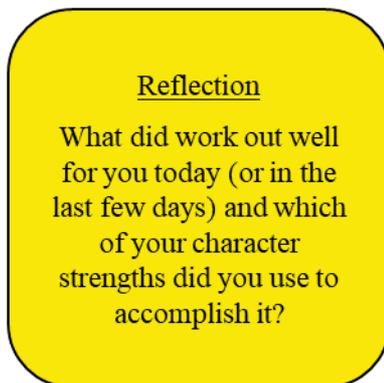


Figure 1: example of a reflection card on character strengths

2.2 Psychological capital

Another central concept of the game is the psychological capital that marks an individual's positive-psychological state of development and competitive advantage. The constructs hope, optimism, resilience, and self-efficacy are combined under the umbrella term and second-order construct psychological capital (PsyCap), which does not only describe the shared variance of these four constructs, but also assumes that they interact with each other [16, 17].

PsyCap is gaining importance in human resource development due to its effects on individuals' attitudes and behaviors. For example, increased job satisfaction, commitment, engagement, well-being, and an increased performance were found to be associated with high levels of PsyCap [3].

Therefore, the concept of PsyCap is also taken into account and actively integrated in the design of the present game. Various game cards ask players to reflect on the different elements of PsyCap and to recall situations in which they were able to apply them or imagine future applications or challenges in which their PsyCap could be useful. Thereby positive thinking patterns may also be trained. Figure 2 shows a game card with a task that is intended to make the players reflect on their PsyCap.

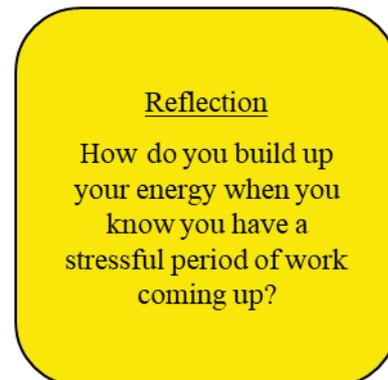


Figure 2: example of a reflection card on PsyCap

2.3 Mindfulness

Mindfulness is a form of attention known from buddhist doctrine, which can be understood as a spiritual form of being present [18]. It is defined as the awareness that arises when one consciously pays attention to the present moment without judging it and fully indulges to that experience. Thus, mindfulness is characterized by experiencing a particular openness of body and mind, and includes a vivid experience of one's sensory impressions and mental processes [18, 19]. Mindfulness practice can be shown to have positive effects on mental health and interpersonal relations [20]. Furthermore, also in the work context mindfulness can be considered as a positive factor and is associated with well-being at work [5] and improved performance [21].

Therefore, the concept of mindfulness is also taken into account in the development of the game. For example, short meditation exercises are integrated into the game as tasks that are found on the playing cards and the players have the chance to try mindfulness together and feel the immediate effects. Furthermore, they are reminded of the importance of mindfulness and reflect on how to integrate it in every day work routines. Figure 3

shows an example of an action card on mindfulness.

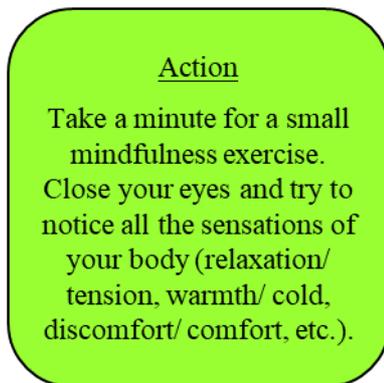


Figure 3: example of an action card on mindfulness

2.4 Flow and team flow experience

Flow experience can be defined as the absorption and merging of an individual with an activity that is perceived as a positive state when the demands of a task match with the individual's own abilities to accomplish it. It is a state of self-forgetting in which an optimal control of the process is felt. The attention is focused on the task and one step seems to follow the other fluidly while the perception of time is accelerated and the activity performed in flow has an intrinsically rewarding effect [6, 22].

Besides individual flow, flow can be experienced in social situations. Team flow is defined as a shared positive experience of team members while working on interdependent tasks and thus on achieving common team goals [23, 24]. A team experiences itself as a unit in team flow and team members perceive a shared feeling of control over the actions and processes [23].

Both flow and team flow are associated with different positive outcomes at work. Flow, for example, was found to foster engagement [25] as well as a positive mood [26]. Similarly, team flow was shown to be associated with a better mood [27], increased collective efficacy [28] and improved team performance [29].

In the game of the present study, playing cards on flow experience are included in the game, asking the players to reflect on their personal flow enhancing situations at work. Figure 4 shows an example of a reflection card on flow experience.

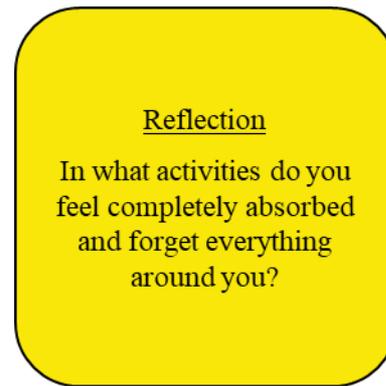


Figure 4: example of a reflection card on flow

In addition, various game elements are included that in previous research have been shown to relate positively to flow and team flow experience. For example, flow is likely to occur when learning new things [30] and the information exchange within a team is associated with team flow [29]. As these conditions are assumed to be present during gameplay, we expect that playing the board game has a positive effect on the flow and team flow experience. In this regard, a pilot study has been conducted.

3 Games for team building

Games are defined as voluntary activities in a limited setting, providing breaks from daily life with rules that have to be followed [31]. Thereby, playing a game is meant to be fun for players [32] and can completely absorb them [31]. At the same time, the outcome of a game is not known before and is influenced by the players' interactions, their competition or based on luck [33].

Serious games are a specific type of games that combine the typical characteristics of a game with learning content and an intended transfer to other situations. Thus, they are more than entertainment and can be used for specific learning purposes. Hence, the goal of a serious game is not limited to the game setting itself but has to be transferred to a context outside the game, for example the workplace [34, 35].

In serious games, individuals work on realistic problems and decision making processes in a playful way while they receive immediate feedback from the game itself as well as from the other players [36]. In this way, serious games can help groups to express emotions and reflect on their role structures and conflicts [32] and the interaction that is stimulated by the serious game can go on even after playing [37].

As a team building tool, serious games are used especially to train critical thinking skills, communication, and decision-making within a group [38]. In this context, often serious games in the form of computer simulations or virtual reality games are applied [32, 39, 40]. However, also non-technical games like conventional board games can show positive effects when used as team building tools. Board games can promote communication within the team as well as collaborative behavior [41, 42]. The present study therefore focuses on the development of a team building tool in the form of board game.

4 Development of the positive-psychological game

By developing a game as a team building tool, a creative approach to design a new and effective team building intervention was explored. When designing team building interventions, often conventional and well known methods such as workshops with trainers are applied. However, also an evidence-based game can be able to combine research findings with a fun approach and a relaxed atmosphere. We therefore consider that a board game can be an effective and at the same time fun intervention for team building. Our goal was to create a playful way of presenting and training positive-psychological constructs that can have a positive impact on teamwork.

4.1 Design of the game

The board game is designed as a team building tool based primarily on the positive-psychological constructs explained in section 2 in the form of an evidence-based serious game. Thus, its goal is not only to entertain the players, but at the same time to teach and practice new content and behaviors.

The format chosen in this study was a board game instead of a digital game. The game provides team members with an unusual environment in which they can freely express new and creative ideas outside of their work environment. Furthermore, a game can be a particularly motivating learning context due to its interactivity [43] and stimulate communication [41, 42]. To our current knowledge, no board game that explicitly incorporates positive psychology has been applied in organizations and at the same time investigated for its effect on flow and team flow. It is assumed that positive-

psychological approaches are particularly suitable when it comes to the design of serious games, however, this is often associated with digital games [44]. The effects of games in training and team development contexts have so far been investigated primarily using online games and computer simulations [34, 38, 39]. By developing and applying the board game of the present study, we can evaluate the effects of a conventional board game in which players interact directly with each other.

The learnings the serious game aims at can be described on a cognitive, affective and behavioral level [45]. On the first level, players learn about different approaches of positive psychology, e.g. character strengths, PsyCap or flow experience. On a deeper, second level, the game stimulates an interpersonal exchange of attitudes and opinions and in consequence aims at strengthening the team members' relationships and trust. Lastly, on the third level, a practical application and training of new skills takes place. The game is set up in such a way that there is a constant exchange between team members and even long existing teams can get to know each other on a new level by playing the game. The tasks of the game are constructed so that team members have the flexibility to reveal only as much personal information as they want at any time. In this way, the positive atmosphere of the game can be maintained even during tasks that are subjectively perceived as more difficult by some players.

The game was designed in such a way that it can have a particularly flow-promoting effect, as described in previous literature [44]. For example, the open format of the questions made it possible to adapt the difficulty of the tasks to the players' skills. Moreover, players get constant feedback from their team, which can also promote flow.

To achieve the previously mentioned goals and benefit from the positive effects of the constructs incorporated in the game, different game elements are designed. At the same time, the game is meant to be fun and absorb players while providing a break from the daily work routine. Thus, the game creates a positive atmosphere in which teams communicate naturally and share their thoughts and opinions about topics rarely touched in their everyday work. In this way, players get to know to each other on a deeper level than during work interactions.

The key component of the game is the colorful game board with different fields that encourage players to take actions by drawing playing cards from the center. To move forward on the game

board, game pawns for each player and a dice are provided. Strength, reflection, action, and discussion cards are part of the game. The strengths cards explain the character strengths and help the team members learn about their own strengths and those of the team. Reflection cards contain questions to reflect on and invite players to tell their team members about their personal thoughts and experiences (e.g. Fig. 1, 2, and 4). Action cards encourage players for a certain activity, in most cases including other team members (e.g. Fig. 3). Discussion cards with open questions or controversial statements ask the team members to discuss briefly and exchange opinions on a certain topic. Other fields on the game board encourage players to think about transferring the learnings of the game to their everyday work as a team. To further strengthen the transfer from game to work, there are personal memo cards to take notes during the course of the game that can be kept by the players also after playing. Figure 5 shows the game setup of the first prototype of the game with its game board and different playing cards.



Figure 5: game setup

The game starts by the players identifying their own character strengths and displaying them with the corresponding strengths cards openly on the table. Thus, the whole team can see the strengths the different team members identify with during the course of the game. Then, players roll the dice and move their pawns the corresponding number of fields on the game board. According to the symbol on the field on which a player is standing, a playing card is drawn. This can be a reflection,

discussion or action card, as described above and comprises a question or activity including one of the different positive-psychological topics, like for example PsyCap or mindfulness. The task described on the card is now performed by the player or, if the card calls for it, by the entire team. This takes, depending on the complexity of the task, between one and approximately five minutes. Then it is the next player's turn to roll the dice and draw the next card from the center.

This game mechanism is characterized by its randomness, which ensures that the team members perform the different task categories in a random order and that a certain feeling of suspense is maintained during the course of the game. The randomness of the game events, however, does not mean that the importance of the content of the game is disregarded. Whenever a card is drawn, the players pause a moment to process it. In this way, it is possible to engage in complex reflections on one's own strengths or small mindfulness exercises that require the players' full attention. However, complex reflections are varied and constantly interrupted by playful events in order to maintain interest and ability to concentrate on the contents of the game.

4.2 Pilot study

We already developed a first prototype version of the board game. An initial pilot study was conducted in which the game was played and evaluated by 12 work teams of different companies. These came from different industries, as the game was not developed for a specific domain, and it was assumed that it would be applicable in different areas.

With the help of questionnaires one week before, directly after playing, and two and four weeks after playing its immediate and long term effects on flow and team flow were measured. In this case, flow and team flow are variables that are both addressed in the content of the game itself and served as outcome variables for evaluating the effect of the game. Also, the players' subjective evaluations of the game as a team building tool were obtained.

The results confirm that the players experienced flow and team flow during gameplay and an increased team flow two weeks after playing was found. In addition, the game received positive ratings in the players' subjective evaluation of design and outcome dimensions [Kloep, Helten & Peifer, under review]. Thus, the

potential of the game for creating positive effects for team members was revealed. Nevertheless, the game and study design also had some weak points, e.g. a limited amount of topics covered in the tasks on the playing cards or the missing control group in the pilot study. Therefore, we are continuously engaged in its improvement and are preparing a revised version of the game.

5 Outlook

A first prototype of the game exists and has been tested with various teams in a pilot study. This first study has already shown that the game may be suitable for team building, as the significant increase in team flow two weeks after playing and the players' positive evaluation of the game confirm. The approach of positive psychology as the basis when developing a team building game can be seen as a useful and effective one. At the same time, the game can provide entertainment and pleasant moments a team spends together.

As a result of the teams' experiences when playing the game and their evaluations, in an upcoming project, the game will be further developed with regard to its contents and design. For this purpose, playing cards on various positive-psychological constructs like the ones described above are developed, especially focusing on communication patterns in the team as well as the team members' trust and openness. Moreover, new interaction and fun elements are incorporated and the design of the game board and playing cards is modernized. Thereby the players should engage more intensely and feel more absorbed into the game, making it feel like a conventional game one would play with friends or family. Another idea is to adapt the game to specific domains in order to better meet the different needs of teams from different fields, both in terms of content and design. In addition, further transfer elements should be integrated to facilitate the transfer of the experiences and learnings from the game to the work context.

A second study to evaluate the game is currently being planned. We aim at examining more precisely the effects of the game during gameplay and in the long term. In an experimental design with one group playing the positive-psychological team building game and a control group playing a conventional board game, the effects of the newly developed game on team performance indicators, e.g. team flow

experience, can be demonstrated. Moreover, in a future study with an experimental and control group design, not only flow and team flow and the evaluation of the game in general should be measured. Variables such as team climate, communication and trust in the team could also be worth considering. Focus groups for a detailed analysis of the game design are also an option that should be taken into account.

For future applications in organizations it would also be interesting to embed the game in a team building process that is composed of different elements like team trainings in general, playing and reflection sessions. Furthermore, repeated applications of the game, that are possible due to the wide range of tasks on the playing cards and their randomness in the game, would be interesting to try and examine.

5.1 Conclusions

It can be concluded that positive psychology offers a useful approach to the design of team building tools and a wide range of applications is possible. For example, learning about one's strengths can have various positive consequences that can be beneficial in a variety of work contexts. Therefore, the integration of positive-psychological constructs is particularly suitable for the design of evidence-based team building tools in order to promote positive effects on the individual as well as on the team level.

The development of future team building tools and interventions moreover should consider the openness of various teams towards a wide range of methods. In addition to conventional team events and online interventions, games also seem to be relevant for team building, given that their development is based on scientific evidence.

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