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Developing and Implementing a Cross-Cultural Digital Intervention on teachers‘ professional well-being in a Norwegian Context

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Abstract

Teaching is considered a stressful occupation, characterized by a high workload and lack of resources, which may result in burnout and turnover. In Norway, turnover rates among teachers are high, and focusing on actions to retain teachers in their jobs is therefore essential. School interventions have mainly focused on the students, whereas less attention has been given to the teachers. Thus, in the current chapter, we describe the development and implementation of a digital intervention aimed at increasing teachers' professional well-being in a Norwegian context, and what factors may have affected the quality of this implementation. First, we present the concept of professional well-being, and the development of the digital intervention using the theoretical framework of the Job-Demands Resources Model (JD-R) (Bakker & Demerouti, 2007). Second, we describe some core characteristics of implementation quality, specifically drawing on implementation quality frameworks. Third, we describe how the digital intervention was implemented in the Norwegian school context, and further, how factors at the school level and the individual level might have related to the quality of the implementation. Finally, we present a conclusion and some learning points related to future interventions aimed at teacher professional well-being in a Norwegian context.

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1 Introduction

Teachers' professional well-being in a Norwegian Context

The health and well-being of workers in Norway is a high priority among policymakers. The Working Environment Act § 1-1 states specifically that the work environment shall be health-promoting for all employees, which implies high job satisfaction, high engagement, and the prevention of work-related illness. The Act further states that: "*one shall secure a working environment that provides a basis for a healthy and meaningful working situation, which affords full safety from harmful physical and mental influences and that has a standard of welfare at all times consistent with the level of technological and social development of society."* Moreover, the Work Environment Act emphasizes that *"arrangements shall be made to enable the employee's professional and personal development through his/her work (..) and emphasis shall be placed on giving the employees the opportunity for self-determination, influence and professional responsibility."* Additionally, the Directorate of Education in Norway states the importance of *professional collaboration* among teachers in schools, to facilitate the development of both pupils and teachers the importance of good leadership to build relationships and trust in the organization is also emphasized. In summary, the Norwegian Working Environment Act underscores the importance of workers' well-being, while the Directorate of Education in Norway focuses on the professional well-being of teachers.

However, when looking at the teaching profession, some concerns indicate their health and well-being are under pressure. Research shows that teaching is one of the professions with the highest level of job stress (Stoeber & Rennert, 2008). Due to high stress at work, teachers have a higher risk of burnout compared to other professions (Babad, 2009) which is concerning, as we know burnout is related to several aspects of ill health (see for instance Salvagioni et al., 2017 for a meta-analyses). In addition to having detrimental effects on teachers' health and well-being, there is also solid evidence that a stressful work environment is related to employee turnover (for a meta-study see Rubenstein et al., 2018). Discipline problems are perceived by teachers as particularly stressful (for meta-study see Aloe et al., 2014), and in a recent study among Norwegian teachers, it was found that teachers who experienced discipline problems in the classroom reported stronger intentions to leave their job (Jensen, 2021). Moreover, Tiplic and colleagues (2015) found that 33% of the teachers who started teaching in 2006 left the profession within 5 years, implying that teacher turnover is a challenge in Norway. This is worrying, as teacher turnover has been found to influence the quality of student education and student achievement negatively (Ronfeldt et al., 2013). Conclusively, in light of the significance of work-related stressors as an antecedent of teacher well-being and turnover, interventions should address working with aspects of the psychosocial work environment to decrease teacher stress and increase their well-being.

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Thus, in cooperation with 14 partners including 4 ministries, 6 universities and 3 centres of educational practice from 8 European countries a digital intervention concerning teachers' professional well-being was developed and implemented in four schools in Norway.

2 Theoretical Framework

The Job Demands-Resources Model

In the development of the digital intervention of teachers' professional well-being, we drew upon the JD-R model (Bakker & Demerouti, 2007). The JD-R model is concerned with how the psychosocial aspects of the work environment relate to workers' health and well-being. The JD-R model highlights that work characteristics can be categorized into two main categories: Job demands and job resources (Demerouti et al., 2001). Job demands refer to physical, psychological, or organizational aspects of the job that require sustained physical and/or psychological effort and are thus associated with certain physiological and/or psychological costs" (Demerouti et al., 2001, p. 501). Job resources refer to "Those physical, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs (c) stimulate personal growth, learning, and development" (Demerouti et al., 2001, p. 501). The JD-R model describes two main processes; the health-impairment process and the motivational process. The health impairment process is mainly concerned with how chronic job demands over time drain energy from the individual worker, which again may lead to burnout and health problems. On the contrary, the motivational process is the process where job resources play an intrinsic motivational role by contributing to employees' learning, growth, and development or an extrinsic motivational role by fulfilling the achievement of work goals (Bakker & Demerouti, 2007).

Job resources relate positively to work engagement which again may relate positively to other organizational outcomes such as job performance. In addition to the two main effects of job demand and job resources on individual and organizational outcomes, the JD-R model further proposes that job resources may function as a buffer on the associations between job demands, burnout and health outcomes, thereby reducing the negative effects of high job demands. Xanthopoulou and colleagues (2007) also expanded the JD-R model to include personal resources. Personal resources are aspects of the self that relate to the individual's resilience and refer to their perceptions of the ability to control and impact their environment successfully (Hobfoll et al., 2003). Xanthopoulou et al. (2007) found in their study that job resources mediated the association between job resources and work engagement/burnout.

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Implementation and Implementation Quality

The concept of implementation is described by (Durlak, 1998) as: "how well a proposed program or intervention is put into practice" (p. 5). However, studies show that implementations are rarely implemented as planned and that the variability in implementation may affect the expected outcomes (e. g., Wilson et al., 2003). Domitrovich et al's (2008) multi-level model for implementation quality gives a thorough overview of factors that may affect the quality of implementation (see Figure 1). In the centre of the figure are three central aspects referred to as core elements, delivery and standardization. These three elements are related to both the quality of the intervention and the system set up to support the intervention. The core elements of the intervention refer to the process of practices and features of the intervention that are related to an underlying theory. Negative adaptations, absence of core components or that core components are poorly delivered can according to Domitrovich's theory reduce the effect of the intervention (Domitrovich et al., 2008). Moreover, there may also be a culture dimension related to the quality of implementation. According to Hofstede's (2001) theory of five cultural dimensions, countries vary in power distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, and long-term short-term orientation, and findings have shown that these factors moderate perceptions of job demands and job resources (see Hofstede 2001 for a meta-analysis). Thus, culture may influence how well the intervention fits the teacher population in each respective country, and cultural adaptions may be beneficial. Moreover, a country's cultural dimensions may impact job characteristics and well-being/outcomes (Van Veldhoven et al., 2017), and influence an individual's response to stress (Hobfoll et al., 2018).

An example of the core elements of the *support system* can be pre-intervention training which gives participants the competence needed to apply the intervention (Fixsen et al., 2005). Standardization of the intervention model refers to the standardization of the intervention across sites and can for instance, include instruction manuals etc. (Domitrovich et al., 2008). Standardization of the support system is also essential to ensure equal support for participants taking part in the intervention, and generally, standardization has been found to relate to implementation quality (Payne et al., 2006). The final aspect referred to as delivery in Domitrovich's model, can be defined as *the frequency, duration, timing, and model of delivering the core components as well as the individuals actually responsible for implementing the intervention* (Domitrovich et al., 2008, p.5). Delivery of the support system is according to Domitrovich's model also an essential determinant for the quality of implementation.

To measure implementation quality of the intervention and the support systems it is necessary to include different compliance measures referred to as fidelity, dosage and quality of delivery (Domitrovich et al., 2008). Implementation fidelity

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is defined as "the degree to which teachers and other program providers implement programs as intended by the program developers (Dusenbury et al., 2003). Dosage refers to the amount of time the participants spend on the intervention (e. g., number of hours, number of lessons). Finally, the quality of delivery can be measured through engagement, sensitivity and responsiveness (Domitrovich, 2008). Durlak and DuPre (2008) concluded from their review of nearly 600 interventions, that there are eight aspects of implementation referred to as fidelity, dosage, participant responsiveness, quality of program delivery, reach, adherence and finally program differentiation – which refers to presence of the uniqueness of the program in the treatment condition (Durlak & DuPre, 2008). The five aspects of adherence, dosage, quality of program delivery, participant responsiveness and program differentiation are generally considered ways of measuring fidelity (Domitrovich & Greenberg, 2000; Lendrum & Humphrey, 2012). Additionally, there are several contextual factors which influence implementation, which is outlined in the multilevel quality implementation framework. (Domitrovich et al., 2008). These factors are organised into three levels: Macro level, school level and individual level. The macro level relates to community factors, including the educational system, government, and community entities. Policy and legislation are examples that may have an impact on the implementation. The school level relates to the school as an organizational entity – examples of relevant school-level factors that may impact the implementation are resources available to support the intervention, personnel expertise, administrative leadership, school climate and culture (Domitrovich et al., 2008). The individual level is concerned with psychological factors (e. g., enthusiasm, anxiety, stress, burnout, self-efficacy). It is believed that for instance burnout can have a negative impact on implementation quality, especially in situations where the intervention is perceived as an additional burden (Domitrovich et al., 2008). On the other hand, high self-efficacy has been shown to relate to a program implementation with better quality (Kallestad & Olweus, 2003).

Social Validity

For interventions to be successful it is also important to ensure social validity. Social validity stems from Wolf (1978), with a proposed framework consisting of three dimensions for assessing interventions: goals, procedures, and effects (Leko, 2014). Social validity may also be closely related to teacher buy-in. Buy-in refers to teachers' beliefs and attitudes that the intervention they are taking part in is useful, which further has been found to be associated with how involved they are in the intervention (Datnow & Castellano, 2000). The concept of buy-in relates closely to the dimension which Domitrovich et al., (2008) refers to as the individual level in their quality implementation framework, and engagement has been acknowledged as a critical factor in research on interventions (Jensen & Solheim, 2020).

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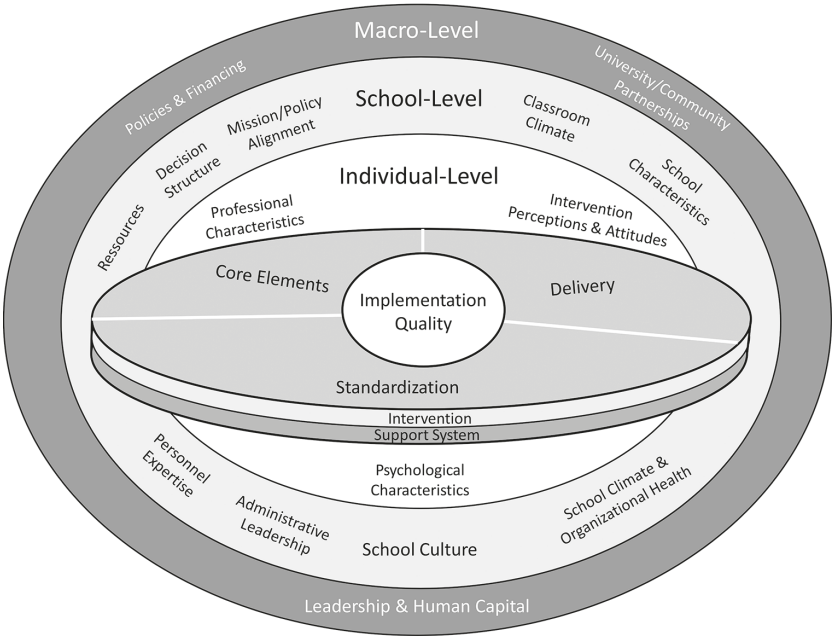

Figure 1: Factors that can Affect Implementation Quality: A Multi-Level Model (Domitrovich et al., 2008, p. 31; self-drawn)

3 Description of the Intervention and how it was Implemented

The Core Elements of the Intervention

The JD-R model reflects the core elements for the development of the intervention, as we applied this model as our underlying theory. The reason for applying the JD-R model as a theoretical framework for developing our intervention was that this model is a relatively broad model when it comes to defining job demands and job resources and is adaptable when it comes to which demands and resources are relevant for teachers. Based on the two processes of the model, referred to as the health impairment process and the motivational process, the focus of the intervention was thus to increase teachers' job resources and reduce their demands, to increase teachers' job engagement as a dimension of well-being, and reduce burnout and negative health outcomes. The development of the content of the intervention was a thorough process that took place throughout 2021 and 2022 through discussions with the participants in the partner countries. In cooperation with a Spanish company who was specialized in delivering game-based learning,

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the digital game was developed, and translated into Norwegian. Game-based learning is an active learning technique where the participant has an active part in the game. The game consisted of 12 modules which were related to professional well-being in a school context, where the participant played an active role in solving tasks etc. (see Table 1 for an overview and description of the different topics). In addition to the game, we also developed a workbook, that consisted of 12 chapters, where the 12 chapters were aligned with the modules in the game. Each chapter in the workbook mirrored a scenario in the online game to play and resolve challenges to get to the next level. The workbook was intended to reinforce the same topics as in the online game but allow for more in-depth individual reflections and discussions in groups with colleagues. Each chapter in the workbook contained a short introduction to the week's topic, questions for reflections and/or discussions, and exercises to complete by writing in the book.

Table 1: Content of the workbook is based on: Diener & Seligman, (2002); Gurung et al., (1997); Ryff & Keyes (1995); Lishner et al., (2016); McCallum & Price, (2015), Schleicher (2018), and Wethington & Kessler (1986).

Module	Topic	Goals, Activities/Independent Practice
1	Professional well-being	Questions for reflection regarding being a teacher, demands, and resources. Evaluate and reflect on what you can impact and what is outside your control at work. What aspects of work do you like and why? Different aspects of well-being
2	Goal setting	Identifying strengths and the applications of these Setting SMART goals Identifying professional developmental goals Overview of the rest of the intervention
3	Thinking patterns	Connections among emotions, thoughts, and actions Which factors may impede your social interactions? Assessment of emotional drivers ABC-model Inner compass: thoughts and intuition
4	Support system	Explore our support system. Uncover what factors contribute to a healthy and sound work environment. Reflections on colleagues and leadership at the school How is the support system working for you now? An assessment

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5	Time management	Strategies and tips for time management Implement some strategies for time management. Successful change processes Eisenhower-model Pomodoro-technique
6	Classroom leadership and engaging teaching	Reflections on the importance of classroom leadership strategies Knowledge of good strategies for classroom leadership Implementing new strategies for classroom leadership
7	Prioritizations	Recognize reactions and triggers to stress. Self-assessment and awareness about own emotions Reflection on stress mastery Building resilience
8	Stress and well-being	How to process stress that is perceived as challenging Tackling emotionally stressful situations Self-awareness about reactions, emotions, and how they affect bodily reactions like breathing, etc. Breathing and mindfulness practices
9	Empathy and communication	Employing cognitive and affective empathy and sympathy and being open-minded to alternative perspectives in the meeting with other people Reflections on personal values Appreciation of diversity Difference between thoughts and feelings and how they can impact each other
10	Empathy and respect	Continuous work with empathy, respect for oneself and others Increased awareness of own attitudes towards others (e.g., colleagues, leaders, students, parents) in conjunction with oneself Development of communication skills and building relationships Analyze, evaluate, and reflect on situations at work
11	Leadership	What are the different aspects of leadership? Reflections on own and others' leadership types. Formal and informal leaders
12	Professional development and summary of the course	Visualization of one task or area where you want to improve the most? Reflection on what you want to change. Self-awareness of the preferred method of learning What is essential, and how do you want to integrate this learning?

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Democratic Principles for Organizational Change in the Norwegian Context

A successful intervention requires a successful change process. In Norwegian work-life, there is a strong tradition for democratic dialogue and collective processes when conducting changes, which can be traced back to the early research conducted by the Norwegian researcher and psychologist Einar Thorsrud. In 1962 Thorsrud was a motive power for the Industrial Democracy Project, which emerged as a result of the cooperation between the Trade Unions and Employers' Organization in Norway. Throughout the 1960s Thorsrud carried out several field experiments in different business industries to improve the conditions for employees to participate when it came to factors concerning their work situation. The hypotheses behind the project were related to that there were several psychological requirements related to job design, including decision-making on the job. An essential conclusion from the Democracy Projects concerning changes was that: "Changes are done by the people in their work organization, and not for people, that organisations and institutions are changed from the inside and not from the outside" (Thorsrud, 1977, p. 411). This statement highlights the importance of employee participation when conducting changes to achieve successful results, a tradition that stands strong in Norwegian organisations. It is also worth mentioning that Thorsrud's findings had direct implications for the development of the Norwegian Work Environment Act (1977), mentioned previously, where it is also stated that all employees have the right to participation and decision-making in organizational changes at their own workplace. In order to achieve democracy, dialogue and open discourses, are essential mechanisms. Gustavsen and Engelstad, (1986) state that when employees get the opportunity to discuss openly and are given equal rights to contribute, the most optimal solutions will appear. Thus, when developing and implementing the professional well-being intervention in the Norwegian context, we had to emphasise the principles of participation and involvement from management and employees, as these are important principles in the Norwegian work-life.

The Project Team

The project team consisted of three academic employees from the University of Stavanger (two professors and one PhD) in addition to one external who had the role of a school development leader in four municipalities in the West of Norway. The main role of the school development leader is to develop, manage and coordinate knowledge-based processes in the different collaboration networks, in addition to cooperating with politicians, the education sector, and the local University. Having a school development leader in our project team was considered essential as this person had close contact with principals, teachers, union officials, and safety deputies at the schools in the different municipalities. During spring 2021 we reached out to the school owner of several municipalities in the West of Norway,

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where we asked for permission to contact relevant schools for recruitment to the project – and the school owner was positive to this. During June 2021 we contacted several schools by e-mail, where we asked for a meeting with the school's management and union representative to present the professional well-being intervention. In cases where the school's management and union representative found the project interesting, we were invited to present the project to the whole staff. Initially, we recruited 5 intervention schools for the project. However, later in the project one of the schools decided to withdraw, leaving us with 4 schools for the final data collection. 2 of 3 of the schools were relatively large primary schools (approximately 50 teachers employed), whereas the third primary school was relatively small (approximately 15 teachers and 7 teacher associates). The smallest school was at the comprehensive level (11 teachers and 3 teacher associates). With also recruited three control schools for the project.

Participation and Dialogue Approach

As noted previously, participation and collective decision making is an important value in Norwegian working life and is especially important for interventions to be successful. Thus, after getting the participating schools on board, we arranged meetings taking a dialogue approach at the respective schools. The dialogue meetings were held from the end of November 2021 until the end of March 2022 at the respective schools. We invited school management, representatives from the teachers' union, teachers, and representatives from other professional groups such as assistants, health nurses, special education teachers, therapists, and social workers. The school owner from the municipality was also invited but did not attend the meetings. The aim of the workshop was for participants to discuss the theme of professional well-being and create a common understanding of the topic of professional well-being. The project team also developed a teaser movie with information about the project and an example of the interactive game which was going to be developed.

During January 2022 we invited the chef municipal education officer and his management team to a presentation of the planned project and the overall contents of the intervention – and also what was required from the schools to participate. By involving top management in the municipalities, we acknowledged that factors at the macro level are important for the successfulness of the intervention – and in line with Domitrovich's theory, we considered that top management could function as an important support system both in the recruitment of schools and throughout the intervention period.

In addition to the dialogue meetings, we also involved a few teachers from each of the schools during the development of the intervention so they could give their feedback on the content, and we could adjust the content accordingly. The content they reviewed was mainly drafts of the workbook, as the game was not ready

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at this point to be reviewed. Additionally, we conducted focus group interviews with the same group of teachers to get insight into how they perceived aspects of job demands and job resources in their workplace. The interviews were then recorded and transcribed. In-depth information on these work aspects was considered useful before developing the quantitative questionnaire.

Establishing Support Systems and Procedures

For an intervention to be implemented as planned, establishing support systems at the school level is essential, where administrative leadership is an important factor (Domitrovich, et al., 2008). Thus, in September 2022 we chose to gather the principals from the intervention schools for a start-up seminar where we rehearsed how the intervention was to be carried out, and where we also discussed how they best could support the teachers during the intervention period. During the seminar, the principals reviewed the first six modules of the workbook and gave input both to the content and the layout. Moreover, they discussed how best to carry out the intervention in their own school. It was also informed who the teachers could contact if they needed assistance when playing the game.

Before the start of the intervention, a pre-test questionnaire was distributed to 250 potential respondents, including both intervention schools and control schools. The questionnaire was distributed at the end of November 2022, and several reminders were sent out to the participants during December 2022. At Time 1, 161 responded to the questionnaire, implying a response reate of 64.4%., implying a response rate of 64.4%. However, two of the respondents were deleted from the data set, as they were milieu therapists and not teachers, leaving us with a total sample of 159, whom 73.6% were women. The first part of the game was launched to the intervention schools the 27th of November 2022. In January 2023 we arranged a follow-up seminar with the principals at each of the schools where the first part of the intervention was evaluated. In addition, we conducted a question-and-answer session to reassure the principals of their further work and asked them to review the next 6 modules of the workbook (see Table1). General feedback from all the principals was that many of the teachers struggled to understand the game, that it was difficult to understand the intention of the game, and that many of the teachers were not motivated to play.

Consequently, after the follow-up meeting with the principals, the school development leader in the project conducted physical follow-up meetings with the staff – and demonstrated how the game should be played. Moreover, it was explained that the game was mainly an introduction whereas they were urged to use the workbook to reflect and work in groups on the various topics. As a result, an alternative approach was taken, where the playing of the game was more team organized – and as an example one teacher played the game, and the other teachers were observers.

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Although several of the teachers reported having trouble with playing the game, the feedback on the workbook was generally positive.

The second part of the intervention was launched in March 2023, and the intervention was closed at the end of May 2023. The post-test questionnaire was then distributed to respondents in control schools and intervention schools. The intervention group consisted of 104 employees at Time 1. However, only 51 respondents responded to the questionnaire at Time 2, implying a drop-out rate of 50.1%. With regards to the control schools 50 teachers had initially responded to the questionnaire at Time 1. However, at Time 2 this number had been reduced to 23, implying a drop-out rate of 54%.

Experienced Hindrances during the Development of the Intervention

Considering the development of the intervention was a cooperation between 8 European countries we experienced some challenges regarding cross-cultural differences when developing the content of the intervention. As mentioned previously, Norwegian work life has been strongly influenced by democratic principles (e. g., Thorsrud, 1977), and principles for a healthy working environment, and workers' professional well-being is strongly regulated by law through the Working Environment Act. This implies that when working with improvements in employee well-being in the Norwegian context, it is most relevant to work with actions at an organizational level (e. g. leader support, organization of work tasks etc). However, when developing the intervention, it became clear that several of the other participating countries had a more individual approach to working with teachers' professional well-being (e. g. mindfulness, breathing techniques to reduce stress etc), which are approaches that are less accepted within the Norwegian work context. This is related to the Working Environment Act which states that it is mainly the organizations' and management's responsibility to secure a healthy working environment. Therefore, coming to an agreement on an intervention which was fit for all countries considering the different cultures was challenging. Throughout the process, it also became clear that schools in each of the countries were organized very differently.

Relevant Factors Affecting the Implementation Quality

As depicted in the model by Domitrovich and colleagues (2008) several factors can impact the intended implementation of an intervention. As shown in Figure 1 the macro, -school, - and individual levels all contain several factors, but we will highlight a few that were particularly pertinent to implementing the intervention in Norway. At the school level, we experienced that *administrative leadership* was an especially important factor for participants' engagement at the different schools. When teachers were given designated time to play the online game and discuss reflections in the workbook, it was experienced as more positive than when

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participation required using their own time. Additionally, the study's potential importance seemed to be understood and communicated differently. One limitation might have been that we did not make explicit cultural adaptations to tailor the content in the intervention to Norwegian culture or context. If we had conducted countrywide adaptations, it could have risked losing the potential critical components in the intervention. Moreover, we did not have time and resources in our project to pilot possible local adaptations. However, as mentioned previously variations in countries' cultures may impact well-being/outcomes (Van Veldhoven et al., 2017), and influence an individual's response to stress *(*Hobfoll et al., 2018. Moreover, different cultures vary in culture dimensions which again has significance for experiences related to job demands and job resources (Hofstede 2001). Although all the participating countries in the study were European, there are still differences in school power distance, administrative leadership styles, teamwork and meeting structures among the teachers, office space to support big groups, gender equality, perceived stressors, etc. These differences may have impacted how the intervention was carried out in each country, the source for various local adaptations, and participants' understanding and varying needs for the content of the intervention. For instance, as mentioned before the Norwegian worklife and professional well-being of workers is strongly based on participation, democracy and collective decision-making. However, the digital intervention was to a great degree individual-oriented – which might have decreased the social validity in the Norwegian context.

Variations in collaboration at the s*chool culture* level could have influenced how much help and support the teachers received. This might be an important aspect, as several teachers reported that it was difficult to understand the digital game. Another relevant contextual factor was that the delivery of the intervention was delayed. The game was not ready until November 2022. Consequently, many schools decided to postpone the startup of the intervention to January 2023 because of Christmas. This resulted in a long time between the start-up meetings held by the project teams at each school and the intervention, which may have influenced teachers' buy-in and involvement (Datnow & Castellano, 2000).

Finally, on an individual level, we experienced that *intervention perceptions, attitudes, and psychological characteristics* were factors that could have influenced the quality of the implementation. In short, the level of social validity may have varied among the participants. As noted previously, teaching is a stressful occupation (Stoeber & Rennert, 2008), and asking the teachers to use their work time on playing the game may be perceived as an additional job demand, which might increase the risk of burnout (Bakker & Demerouti, 2007), leading to adverse effects on implementation quality (Domitrovich, 2008). As referred to above, several of the teachers experienced technical issues with the game and reported back that

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parts of it were difficult to understand or did not feel that the content was relevant. Teachers' previous experience with digital games might also have affected how they perceived the intervention. However, establishing better support systems at the intervention schools might have made the playing of the game easier. According to Domitrovich and colleagues (2008), establishing standardized support systems for the intervention is important regarding the quality of implementation (Domitrovich et al., 2008). Thus, a limitation of the intervention was that there was no trained coach or facilitator at the schools during the meetings.

4 Conclusion

The current chapter aims to describe the development and implementation of a cross-cultural digital intervention aimed at increasing teachers' professional well-being in a Norwegian context and highlight what factors may have affected the quality of the implementation and in our experience developing an intervention in cooperation between 8 countries had several challenges which might have affected the quality of the intervention for Norwegian teachers – as it was not fully adapted to the Norwegian context. Due to the Norwegian Working Environment Act and the long traditions for democracy in working life, schools in Norway are in a different position compared to other European countries. This implies that working to improve teachers' professional well-being is not a new era for Norwegian teachers. Thus, an intervention on professional well-being in a Norwegian context perhaps requires a higher standard compared to other countries where schools and teachers are less familiar with working with such topics. Conclusively, it is important to consider that when developing intervention content through cross-cultural collaborations, adaptations to the country context may be more challenging.

Further, several factors could have influenced the implementation of the intervention. These were related to variations in administrative support, how well teachers collaborated and supported each other when working with the intervention, and whether teachers perceived the intervention as an additional job demand. Digital interventions are becoming more and more popular due to cost-effectiveness, and it is possible to reach a higher number of participants. However, from our experience with developing and implementing digital interventions, it is important to establish good support systems and ensure the digital competence of the participants to make such interventions successful.

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