

The Moderating Effect of Fear of Failure on the Relationship between Peer
Modeling Video Instruction and Self-Efficacy

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Abstract

Individuals use instructional videos to develop skills and knowledge. Research shows that instruction videos with peer modeling enhances self-efficacy. A peer model can show a mastery example: flawless task performance and high self-efficacy, or a coping example: showing high effort and gradual increasing performance and self-efficacy. Moreover, Piotrowski and Valkenburg state that media effects are moderated by the susceptibility of the viewer. This study investigates the moderating role of fear of failure (FF) on the relationship between peer modeling examples and self-efficacy. Academically educated adults aged 20-30 filled in a pre-test of self-efficacy and a fear of failure questionnaire, watched a peer modeling instructional video (mastery or coping) and filled in a self-efficacy post-test. Results showed that instructional videos enhance task related self-efficacy, but there was no main effect of model type; both mastery and coping examples were effective. Furthermore, no evidence was found that FF moderates this relationship. This may due to too little perceived observer-model similarity or the fact that participants did not have to perform and therefore did not experience FF. This study implies that both coping and mastery models can be effective in enhancing self-efficacy for individuals with and without FF.

Keywords: instructional videos, peer modeling, mastery and coping examples, self-efficacy, fear of failure, Differential Susceptibility to Media Effects Model

Nowadays, internet technology has a fundamental role in our daily communication, leisure, labour, and educational activities (Lowerison, Sclater, Schmid & Abrami, 2006). One of the platforms which makes this happen is YouTube, an online video-sharing site. YouTube offers a wide range of videos, for example for entertaining, informing, and educational purposes (Jaffar, 2012). In the educational setting, instructional videos can help gain new skills and knowledge (Lange, 2014). Instructional videos are video lessons that include visual and verbal materials and intend to teach skills and knowledge (Fiorella & Mayer, 2018). Educators use them as a powerful instrument in meaningful learning (Duffy, 2008; Karpinnen, 2005) and in positively affecting performances (Mayer, 2002). Examples of instructional videos are web lectures, tutorials, knowledge clips and modeling examples (Van Maaren & Oostlander, 2018; Ito et al., 2008). In a modeling example a person demonstrates and/or explains how to perform a task (Hoogerheide, Loyens & Van Gog, 2014).

Peer modeling, in which a peer displays how to perform a task, has been used since the 1980s. It originates from social-cognitive theories, for example social learning, learning by observing others (Schunk, 1987) and cognitive apprenticeship, learning from a more skilled person through guiding and cognitive processes (Dennen & Burner, 2008). Schunk (1987) distinguishes two types of models, mastery and coping examples. Mastery examples demonstrate a faultless performance of a task, while coping examples first show a poor performance which gradually improves to a skilful performance.

Peer modeling examples have shown positive effects for self-efficacy, the extent to which one believes he can accomplish a task to the designated level of performance (Bandura, 2010; Schunk, 1987). A meta-analysis on predictors of academic performance shows self-efficacy as one of the greatest predictors for study success (Richardson, Abraham, & Bond, 2012). Furthermore, self-efficacy relates positively to motivation, (Bandura, 2010), goal

setting, task perseverance and decision making (Caraway, Reinke & Hall, 2003). Therefore, understanding what contributes to self-efficacy is important for learners.

However, in general, individuals are influenced by watching videos, consciously and unconsciously. It affects their thoughts and emotions and how they react to videos (Berk, 2009; Piotrowski & Valkenburg, 2015). Some personal characteristics influence how one experiences, responds to and chooses media. According to the Differential Susceptibility to Media Effects Model (DSMM) the reactions to media are predisposed by one's level of vulnerability or sensitivity, which is called differential susceptibility (Piotrowski and Valkenburg, 2015). One of the differential susceptibilities that is of particular interest in an educational setting is fear of failure (FF). Persons with FF are anxious in situations where they feel judged and are motivated to avoid performance situations (Veenman, 2004). FF is often accompanied with low self-efficacy (Bandalos, Yates & Thorndike-Christ, 1995; Caraway et al., 2003).

There is little published data on the effect that FF has on the relationship between peer modeling examples and self-efficacy. Jaffe and Carlson (1972) found that anxious students in general profit from modeling, it improves their academic performance. In addition, Weiss, McCullagh, Smith and Berlant (1998) showed that for children identified as fearful for swimming, coping and mastery modeling examples were both effective in enhancing swimming performance. However, coping models yielded higher effects. Though, a systematic understanding of how personal characteristics such as FF affect the relationship between peer modeling videos and self-efficacy is still lacking. Exploring this relationship can offer some new insights on peer modeling, and its effect on self-efficacy for people with and without fear of failure. This can contribute to optimizing instructional videos and enhancing self-efficacy for different kinds of learners. Therefore, the aim of this study is to investigate the relationship between peer modeling in instructional videos and self-efficacy, and how this

may differ for coping and mastery examples. A second objective is to explore the possible moderating effect of FF on this relationship.

Reading Guide

In the next chapter relevant theory is addressed. First the DSMM is introduced because this provides a framework for this study. After that all relevant elements in this model are explained and applied in this research situation.

Theoretical Framework

Differential Susceptibility

Research has shown that there is variability in responses to media among individuals (Piotrowski & Valkenburg, 2015). Individuals classified as susceptible can show different cognitive, emotional, or executive responses to stimuli and surroundings than less sensitive peers (Ellis, Belsky, Bakermans-Kranenburg & Van IJzendoorn, 2011; Valkenburg & Peter, 2013). This sensitivity is also referred to as differential susceptibility and it includes genetics, personality, pedagogy, cognitions, and motivations (Piotrowski & Valkenburg, 2015). The Differential Susceptibility to Media Effects Model (DSMM) is a theoretical model which states that one's differential susceptibilities are predispositions that influence the selection of and responsiveness to media (Valkenburg & Peter, 2013). As Figure 1 shows, predisposed differential susceptibilities (proposition 1) can have a predicting as well as a moderating effect on media use (proposition 3). According to this model, individuals seek out media that converges with their dispositions, and moderates how one reacts to this media. Although the DSMM is focused on the responses of children, scholars highlight the importance of research on differential susceptibility among adults (Ellis et al., 2011). Furthermore, researchers argue that it should be investigated which personal characteristics predispose susceptible responses

(e.g. Belsky et al., 2007; Piotrowski & Valkenburg, 2015). Moreover, the DSMM is a theoretical model and scholars recommend inquiring the validity of the model in the field (Valkenburg & Peter, 2013). In this study, is it is investigated how the predisposition fear of failure moderates the relationship between peer modeling in instructional videos (the media) and self-efficacy (the response), as Figure 2 shows. Below, relevant literature describes fear of failure as a predisposed differential susceptibility, media use in the form of instructional videos displaying peer models and the response to media as the level of self-efficacy.

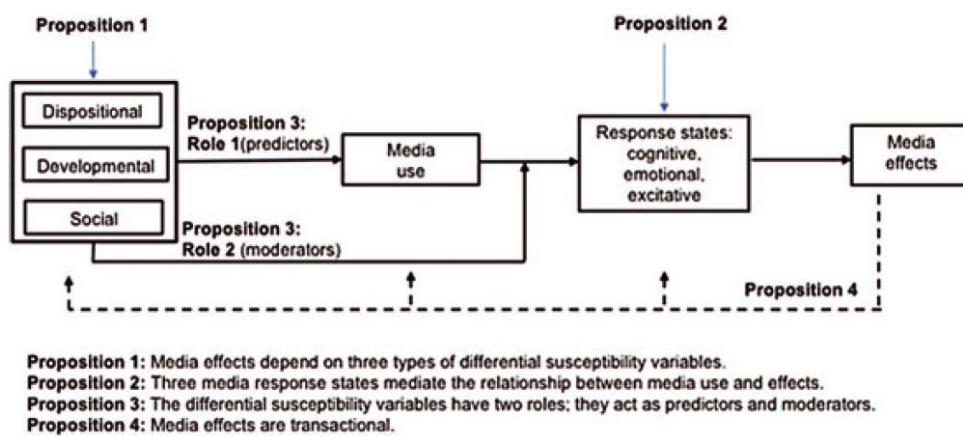


Figure 1. The four propositions of the DSMM. Reprinted from Valkenburg and Peter, 2013.

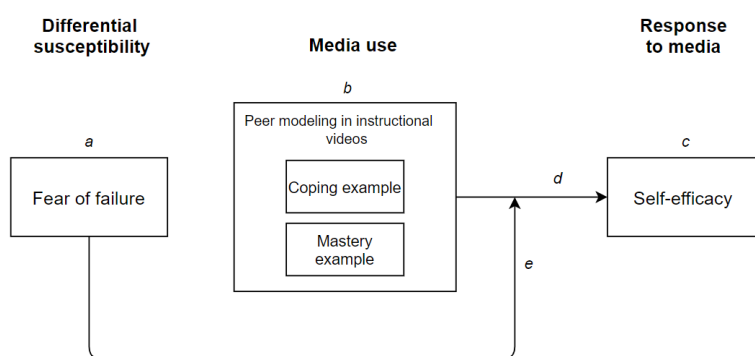


Figure 2. Conceptual framework for this research. This Figure is based on the DSMM. *a* is the differential susceptibility and *b* the media use, in this study instructional videos. *c* is the response to media, in this study self-efficacy. *d* the relationship between the media use and the response, and *e* the moderating role of the differential susceptibility.

Predisposition: Fear of Failure

Fear of failure (FF; concept *a* in Figure 2) is a task specific form of anxiety expressed by cognitive, physical and behavioural reactions. It occurs in situations where one needs to perform and feels judged in doing so (Van Lieshout, 2009). One cause of FF is vulnerability, originated from biological, psychological, and environmental factors. This predisposition produces anxiety (Barlow, 2000). FF activates cognitive schemas and beliefs about the aversive consequences of failing, such as feelings of shame and embarrassment, a lowered self-esteem, worries about the future and losing others' interest as consequence of failing (Conroy & Elliot, 2002). This all results in a tendency to set small goals and to minimize the chance to fail those goals, or even avoid performance situations, for example in a sport or music context (Chen, Wu, Kee, Lin & Shui, 2009; Elliot & Thrash, 2004; Kenny & Osborne, 2006). FF is one of the most hindering factors for performance and learning (Van Lieshout, 2009) and has negative consequences for achievement and well-being (Sakin Ozen, Ercan, Irgil & Sigirili, 2010).

Media: Instructional Videos with Peer Modeling

Central in the DSMM is the use of media (concept *b* in Figure 2). Multimedia is the presentation of materials through auditory/verbal and visual/pictorial means (Berk, 2009; Mayer, 2002). In multimedia learning, knowledge is constructed based on the information in multimedia. The limited processing capacity of the human mind is considered, and active learning is fostered (Mayer, 2005). Multimedia instruction is more beneficial for understanding compared to learning materials presented in words alone (Mayer, 2002). One type of instructional video is peer modeling, where one watches a peer perform a certain skill.

Peer modeling. Peer modeling can be effective in acquiring skills, beliefs, and behaviour (Schunk, 1987). Two types of peer modeling are mastery and coping examples,

whereby the model shows how one can practice, perform and eventually master the task (Schunk, 1987). In a mastery example, the model performs the task flawlessly and conform the designated standards. The model shows high task ability, high self-efficacy, low task difficulty and positive attitudes (Schunk, Hanson & Cox, 1987). In a coping example the model initially shows errors, verbalizes low self-efficacy and ability, combined with negative emotions. But the model demonstrates progress through dedication and hard work, so eventually a coping model shows a skilful performance as well (Schunk, et al., 1987; Schunk & Hanson, 1989). Peer modeling is particularly effective when there is perceived similarity between the learner and the model. This provides the learner with information about his own abilities of the demonstrated behaviour, and he can formulate outcome expectations (Bandura, 2010; Schunk, 1987).

Response to Media: Self-Efficacy

Self-efficacy (concept *c* in Figure 2) is one's personal belief about his own capabilities to accomplish a task conform the requirements (Bandura, 2010). People with a strong sense of self-efficacy approach challenging tasks rather than avoid them and they stay committed to tasks (Bandura, 2010). Meta-analyses show that self-efficacy is positively correlated to performances in academics ($r = .31$, Richardson et al., 2012), work ($r = .38$, Stajkovic & Luthans, 1998) and sport ($r = .38$; Moritz, Feltz, Fahrbach, & Mack, 2013). Self-efficacy increases through social models: seeing peers succeed raises observers' beliefs that they too can accomplish the task. Furthermore, mastery experiences increase the sense of self-efficacy, while failure decreases it (Bandura, 2010).

Relationship Media Use and Self-Efficacy

As stated in the DSMM, media affects the response of the user (proposition 2 in Figure 1; Valkenburg & Peter, 2013). This applies here as well, learners' self-efficacy is affected when watching high quality instructional videos (Morain & Swarts, 2011, concept *d* in Figure 2). The effectiveness of video modeling examples on self-efficacy is already demonstrated by many scholars (e.g. Hoogerheide, Loyens, & Van Gog, 2016; Knol, 2018; Schunk, 1987; Schunk et al., 1987). Cumming and Ramsey (2011) examined the effect of video modeling examples on self-efficacy for a physical balancing task. Participants watched a video with modeling examples (mastery or coping) and were assigned to the one of three practice groups (no practice, physical practice and imaginary practice). Performance and self-efficacy were measured prior and after the experiment. The results showed that balancing performance was improved, even when the participants were assigned to the no-practice group. The self-efficacy of the participants in the physical practice and imaginary practice groups was also higher in the post-test, though it did not increase for the students who did not have the chance to practice. This study establishes the value of instructional videos with peer modeling. Peer modeling is not only effective for physical tasks, its benefits have been proven in cognitive settings as well. For example, Hoogerheide and colleagues (2016) showed that task related self-efficacy among teenagers was enhanced after watching a model solving a mathematical problem.

This relationship between peer modeling and self-efficacy can be explained by the social learning theory. Peer modeling is based on observational learning, and by watching others. Learners gain knowledge about how to execute the skill execution and how to apply performance strategies, (Clark, 2001) while simultaneously formulating outcome expectancies about their own performance by comparing themselves to the model (Bandura, 2010; Hoogerheide, 2016; Schunk et al., 1987). The model-observers similarity hypothesis states

that the effectiveness of social models is partly moderated by the degree to which observers perceive the model similar to themselves (Moreno & Flowerday, 2006 in Hoogerheide et al., 2016). The greater the perceived similarity, the greater it can influence observers and raise their self-efficacy (Bandura, 2010). Scholars argue that coping models are more enhancing for self-efficacy than mastery models because coping models are perceived more similar than mastery models. The individual may experience that the gradual process shown in a coping example is more congruent with their learning situation than a rapid mastery (Schunk, 1987; Schunk et al., 1987).

The superior effect of coping models relative to mastery models has been shown in different learning situations. In 1987, Schunk, Hanson and Cox showed that video modeling examples enhance self-efficacy on a cognitive task. Mastery and coping examples are both effective, though coping models yielded a higher sense of self-efficacy than the mastery models. Also, on motor skills, coping examples seem to be more effective than mastery examples for self-efficacy and performance (Kitsantas, Zimmerman, and Cleary, 2000; McCullagh et al., 2012). Furthermore, coping models are beneficial when there is little familiarity with the task (Braaksma, Rijlaarsdam and Van den Bergh, 2002; Schunk, 1987). Lastly, coping examples seem to be more effective than mastery examples even when the model is not a peer but a pedagogical agent (Ebbers, 2007). However, several studies could not demonstrate the superior effectiveness of coping models but showed that both examples are equally effective (e.g., Cumming & Ramsey, 2011, Knol, 2018). Placing this relationship in DSMM, may help us clarify this diversity in results. Thus, this work will generate fresh insights in the relationship between peer models and self-efficacy.

Moderating Effect of Fear of Failure

An important proposition in the DSMM is the moderating role of susceptibilities. In this study, it is investigated to what extent FF has this role (concept *e* in Figure 2).

FF and self-efficacy. FF is often accompanied with low self-efficacy (Bandalos et al., 1995; Caraway et al., 2003). Self-efficacy increases by achieving goals and mastery experiences, but individuals with FF are likely to avoid setting goals and working towards goals, because of the anxiety to fail these (Bandura, 2010; Caraway et al., 2003; Conroy & Elliot, 2002). Therefore, they miss opportunities to increase their level of self-efficacy (Caraway et al., 2003). For people with a low self-efficacy, the faith in their own competences is quickly lost and this takes a lot of time to recover (Bandura, 2010).

Peer modeling and FF. Anxiety is reduced by observations (Bandura, 1977), though very few studies have examined the role of FF in relationship to peer modeling. Two studies addressed the effects of peer models in anxiety-provoking situations. Weiss et al. (1998) examined the role of peer models on children's fear of the water and their swimming skills. There were three conditions, a mastery model, a coping model and no model. The intervention included exposure to the model followed by a swimming lesson, for three days. It was expected that the coping model would be more effective than the mastery model, due to the perceived model-observer similarity. Though, results showed there was no significant difference between the two types of models, both models were effective compared to no model. This is because the coping model was not distinguishable enough from the coping model the authors conclude. The models were perceived as similar by the children (Weiss et al., 1998). However, there were some limitations. Weiss et al. (1998) suggest that the task may not have been difficult or fearful enough to induce avoidance behaviour. Another issue is that the participants did not only observe the model but also each other, so it could not be

excluded that the model was the only observational learning experience for them. This may have confounded the results (Clark, 2001).

Further, Kornhaber and Schroeder (1975) researched the effectiveness of therapeutic modeling for anxiety. Due to conflicting results in the past concerning the model-observers similarity hypothesis, the authors aimed for a better understanding in which model characteristics in modeling examples yield desired results. In a 2x2 model, Kornhaber and Schroeder tested the age dimension (peer or adult) and response dimension (fear or fearless response to a snake), resulting in four types of models: a fearful peer, a fearless peer, a fearful adult and a fearless adult. Children who were afraid of snakes, were shown a video of one of the four model types. Pre- and post-tests were conducted to measure change in attitudes about snakes. Their results showed that modeling is effective for reducing avoidance behaviour, all models showed positive changes. Peer models who overcame their anxiety led to the greatest change in approaching behaviours towards snakes among the participants. The authors concluded that it is due to the perceived similarity between observer and model (Kornhaber & Schroeder, 1975). However, this study should be interpreted with caution because of methodological concerns about the measurement of self-efficacy (Schunk, 1987).

Although there are some indications that coping models are more effective for individuals who experience fear for the task, supposedly due to the perceived similarity between the model and the observer, studies failed to explicitly confirm this hypothesis. The studies described above were conducted more than two decades ago and have several limitations. Furthermore, in these studies the participants were children, while this research focuses on adults. So, it still remains unclear what the role of fear of failure is when watching peer models. Therefore, this study investigates the following question: *To what extent does fear of failure have a moderating effect on the relationship between a mastery example and self-efficacy and on the relationship between a coping example and self-efficacy?*

Hypotheses

Based on the abovementioned literature, three hypotheses are composed. 1) Instructional videos with peer models have positive effect on self-efficacy. This is shown by many empirical studies and meta-analyses concerning this subject. 2) There is a main effect of video condition; coping examples have a stronger effect than mastery examples. This is based on the model-observer similarity hypotheses. 3) There is a moderating effect of FF on the relationship between instructional videos and self-efficacy. The DSMM states that susceptibilities have a moderating effect. However, to my knowledge there is little published data on the direction of this moderating role. Therefore, it is expected that there will be an effect, though it could not be specified in which direction the moderating role of FF will be.

Method

Design

This research has a randomized two group design. The coping condition is presented a coping model video instruction, while the mastery condition will view a mastery example instructional video.

Participants

The participants (N = 139) were recruited by a targeted selected sample and snowballing. Potential participants in the researcher's network were asked through social media to participate in the experiment and to distribute the invitation in their network. The inclusion criteria were: proficient in the Dutch language, aged between 20-30 and academically educated (level 5 or higher according to the European Qualifications Framework). An effect size of 0,5 with a power of 0,8 was expected. This required a sample size of at least 51 respondents per condition, 102 in total.

Sixty respondents were assigned to the coping condition and 48 to the mastery condition. Table 1 provides more insights in both conditions. As shown, the demographics

were relatively equal for both groups. Most of the respondents indicated their competence in drumming as never done before or only done a few times (novice).

Table 1

Summary of the demographic information for both conditions

Group		Coping (<i>n</i> = 60)	Mastery (<i>n</i> = 48)	Total (<i>n</i> = 108)
Sex	Men	14 (23.3%)	16 (33.3%)	30 (27.8%)
	Female	46 (76.7%)	32 (66.7%)	78 (72.2%)
Mean age		27.03 (<i>SD</i> = 7.40)	24.36 (<i>SD</i> = 3.00)	25.86 (<i>SD</i> = 6.01)
Occupation	Studying	28 (46.7%)	23 (47.9%)	51 (47.2%)
	Working	30 (50%)	25 (52.1%)	55 (50.9%)
	Other	2 (3.3%)	0 (0%)	2 (1.9%)
Drum skills	Novice	43 (71.7%)	36 (75%)	79 (72.2%)
	Advanced beginner	14 (23.3%)	9 (18.8%)	23 (21.3%)
	Competent	2 (3.3%)	0 (0%)	2 (1.9%)
	Proficient	1 (1.7%)	3 (6.3%)	4 (3.7%)
	Expert	0 (0%)	0 (0%)	0 (0%)

Instruments and Materials

Materials. Two instructional videos were constructed, a coping and a mastery example, where a peer shows a solo on the drums. In both videos the same 26-year old Caucasian male was employed (Appendix I; Figure 3). It was assumed that the drumming skill is interesting for both genders, is only acquired by a few and is of a proper level for

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adolescents. The videos were uploaded to YouTube. The duration of the videos was 3 minutes and the spoken language was Dutch. Literature was considered to guarantee the quality of the instruments. This included the design principles for mobile learning of Elias (2011) who emphasizes the importance of a simple interface and responsiveness to different devices (desktop, tablet and phone). Also, the multimedia learning design principles were considered. Segmenting, dividing the learning materials in short chunks with an identifiable start and end, was applied. This helps novices to understand the content (Ibrahim, 2012; Mayer, 2008). Furthermore, Schunk (1987) has described how to make a clear distinction between the two types of models, which was also applied. In the mastery example the model shows a perfect demonstration of the drum solo and verbalized statements of high levels of self-efficacy, positive attitudes, and low task-difficulty, for example “this song is easy to play on drums” or “I know I can play this perfectly”. The coping video shows gradual progress in performance and increasing levels of self-efficacy. Statements about learning, task-difficulty and self-efficacy are initially negative but gradually became more positive (Schunk, 1987). Examples of statements in the coping condition are “This song is very hard to learn” and “Maybe if I practice often, I can eventually master this song”.



Figure 3. Fragment of the videos.

Measurements. In this study self-efficacy and fear of failure are measured by self-report questionnaires (Appendix II).

Self-efficacy. Three scales are used to measure self-efficacy. First, two scales of the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia & McKeachie, 1991) are used to measure task-related self-efficacy. The Dutch version was used. For both scales, items are scored on a seven-point Likert-scale ranging from (1) totally disagree to (7) totally agree. The items refer all to a skill, and the instructions explain that this refers to drumming. The scale *Self-efficacy for learning and performance* measures performance expectations and the self-confidence of one's ability to master a task. It is measured by eight items, for example "I expect I can learn this skill". Pintrich et al. (1991) assessed the reliability as sufficient ($\alpha = .93$). The scale *control of learning beliefs* which consists of four items ($\alpha = .68$, Pintrich et al., 1991) focuses on students' beliefs that their learning efforts will lead to positive outcomes. One item for example is "If I try hard enough, then I will learn this skill".

Additionally, perceived general self-efficacy is measured by the Dutch Adaptation of the General Self-Efficacy scale (D-GSE; Teeuw, Schwarzer & Jerusalem, 1994; Appendix I). This 10-item survey assesses optimistic self-beliefs during coping with difficulties in general settings. The items are measured on a four-point Likert-scale ranging from (1) 'completely incorrect' to (4) 'completely correct' An example of an item is "Whatever happens, I can figure it out". The GSE is translated in over thirty languages, the reliability varies between $\alpha = .5$ and $.9$, depending on context and intended use (Schwarzer & Jerusalem, 1995). There is no information about the validity and reliability provided yet for the Dutch version of the GSE. This was calculated for this sample.

Fear of failure. The scale 'fear of failure' of the Questionnaire study and exam skills (VaSEV; Depreeuw, Steenhout, Vanneste & Van der Eynde, 2010; Appendix I) is used to

measure FF. This Dutch survey [Vragenlijst Studie- en examenvaardigheden Levenslang leren – Extra korte versie] is initially developed to measure adults' motivation and study skills in a lifelong learning setting. The fear of failure scale consists of 10 items ($\alpha = .92$; Gutmann Split-Half = .79; Depreeuw et al., 2010) and measures to what extent one feels anxious and fearful in testing situations (Depreeuw et al., 2010). In this study, the testing situation is rephrased to performance situations, for example 'Prior to or during performing, I lose control of myself'. In the instructions it is defined what counts as a performance. The items are measured on five-point Likert-scale from 1 = (almost) never to 5 = (almost) always. Earlier versions of the questionnaire are assessed by the Commissie Testaangelegenheden Nederland as sufficient and good on all criteria except for the norms (Commissie Testaangelegenheden Nederland, 2019). Though, the validity and reliability were recalculated in this sample.

Procedure

Prior to the main study, a simple pilot study was conducted. The goal of the pilot study was to check whether the items were clear and understandable to the target audience, trace any flaws or grammar mistakes, and estimate the duration of the experiment. Two women of age 22 and 24 were asked to assess the survey and report feedback to the researcher. Based on the feedback, the questionnaire was altered.

The main study was conducted through online survey software. It was distributed through social media and individuals could participate whenever they wanted. Appendix I shows the questionnaire. Participants were asked to fill in an informed consent in advance. Further, it was requested that participants should fill out the questionnaire in a quiet room, so they can watch and hear the video clearly and without being interrupted. First, participants filled in the demographical items: their gender, age, education level, main occupation (studying or working), and perceived competence in drumming (Benner et al.'s five levels of

expertise, Dunphy & Williamson, 2004). The second part of the questionnaire features the self-efficacy pre-test and the fear of failure questionnaire. Next, respondents were assigned to one of the conditions, which was randomly determined by the survey software. Depending on this, participants viewed either the mastery or the coping condition video. After this, the participants filled in the self-efficacy post-test. The experiment took about 15 minutes. Finally, participants were requested if they could help distribute the survey in their network by sharing the URL to the survey with others.

Data Analyses

First, the reliability and validity of the instruments were recalculated for this sample and the descriptives were calculated for both conditions. An independent t-test was used to check whether there were differences between the two conditions in the pre-test. Hypotheses 1, the difference between the pre- and post-tests in self-efficacy, and hypotheses 2, the main effect of the video conditions on the self-efficacy, were tested with a Repeated Measures ANOVA. Lastly, the third hypotheses, the moderating effect of FF was assessed. The gain scores, the average difference between the post-test and pre-test were calculated. A moderation analysis with PROCESS was used to assess the third hypotheses. The dependent variable was the gain score, the independent variable the video condition and FF the moderator. For all analyses significance applies when $p < .05$.

Results

In this section the quality of the instruments is examined first, followed by an explanation about the missing data. Next, the pre-test differences between the conditions were measured. Lastly, the hypotheses were tested.

Quality of the Instruments

MSLQ. To assess the construct validity of the MSLQ in this study, a confirmative factor analysis (CFA) was conducted to test the fitness of the model with two factors (SELP and CLB-scale). Unit loading identification was applied. The goodness of fit test and the fit indexes showed an unacceptable fit for the assumed model ($\chi^2 = 183.45$, $df = 53$, $p < .001$, CFI: 0.86, TLI: 0.82, RMSEA: 0.15). Table 2 shows the factor loadings of the items on this two-factor model. A CFA with unit variance identification did not show any different results. This result means that the scales as designed by Pintrich et al. (1991) could not be generalized to this sample. Next, it was tested whether the all twelve items of the MSLQ loaded on *one* factor. This CFA analysis also showed a poor fit ($\chi^2 = 193.93$, $df = 54$, $p < .001$, CFI: 0.85, TLI: 0.81, RMSEA: 0.15). As Table 2 shows, the factor loading on factor 1 are quite good when testing the two-factor model, all > 0.70 , while factor 2 shows diverged factor loadings. Therefore, it was tested whether a one-factor model with only the items of the SELP-scale was valid. This was also not the case, there was no goodness of fit ($\chi^2 = 81.88$, $df = 20$, $p < .001$, CFI: 0.89, TLI: 0.85, RMSEA: 0.17). For both scales the reliability was calculated. The SELP-scale could be considered as reliable ($\alpha = .91$) while the internal consistency of the CLB-scale was poor ($\alpha = .57$; Field, 2018).

Based on these results, it was decided to only use the SELP-scale to measure task-specific self-efficacy. Due to the poor reliability of the CLB-scale and its diverging factor loadings on the CFA, it was decided to remove this scale from further data analysis. The SELP-scale was used in further analyses because the factor loadings were acceptable as well as the internal consistency.

Table 2

Factor loadings for the two-factor model for the MSLQ with the SELP-scale and CLB-scale, conducted with a CFA

Model	Items	Factor loadings
Factor 1	MSLQ_SELP_1	1.00
	MSLQ_SELP_2	0.93
	MSLQ_SELP_3	1.06
	MSLQ_SELP_4	0.75
	MSLQ_SELP_5	0.84
	MSLQ_SELP_6	1.04
	MSLQ_SELP_7	0.75
	MSLQ_SELP_8	0.72
Factor 2	MSLQ_CLB_1	1.00
	MSLQ_CLB_2	0.92
	MSLQ_CLB_3	-0.07
	MSLQ_CLB_4	0.04

GSE. To assess whether the items of the GSE load on one factor, a CFA with unit loading identification was conducted. Although there was a significant effect which would mean to discard the model, the test indexes indicated that there was a goodness of fit ($\chi^2 = 272.41$, $df = 45$, $p < .001$, CFI: 100, TLI: 1.03, RMSEA: 0.00). Therefore, the model with one factor was approved. Table 3 shows the factor loadings for each item. The reliability of the GSE was also good with a Cronbach's alpha of .81. So, the GSE demonstrated a high validity and reliability and there was no need for adjustments.

Table 3

Factor loadings for the one-factor model for the GSE, conducted with a CFA

Item	Factor loading
GSE_1	1.00
GSE_2	1.06
GSE_3	0.90
GSE_4	1.64
GSE_5	1.97
GSE_6	1.27
GSE_7	2.44
GSE_8	1.90
GSE_9	1.77
GSE_10	1.61

VASEV. The validity of the VASEV was also checked with a CFA. All items loaded on one factor, when unit loading identification was applied. The fitting indexes showed goodness of fit for this one-factor model ($\chi^2 = 71.07$, $df = 55$, $p < .001$, CLI: 0.97, TLI: 0.89, RSMEA: 0.10). Table 4 shows the factor loadings for this model. Besides a proper validity, the VASEV was also considered as reliable ($\alpha = .88$) with all ten items. So, there were no adjustments needed.

Table 4

Factor loadings for the one-factor model for the VASEV, conducted with a CFA

Item	Factor loading
VASEV_1	1.00
VASEV_2	1.00
VASEV_3	1.15
VASEV_4	0.93
VASEV_5	1.67
VASEV_6	1.64
VASEV_7	1.09
VASEV_8	0.81
VASEV_9	0.97
VASEV_10	1.25

Missing Values

In total 139 participants filled in the survey, but 31 (22.30%) of them closed the survey without finishing it. Because respondents were assigned to either the mastery or coping condition halfway through the survey, the individuals who closed the survey before this point, were not assigned to a condition. The items left blank were marked as missing values. Only the data of the participants who completed the survey ($n = 108$) could be included in the analysis to answer the research questions and test the hypotheses. Though, the available data of all participants were used to examine the validity and reliability of the instruments.

Pre-Test Differences

First, independent t-tests were used to check whether there were differences between the two conditions in the pre-test scores. Before the t-test was conducted, the assumption of normal distribution was tested with a Shapiro-Wilk test. The SELP-scale was normally distributed for both groups (coping: $W(59) = .99, p = .73$, mastery: $W(48) = .98, p = .39$), as well as the GSE (coping: $W(59) = .96, p = .08$, mastery: $W(48) = .97, p = .23$) and the VASEV (coping: $W(59) = .98, p = .61$, mastery: $W(48) = .98, p = .58$). Table 5 shows the average scores on the pre-test for both groups. No significant differences were found for the self-efficacy for learning and performance (SELP) -scale of the MSLQ ($t(106) = -1.01, p = .315$) between the conditions. Also, the conditions did not significantly differ for the GSE ($t(205) = -0.47, p = .64$). Lastly, the results of the VASEV showed no differences ($t(105) = 0.54, p = .59$) between the conditions.

Table 5

Means and standard deviation on the pre-test for both conditions

	Coping condition			Mastery condition		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
SELP	60	4.16	1.21	48	4.39	1.09
GSE	59	3.14	0.05	48	3.17	0.04
VASEV	59	2.60	0.65	48	2.53	0.71

Hypothesis 1 and 2: Main Effects of Test Moment and Video Condition

The main effect of the two instructional videos (the condition) on the three self-efficacy scales was tested, using a Repeated Measures ANOVA with the test moment (pre-test and post-test)

as within-subject factor and the condition (mastery or coping video) as between-subject factor.

MSLQ-SELP. There was a significant main effect of the test moment for the self-efficacy for learning and performance ($F(3, 105) = 36,29, p < .001$). Participants ($n = 107$) scored higher on the post-test ($M = 4.78, SD = 1.21$) of self-efficacy for learning and performance than on the pre-test ($M = 4.23, SD = 1.15$). This effect was large, $\eta^2 = .26$ (Field, 2018). There was no significant main effect of the video conditions on the SELP-scale, $F(1, 105) = 0.34, p = .56, \eta^2 = .00$

GSE. For the General Self-efficacy, there was no significant difference in the pre ($M = 3.15, SD = 0.36$) and post-test ($M = 3.17, SD = 0.42$), $F(1, 103) = 0.004, p = .95, \eta^2 = .004$. The main effect of the video conditions was also not significant, $F(1, 103) = 0.12, p = .73, \eta^2 = 0.001$

Hypothesis 3: Moderating Effect of FF on the Relationship between the Video Conditions and Self-Efficacy

To investigate the moderating effect of fear of failure on the relationship between the instructional videos and the self-efficacy, a moderator analysis was performed using PROCESS. The mean difference between the post and pre-test of the self-efficacy scales is the dependent variable in this analysis. Table 6 shows the gain scores for each scale and condition. The moderator in this analysis was FF, measured by the VASEV.

MSLQ-SELP. There was no significant effect of the video conditions on the differential scores of the SELP (SELP-diff), $F(3, 103) = 1.28, p = .25, r^2 = .04$. The model did not show a significant interaction effect of FF, $t(103) = 0.55, p = .58$.

GSE. There was no significant effect of the video conditions on the differential scores of the GSE, $F(3, 101) = 0.05, p = 0.31$. There was no significant interaction effect of FF, $t(101) = -0.04, p = .67$.

Table 6

Mean difference scores and standard deviation between the post- and pre-test of the self-efficacy scales for both conditions

	Coping condition			Mastery condition		
	n	M	SD	n	M	SD
SELP-dif	59	0.56	0.84	48	0.42	0.84
GSE-dif	58	0.02	0.23	47	0.01	0.21

Discussion

Conclusions

This study investigated whether personal characteristics have an influence on the relationship of media use and individuals' responses to media, which was stated by the Differential Susceptibility to Media Effects Model (DSMM; Piotrowski and Valkenburg, 2015). More specific, it was addressed to what extent fear of failure has a moderating effect on the relationship between instructional videos with peer modeling and the observer's self-efficacy. Two types of peer modeling were researched, coping and mastery examples.

Hypothesis 1. The first hypothesis in this study stated that instructional videos have a positive effect on self-efficacy. This hypothesis is partly confirmed in this study, the results showed that the instructional videos indeed had a large positive effect on the viewers' self-efficacy for learning and performance (task-specific), but not on general self-efficacy. An explanation for this, is that general self-efficacy is a more stable trait than task-specific self-

efficacy. Task-specific self-efficacy is a judgement of one's ability and is dependent of the context, domain and task, while general self-efficacy is defined as an overall competence in a wide variety of achievement situations (Bandura, 2010; Chen, Gully & Eden, 2001). It is a personality trait which is closely related to self-confidence (Chen et al., 2001). General self-efficacy scales therefore measure individuals' general confidence and not their estimate of their own ability for a specific task. General self-efficacy is augmented by an accumulation of success-experiences (Chen et al., 2001), so it is not unusual that one video intervention of three minutes does not alter one's general sense of self-efficacy. But for task-specific self-efficacy, this video was effective. Although this hypothesis was confirmed, it must be interpreted with caution due to the low validity of the task-specific self-efficacy questionnaire.

Hypotheses 2. The second hypothesis stated that there was a main effect of the video condition: coping examples would have a stronger effect than mastery examples. This was rejected, there was no significant difference between the mastery and coping condition, both were equally effective for self-efficacy. This finding is in line with what Cumming and Ramsey (2011) argue. According to them there is growing evidence that both conditions are equally beneficial for learners. Recent studies were unable to provide evidence for the superior role of coping examples but stated that both types are effective. Knol (2018) demonstrated this for cognitive and physical tasks for children. Clark (2001) showed children's self-efficacy for diving enhanced after watching a social model but found no differences between the two types of models. Thus, this study contributes to this idea.

The equal effect that mastery and coping examples generate, may be due to mediating mechanisms which could affect the role of both examples. One of these mechanisms is perceived task difficulty, if the task is perceived as too difficult, the prominent role of coping models possibly diminishes and lead to equally effects for mastery and coping models (Clark, 2001; Cumming & Ramsey, 2011; Weiss et al., 1998). If the task is perceived too easy, there

are no meaningful differences between the coping and mastery model elicited (Cumming & Ramsey, 2011). Plausibly, the drumming task in this study has not been difficult enough to elicit differences between the two model types, even though 70% of the participants was a novice in drumming. Therefore, it is recommended for future research to investigate to which extent the perceived task difficulty influences the role of peer models. Conducting a research with two tasks conditions (easy and difficult) and two model conditions (coping and mastery) could provide answers to the suggestion of the mediating role of perceived task difficulty.

Hypothesis 3. Lastly, this study was designed to address the potential moderating effect of fear of failure (FF) on the relationship between instructional videos and self-efficacy. This study has been unable to demonstrate this. This result is contradicting to what Piotrowski and Valkenburg (2015) state in their model, that susceptibilities moderate the response to media use. This result may have different origins, a) this research did not provoke anxiety or b) the model was not congruent with the observers.

For individuals with FF, cognitive schemas about the negative consequences of failure are activated when one perceives a situation as a possibility for failure (Conroy & Elliot, 2002). In this study, participants watched a peer model and subsequently they estimated their own ability in drumming, but participants knew beforehand that their actual drumming performance was not measured. They only needed to imagine performing the task. Therefore, it is likely that they did not consider this situation as a possibility for failure, so this study did not induce negative feelings, thoughts or avoidance behaviour. This could have influenced how respondents filled out the FF-survey, and how they perceived their self-efficacy in drumming. Peer modeling is particularly effective in anxiety triggering situations (Schunk, 1987). The absence of this could have diminished the effects. Therefore, future research should assess the actual performance of the participants. This provides more a realistic view

of self-efficacy in performance situations and the fear to fail some respondents could experience prior to or during performing.

The second explanation for the discrepancy between this hypothesis and the results could be explained by the perceived observer-model similarity and the disposition-content congruency hypothesis. The perceived observer-model similarity hypothesis states that models are more effective when perceived as similar by the observer (Moreno & Flowerday, 2006 in Hoogerheide et al., 2016). The disposition-content congruency hypothesis in the DSMM explains how the dispositional variables moderate media effects (Valkenburg & Peter, 2013). It states that media which is congruent with the differential susceptibilities of the viewer are more likely to lead to media effects than incongruent media. Media is preferred more when there is familiarity for the viewer or when it is not too discrepant from their own existing cognitive schemata and emotional experiences (Valkenburg & Peter, 2013). So, it is possible that individuals with FF did not perceive either the coping or the mastery model as similar to them. Additionally, it could be that the behaviour demonstrated by the model did not fit in the observers' existing cognitive and emotional schemata about performances. Maybe the models did not express the cognitions, feelings and/or behaviour as individuals with FF experience these. So, it would be interesting for future research to alter the coping model, so it is more congruent with FF. The model could for example express more anxiety and avoidance behaviour, but gradually overcomes his fears as well showing improvement in performances. Then it could be investigated whether the coping model will yield higher effects.

Limitations

This study has several limitations. First, the analysis showed that the validity of the MSLQ could not be generalized to this sample. The MSLQ is an instrument that is used

worldwide though the questionnaire has some psychometric problems (Davenport, 2003; Hamilton & Akther, 2009). Research into its validity showed varying results from valid and reliable (e.g. Carmona, Buunk, Dijkstra & Peiro, 2008; Erturan Ikler, Arslan, & Demirhan, 2014) to an unsatisfactory fit of the model (e.g. Cook, Thompson, & Thomas, 2011; Cho & Summers, 2012). Hamilton and Akther (2009) concluded that in particular the self-efficacy scale needs revision or replacement because this scale was highly skewed. Further, in this study the CLB-scale was removed due to its poor quality. It measured the control of learning beliefs and together with the SELP-scale measured the whole construct self-efficacy. So, removing items diminished the content validity, because not all aspects of self-efficacy were measured anymore. Therefore, the results of this study should be interpreted cautiously. Future studies could include more items measuring the control of learning beliefs to increase the validity.

Another point of debate in this study is the context of the data collection. This study researched how individuals behave in learning situations. In informal learning individuals watch an instructional video on YouTube when they feel the need for instruction or a performance example when learning (Swarts, 2012). There is an intention to learn when watching instructional videos. However, respondents presumably participated in the research with the intention to help the researcher or science in general and not necessarily because they wanted to learn the demonstrated skill. This could have consequences for their motivation to learn, their focus, attention and engagement, so eventually the results of this study. It would be interesting to conduct this study in formal learning situations, for example in a school setting, during a company training or in an online program, and inquire how these situations affect the results. In those situations, it is more likely that participants have personal interest in engaging in the video, for example because they are motivated to learn a new skill or when they have to follow a certain course for credits.

Relevance of the Study

Scientific relevance. One of the unsolved issues for the DSMM according to the authors is that it is yet unclear which media content leads to which response states (Valkenburg & Peter, 2013). This study investigated this and showed that instructional videos fit in this model, it affects the media response. It was demonstrated that peer modeling is effective when received with video instruction, though this work implicates that there is no difference for coping and mastery models. Valkenburg and Peter (2013) suggested that with the third proposition of the DSMM (Figure 1), that susceptibilities moderate this relationship. This could not be confirmed in this study. So, in the context of learning through multimedia, this research showed that moderating effects of FF may be negligible small. Future research could elaborate on this by investigating whether other susceptibilities may have a moderating effect in multimedia learning contexts.

Practical relevance. Due to the limitations of this research, the relevance should be considered carefully. The current work has demonstrated that instructional videos on YouTube with peer modeling foster self-efficacy among viewers. It does not matter if this a coping or mastery model. Educational agents, instructors, and trainers could integrate those videos in their course to enhance self-efficacy among their learners. This could have positive effects on other learning outcomes as well. This study indicated that the videos have a similar effect to learners with and without fear of failure, so educators can keep this in mind when choosing videos.

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Appendix I: The instructional videos.

The link below redirects to the mastery example:

<https://www.youtube.com/watch?v=ky5r7rddsK0&>

The link below redirects to the coping example:

<https://www.youtube.com/watch?v=1OGwz0b5wxs>

Note of the author:

Both videos are private videos, which means that only viewers with a link have access to the videos. This video was only used in the context of this study and not shared with others. The videos will be removed of YouTube after I pass this course.

Appendix II: Questionnaire used in this study including informed consent

Participants were Dutch, so the questionnaire is completely in Dutch.

Hoi,

Bedankt dat je mee wil doen aan mijn onderzoek. Ik ben Maaike Wientjes en doe voor mijn master onderwijswetenschappen aan de Universiteit Utrecht onderzoek naar het effect van instructievideo's. Tegenwoordig leert men steeds meer vaardigheden door het kijken van video's, bijvoorbeeld via YouTube. Ik onderzoek wat het effect is van dit soort video's op het taakgerelateerde zelfvertrouwen van de kijker en of faalangst deze relatie beïnvloedt. Met de resultaten kan ik de bestaande kennis over de effecten van dit soort video's uitbreiden en docenten of trainers adviezen geven over de inzet van dit soort video's.

Het onderzoek bestaat uit drie delen, de voormeting, door middel van vragenlijsten, een video, en een nameting. Het zal ongeveer 15 minuten duren. **Zorg ervoor dat je in een rustige ruimte bent, zodat je de video met aandacht kan bekijken en het geluid goed kan horen.**

Wat houdt deelname in?

Deelname is geheel vrijwillig en je kan op ieder gewenst moment stoppen zonder opgaaf van reden. Aan deelname zitten geen risico's verbonden. De antwoorden worden anoniem en vertrouwelijk behandeld. Ik vraag niet naar persoonlijke gegevens, waardoor de gegevens nooit zijn terug te leiden jou. Alleen ik en mijn begeleider hebben toegang tot deze data en worden alleen voor dit onderzoek gebruikt. De data wordt in een beveiligde omgeving opgeslagen en voldoet aan de hoogste normen. De gegevens zullen minimaal 10 jaar bewaard worden, dit is volgens de richtlijnen van de VSNU. Dit onderzoek is goedgekeurd door de Ethische Toetsingscommissie van de Faculteit Sociale Wetenschappen van de Universiteit Utrecht.

Vragen

Als je na het lezen van deze informatie nog vragen hebt, of op de hoogte wil worden gehouden van de resultaten, kan je me een mailtje sturen op m.wientjes@students.uu.nl. Als je vragen of opmerkingen over het onderzoek hebt, kunt contact opnemen dr. L. Hornstra, (t.e.horstra@uu.nl) zij is een onafhankelijk contactpersoon die inhoudelijk kan ingaan op de vraag of klacht. Een officiële klacht kun je indienen via klachtenfunctionaris-fecsocwet@uu.nl

Toestemming

Door akkoord te gaan met deelname aan dit onderzoek en verder te gaan met de vragenlijsten bevestig je dat:

- Je bovenstaande informatie hebt gelezen en hiermee akkoord gaat
- Je vrijwillig deelneemt

Indien je geen bezwaar hebt om mee te doen aan dit onderzoek, bevestig dan dat je akkoord gaat met deelname.

Ik heb de informatie gelezen en ga akkoord met deelname

Ik heb de informatie gelezen en ga NIET akkoord met deelname

Demografische gegevens

Geslacht

Man

Vrouw

Anders / zeg ik liever niet

Leeftijd: Jaar

Wat is je hoogst afgeronde opleiding?

vmbo, mbo-1, mbo-2 of mbo-3

Havo, vwo of mbo-4

Propedeuse of associate degree

Hbo of universitaire bachelor

Hbo master of universitaire master

PhD of doctoraat

Welke situatie is voor jou van toepassing? Met 'werkende' worden geen bijbanen bedoeld.

Ik ben student

Ik ben werkende

Anders

Je gaat verderop in dit onderzoek een filmpje bekijken waarin je iemand anders ziet drummen. In hoeverre ben jij bekwaam in drummen?

Ik heb het nog nooit gedaan

Beginner: enkele keren gedaan, basale beheersing

Gevorderde beginner: beheerst basistechnieken en tricks

Gevorderde: beheerst moeilijkere technieken en tricks

Vergevorderde: beheerst (bijna) alles

Expert: evenaart het niveau van een professioneel drummer

FEAR OF FAILURE AND THE EFFECT OF PEER MODELING ON SELF-EFFICACY

MSLQ-voor

Beantwoord nu de onderstaande vragen ten aan zien van de vaardigheid drummen. Er zijn geen goede of foute antwoorden, maar beantwoordt in hoeverre de stelling voor jou van toepassing is.

Item nr	Item	Helemaal mee oneens	Mee oneens	Beetje mee oneens	Neutraal	Beetje mee eens	Mee eens	Helemaal mee eens
MSLQ_ SELP_ 1_voor	Ik verwacht dat ik deze vaardigheid goed kan leren.							
MSLQ_ SELP_ 2_voor	Ik ben ervan overtuigd dat ik de vaardigheid uitstekend kan uitvoeren.							
MSLQ_ SELP_ 3_voor	Ik ben er zeker van dat ik deze vaardigheid kan beheersen na instructie.							
MSLQ_ SELP_ 4_voor	Ik ben ervan overtuigd dat ik de basis van deze vaardigheid kan leren.							
MSLQ_ CLB_1 _voor	Als ik goed mijn best doe, dan zal ik deze vaardigheid beheersen.							
MSLQ_ SELP_ 5_voor	Als ik kijk naar de instructie en naar mijn eigen kennis en kunnen, dan denk ik dat ik deze vaardigheid kan leren.							
MSLQ_ SELP_ 6_voor	Ik ben ervan overtuigd dat ik deze vaardigheid kan beheersen.							
MSLQ_ CLB_2 _voor	Als ik deze vaardigheid voldoende oefen, dan kan ik deze vaardigheid aanleren.							
MSLQ_ SELP_ 7_voor	Ik ben ervan overtuigd dat ik de meest moeilijke onderdelen van deze vaardigheid kan leren, als wordt voorgedaan door een instructeur.							
MSLQ_ CLB_3 _voor	Als ik niet mijn best doe, dan zal ik deze vaardigheid niet begrijpen of beheersen.							
MSLQ_ SELP_ 8_voor	Ik ben ervan overtuigd dat ik zelfs de moeilijkste onderdelen van deze vaardigheid kan uitvoeren.							
MSLQ_ CLB_4 _voor	Als ik deze vaardigheid niet oefen, dan kan ik deze ook niet leren.							

FEAR OF FAILURE AND THE EFFECT OF PEER MODELING ON SELF-EFFICACY

GSE-D-voor

Hieronder volgen 10 stellingen over hoe je over het algemeen denkt en doet. Wil je aangeven in hoeverre je het eens bent met deze stellingen. Hierbij kan het antwoord invullen dat op dit moment het meest van toepassing is.

Item nr	Item	Volledig onjuist	Nauwelijks juist	Enigszins juist	Volledig juist
GSE_1_voor	Het lukt me altijd moeilijke problemen op te lossen, als ik er genoeg moeite voor doe.				
GSE_2_voor	Als iemand mij tegenwerkt, vind ik toch manieren om te krijgen wat ik wil.				
GSE_3_voor	Het is voor mij makkelijk om vast te houden aan mijn plannen en mijn doel te bereiken.				
GSE_4_voor	Ik vertrouw erop dat ik onverwachte gebeurtenissen doeltreffend aanpak.				
GSE_5_voor	Dankzij mijn vindingrijkheid weet ik hoe ik in onvoorziene situaties moet handelen.				
GSE_6_voor	Ik kan de meeste problemen oplossen als ik er de nodige moeite voor doe.				
GSE_7_voor	Ik blijf kalm als ik voor moeilijkheden kom te staan omdat ik vertrouw op mijn vermogen om problemen op te lossen				
GSE_8_voor	Als ik geconfronteerd word met een probleem, heb ik meestal meerdere oplossingen.				
GSE_9_voor	Als ik in een benarde situatie zit, weet ik meestal wat ik moet doen.				
GSE_10_voor	Wat er ook gebeurt, ik kom er wel uit.				

VaSEV

Hieronder staan een aantal vragen met betrekking op het leveren van prestaties. Hiermee worden situaties bedoeld waarin gepresteerd moet worden en waarin je beoordeeld kan worden. Voorbeelden zijn: het maken van een toets of examen, het geven van een presentatie, het meedoen aan een wedstrijd.

Itemnr	Item	(bijna) nooit	Eerder weinig	Soms	Vaak	(bijna) altijd
VASEV_1	Als ik nog maar aan het leveren van een prestatie denk, ben ik al gespannen					
VASEV_2	Zelfs als ik goed geoefend heb, raak ik nog in paniek					
VASEV_3	Hoe meer ik prestaties ik moet leveren, hoe meer stress ik heb					
VASEV_4	Door mijn stress zal ik mislukken					
VASEV_5	Ik heb indruk dat anderen tijdens het leveren van prestaties prestaties veel rustiger zijn dan ik					
VASEV_6	Ik vergelijking met anderen ben ik meer gespannen bij het leveren van prestaties					
VASEV_7	Als ik het niet perfect ken/kan, ben ik angstig					
VASEV_8	Voor of tijdens het leveren van een prestatie verlies ik controle over mijzelf					
VASEV_9	Tijdens het leveren van een prestatie twijfel ik erg					
VASEV_10	Tijdens het leveren van een prestatie raak ik makkelijk in paniek					

Instructievideo

Je gaat een video bekijken waarin je iemand anders ziet drummen. Zorg dat je het geluid goed kan horen en dat je de video met aandacht bekijkt.

[video wordt hier bekeken]

MSLQ-na

Beantwoord nu de onderstaande vragen ten aan zien van de vaardigheid drummen. Er zijn geen goede of foute antwoorden, maar beantwoordt in hoeverre de stelling voor jou van toepassing is.

Item nr	Item	Helemaal mee oneens	Mee oneens	Beetje mee oneens	Neutraal	Beetje me eens	Mee eens	Helemaal me eens
MSLQ_SELP_1_na	Ik verwacht dat ik deze vaardigheid goed kan leren.							
MSLQ_SELP_2_na	Ik ben ervan overtuigd dat ik de vaardigheid uitstekend kan uitvoeren.							
MSLQ_SELP_3_na	Ik ben er zeker van dat ik deze vaardigheid kan beheersen na instructie.							
MSLQ_SELP_4_na	Ik ben ervan overtuigd dat ik de basis van deze vaardigheid kan leren.							
MSLQ_CLB_1_na	Als ik goed mijn best doe, dan zal ik deze vaardigheid beheersen.							
MSLQ_SELP_5_na	Als ik kijk naar de instructie en naar mijn eigen kennis en kunnen, dan denk ik dat ik deze vaardigheid kan leren.							
MSLQ_SELP_6_na	Ik ben ervan overtuigd dat ik deze vaardigheid kan beheersen.							
MSLQ_CLB_2_na	Als ik deze vaardigheid voldoende oefen, dan kan ik deze vaardigheid aanleren.							
MSLQ_SELP_7_na	Ik ben ervan overtuigd dat ik de meest moeilijke onderdelen van deze vaardigheid kan leren, als wordt voorgedaan door een instructeur.							
MSLQ_CLB_3_na	Als ik niet mijn best doe, dan zal ik deze vaardigheid niet begrijpen of beheersen.							
MSLQ_SELP_8_na	Ik ben ervan overtuigd dat ik zelfs de moeilijkste onderdelen van deze vaardigheid kan uitvoeren.							
MSLQ_CLB_4_na	Als ik deze vaardigheid niet oefen, dan kan ik deze ook niet leren.							

GSE-D-na

Hieronder volgen 10 stellingen over hoe je over het algemeen denkt en doet. Wil je aangeven in hoeverre je het eens bent met deze stellingen. Hierbij kan het antwoord invullen dat op dit moment het meest van toepassing is.

Item nr	Item	Volledig onjuist	Nauwelijks juist	Enigszins juist	Volledig juist
GSE_1 _na	Het lukt me altijd moeilijke problemen op te lossen, als ik er genoeg moeite voor doe.				
GSE_2 _na	*Als iemand mij tegenwerkt, vind ik toch manieren om te krijgen wat ik wil.				
GSE_3 _na	Het is voor mij makkelijk om vast te houden aan mijn plannen en mijn doel te bereiken.				
GSE_4 _na	Ik vertrouw erop dat ik onverwachte gebeurtenissen doeltreffend aanpak.				
GSE_5 _na	Dankzij mijn vindingrijkheid weet ik hoe ik in onvoorziene situaties moet handelen.				
GSE_6 _na	Ik kan de meeste problemen oplossen als ik er de nodige moeite voor doe.				
GSE_7 _na	Ik blijf kalm als ik voor moeilijkheden kom te staan omdat ik vertrouw op mijn vermogen om problemen op te lossen				
GSE_8 _na	Als ik geconfronteerd word met een probleem, heb ik meestal meerdere oplossingen.				
GSE_9 _na	*Als ik in een benarde situatie zit, weet ik meestal wat ik moet doen.				
GSE_1 0_na	Wat er ook gebeurt, ik kom er wel uit.				

Dit was het einde van de vragenlijst, hartelijk dank voor het invullen!

Graag verzamel ik nog meer respondenten voor mijn onderzoek. Jij kan me hierbij helpen door de onderstaande link naar twee anderen door te sturen:

[link staat hier]

Dankjewel!

Appendix III: FETC form

Appendix V: FETC form

Section 1: Basic Study Information

1. Name student:

Maike Wientjes

2. Name(s) of the supervisor(s):

Liesbeth Kester & Casper Hulshof

3. Title of the thesis (plan):

The moderating effect of fear of failure on the relationship between peer modeling instruction and self-efficacy

4. Does the study concern a multi-center project, e.g. a collaboration with other organizations, universities, a GGZ mental health care institution, or a university medical center?

Yes / **No**
If yes: Explain.

5. Where will the study (data collection) be conducted? If this is abroad, please note that you have to be sure of the local ethical codes of conducts and permissions.

Data collection will be conducted on trough the online survey software service Qualtrics. Participants are adults.

Section 2: Study Details I

6. Will you collect data?

Yes / No

Yes → Continue to question 11

No → Continue to question 7

7. Where is the data stored?

8. Is the data publicly available?

Yes / No

If yes: Where?

9. Can participants be identified by the student? (e.g., does the data contain (indirectly retrievable) personal information, video, or audio data?)

Yes / No

If yes: Explain.

10. If the data is pseudonymized, who has the key to permit re-identification?

Section 3: Participants

11. What age group is included in your study?

Age 20-30

12. Will be participants that are recruited be > 16 years?

Yes/No

13. Will participants be mentally competent (wilsbekwam in Dutch)?

Yes/No

14. Does the participant population contain vulnerable persons? (e.g., incapacitated, children, mentally challenged, traumatized, pregnant)

Yes/No

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15. If you answered 'Yes' to any of the three questions above: Please provide reasons to justify why this particular groups of participant is included in your study.

16. What possible risk could participating hold for your participants?

One of the questionnaires measure the prevalence of fear of failure symptoms. Although there is no intention at all to 'diagnose' individuals with fear of failure, they might become conscious about their fears. This could be confronting for them.

17. What measures are implemented to minimize risks (or burden) for the participants?

Individuals are allowed to mail me questions. May participants be confused, anxious or experience other emotions during or after the filling in the surveys, I will comfort and debrief them. My e-mail address is stated in the informed consent letter.

18. What time investment and effort will be requested from participants?

It is estimated that data collection will take about 15 minutes. During this, participants fill in surveys and watch an instructional video.

19. Will be participants be reimbursed for their efforts? If yes, how? (financial reimbursement, travelling expenses, otherwise). What is the amount? Will this compensation depend on certain conditions, such as the completion of the study?

No there is no reward for participating.

20. How does the burden on the participants compare to the study's potential scientific or practical contribution?

It is assumed that the burden of this research is minimal. It is expected that individuals with fear of failure react differently on media than children without fear of failure. This could have implications for education, because the results of this research could point out that instructional

videos should be designed different than children without fear of failure. This could enhance their learning.

21. What is the number of participants? Provide a power analysis and/or motivation for the number of participants. The current convention is a power of 0.80. If the study deviates from this convention, the FERB would like you to justify why this is necessary. (Note, you want to include enough participants to be able to answer your research questions adequately, but you do not want to include too many participants and unnecessarily burden participants.)

Results of the Power analysis showed that a sample size of 51 per condition would be optimal, so a total of 102 participants.

22. How will the participants be recruited? Explain and attach the information letter to this document.

Individuals in my network will be contacted by me and asked if they want to participate. Also the survey will be distributed on social media such as Facebook, LinkedIn and whatsapp. Participants are asked to share the survey in their network, so snowballing can take place.

23. How much time will prospective participants have to decide as to whether they will indeed participate in the study?

The survey will be open for a month. Participants can choose whether or not to participate and can fill in the questionnaire whenever they want.

24. Please explain the consent procedures. Note, active consent of participants (or their parents) is in principle mandatory. Enclose the consent letters as attachments. You can use the consent forms on Blackboard.

1. Participants open the survey by a URL
2. The first page they will see is the informed consent form
3. Participants read the information and answer the following question:
 Ik heb de informatie gelezen en ga akkoord met deelname [I have read the information and I agree with participation]
 Ik heb de informatie gelezen en ga NIET akkoord met deelname
[I have read the information and I DO NOT agree with participation]
4. If participants choose the second option, the survey will be automatically closed.

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25. Are the participants fully free to participate and terminate their participation whenever they want and without stating their grounds for doing so? Explain.

Yes. Participants can close the survey whenever they want.

26. Will the participants be in a dependent relationship with the researcher?

Yes / **No**
If yes: Explain.

27. Is there an independent contact person or a general email address of a complaint officer whom the participant can contact?

Yes. They can e-mail Lisette Hornstra (t.e.hornstra@uu.nl)or send their official complaints to klachtenfunctionaris-fecsocwet@uu.nl

28. Is there an independent contact person or a general email address of a complaint officer whom the participant can contact in case of complaints?

Yes. They can e-mail Lisette Hornstra (t.e.hornstra@uu.nl)or send their official complaints to klachtenfunctionaris-fecsocwet@uu.nl

Section 4: Data management

29. Who has access to the data and who will be responsible for managing (access to) the data?

I and Liesbeth Kester are the only ones with access to the data. Data is saved in YODA and I am responsible for managing the data correctly.

30. What type of data will you collect or create? Please provide a description of the instruments.

I will collect the following data:

- Gender
- Age
- Education level

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- Occupation: working or studying, and the field of working/studying (for example: business, education, health)
- Perceived competence in drumming
- Fear of failure survey: 10 items on a 5 point Likert scale
- Self-efficacy surveys: 8 items questionnaire on a 7 point Likert scale and 10 item questionnaire on a 7 point Likert scale. The self-efficacy scales are used two times. Prior to watching the instructional video and after watching.

More detailed information about the instruments can be found in the Method section of my research plan.

31. Will you be exchanging (personal) data with organizations/research partners outside the UU?

Yes / **No**
If yes: Explain.

32. If so, will a data processing agreement be made up?

Yes / No
If yes: Please attach the agreement.
If no: Please explain.

Nvt.

33. Where will the data be stored and for how long?

Data will be stored in YODA and no longer than necessary (after finishing the course). According the VNSU guidelines data is stored 10 years.

34. Will the data potentially be used for other purposes than the master's thesis? (e.g., publication, reporting back to participants, etc.)

No.

35. Will the data potentially be used for other purposes than the master's thesis? (e.g., publication, reporting back to participants, etc.)

Yes / **No**
If yes: Explain.

Informed consent form participants:

Hoi,

Bedankt dat je mee wil doen aan mijn onderzoek. Ik ben Maaïke Wientjes en doe voor mijn master onderwijswetenschappen aan de Universiteit Utrecht onderzoek naar het effect van instructievideo's. Tegenwoordig leert men steeds meer vaardigheden door het kijken van video's, bijvoorbeeld via YouTube. Ik onderzoek wat het effect is van dit soort video's op het taakgerelateerde zelfvertrouwen van de kijker en of faalangst deze relatie beïnvloedt. Met de resultaten kan ik de bestaande kennis over de effecten van dit soort video's uitbreiden en docenten of trainers adviezen geven over de inzet van dit soort video's.

Het onderzoek bestaat uit drie delen, de voormeting, door middel van vragenlijsten, een video, en een nameting. Het zal ongeveer 15 minuten duren. **Zorg ervoor dat je in een rustige ruimte bent, zodat je de video met aandacht kan bekijken en het geluid goed kan horen.**

Wat houdt deelname in?

Deelname is geheel vrijwillig en je kan op ieder gewenst moment stoppen zonder opgaaf van reden. Aan deelname zitten geen risico's verbonden. De antwoorden worden anoniem en vertrouwelijk behandeld. Ik vraag niet naar persoonlijke gegevens, waardoor de gegevens nooit zijn terug te leiden jou. Alleen ik en mijn begeleider hebben toegang tot deze data en worden alleen voor dit onderzoek gebruikt. De data wordt in een beveiligde omgeving opgeslagen en voldoet aan de hoogste normen. De gegevens zullen minimaal 10 jaar bewaard worden, dit is volgens de richtlijnen van de VSNU. Dit onderzoek is goedgekeurd door de Ethische Toetsingscommissie van de Faculteit Sociale Wetenschappen van de Universiteit Utrecht.

Vragen

Als je na het lezen van deze informatie nog vragen hebt, of op de hoogte wil worden gehouden van de resultaten, kan je me een mailtje sturen op m.wientjes@students.uu.nl. Als je vragen of opmerkingen over het onderzoek hebt, kunt contact opnemen dr. L. Hornstra, (t.e.horstra@uu.nl) zij is een onafhankelijk contactpersoon die inhoudelijk kan ingaan op de vraag of klacht. Een officiële klacht kun je indienen via klachtenfunctionaris-fecsocwet@uu.nl

Toestemming

Door akkoord te gaan met deelname aan dit onderzoek en verder te gaan met de vragenlijsten bevestig je dat:

- Je bovenstaande informatie hebt gelezen en hiermee akkoord gaat
- Je vrijwillig deelneemt

Indien je geen bezwaar hebt om mee te doen aan dit onderzoek, bevestig dan dat je akkoord gaat met deelname.

- Ik heb de informatie gelezen en ga akkoord met deelname
- Ik heb de informatie gelezen en ga NIET akkoord met deelname

Informed consent video model

Informatie voor deelname als video instructie model bij een sociaal-wetenschappelijk onderzoek

Faalangst en het effect van video instructies met voorbeelden op het taakgerichte zelfvertrouwen van volwassenen



Universiteit Utrecht

[datum], Utrecht

Geachte heer,

Door middel van deze brief wil ik je toestemming vragen om deelname in een wetenschappelijk onderzoek. Ik doe dit onderzoek voor mijn studie Onderwijswetenschappen aan de Universiteit Utrecht. Voor mijn afstudeeronderzoek ga ik onder begeleiding van prof. dr. Liesbeth Kester onderzoek doen naar het effect van instructievideo's. Deze brief informeert je over dit onderzoek en kan je helpen met de beslissing voor toestemming voor deelname aan dit onderzoek.

Doel van het onderzoek

Tegenwoordig kijken mensen veel filmpjes via internet, in hun vrije tijd en in school- of leersettingen. Geregeld zijn dit filmpjes waarin een ander een bepaalde vaardigheid voordoet, bijvoorbeeld in de sport of tijdens het gamen. Dit kunnen filmpjes zijn waarin een vaardigheid foutloos wordt voorgedaan, of filmpjes waarin te zien is hoe iemand steeds beter wordt in een vaardigheid. Ik ben benieuwd naar het effect van deze instructievideo's op mensen: denkt hij/zij dat hij/zij dit ook kan na het kijken van zo'n filmpje? En is dit anders voor mensen die faalangstig zijn?

Met de resultaten uit dit onderzoek kan ik bijdragen aan een ideale leeromgeving voor volwassenen als het gaat om het leren van nieuwe vaardigheden. Een instructievideo kan effect hebben op het zelfvertrouwen, wat vervolgens weer invloed kan hebben op prestaties. Het is dus belangrijk dat we onderzoeken welke filmpjes wel en niet geschikt zijn voor lerenden met en zonder faalangst.

Vraag voor deelname in de video

De instructievideo's die in dit onderzoek gebruikt worden zal ik zelf monteren. Dit betekent dat ik op zoek ben naar iemand die als model gebruikt wordt in dit onderzoek. Het model doet de vaardigheid voor, in dit onderzoek gaat het om drummen. Er zullen twee filmpjes opgenomen worden, één waarin te zien is dat je het drummen beheerst, en één waarin te zien is hoe je steeds beter wordt in drummen.

Privacy en vertrouwelijkheid

Het filmpje zal alleen in dit onderzoek gebruikt worden en dus alleen worden getoond aan participanten in dit onderzoek. In het filmpje worden geen persoonsgegevens genoemd. Het filmpje wordt nergens gepubliceerd en na afloop van het onderzoek niet gebruikt voor andere doeleinden.

Mogelijkheid tot vragen, informatie en toestemming

Als je na het lezen van deze brief nog vragen hebt over het onderzoek of als je op de hoogte gehouden wilt worden van dit onderzoek, kunt je mij mailen op m.wientjes@students.uu.nl of bellen op 06-48086861

Indien je geen bezwaar hebt tegen deelname aan dit onderzoek, wil ik je vragen om onderstaand strookje in te vullen en terug te sturen.

FEAR OF FAILURE AND THE EFFECT OF PEER MODELING ON SELF-EFFICACY

Met vriendelijke groet,

Maaïke Wientjes
Student master Onderwijswetenschappen

Mede namens prof. dr. Liesbeth Kester

Met dit formulier geef ik toestemming voor deelname als video instructie model aan het onderzoek van Maaïke Wientjes.

Naam:

Datum:

Handtekening: