

**Effects of Core Quality Coaching in Primary Education on Students' Happiness and
Self-Concept**

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Abstract

In this study, we investigated the effectiveness of a coaching innovation provided by teachers in primary education, based on exploring and using students' core qualities. This thesis focused specifically on the effects on students' happiness and self-concept, and whether gender played a moderating role in these effects. To research this, staff of 11 primary schools were trained in Core Quality Coaching and the innovation took place for a year. A sample of students (N = 390) filled in a questionnaire before the innovation, and a sample (N = 244) filled in the same questionnaire after the innovation. No effects were found of coaching on happiness and self-concept, nor had gender a moderating effect. Although no evidence was found to support the hypotheses, previous research still gives enough indication that Core Quality Coaching can have positive outcomes in primary education. Further research could investigate these effects in different settings, with stricter monitoring of the implementation, or with a different research design.

Key Words: coaching, innovation, primary education, core qualities, happiness, self-concept, gender

Effects of Core Quality Coaching in Primary Education on Students' Happiness and Self-Concept

Nowadays, it is very common in Western society to experience feelings of performance pressure. Young people especially suffer from mental health problems, due to high expectations within the educational system (Jacobsen & Nørup, 2020). It has been shown that a prominent focus on performance and grades in schools can have negative effects on students' general well-being and socio-emotional development. However, when parents are asked what they find most important in their child's education, it is often their well-being (Ruit, 2021). Hence, it would be admirable to shift from an achievement-based scholar system, to a more person-based one. One way to achieve this is by letting teachers take on a coaching role in their education.

Positive effects of coaching in general and in education specifically are well known (Reddy, 2023; Ruit, 2021; Seraj & Leggett, 2023; Theeboom et al., 2013), but there are still more variables and coaching techniques to explore. Research has shown that coaching can be an effective way to reach several beneficial outcomes in different domains, such as implementing skills and student behaviour (Reddy, 2023) or coping and self-regulation (Theeboom et al., 2013). With the emergence of positive psychology, there has also been an increasing popularity in using Positive Education to develop character strengths in school students (Schiavon et al., 2020; Shoshani & Slone, 2017). One way to do so, is by focusing on students' core qualities to improve their personal growth (Korthagen, 2014; Korthagen & Nuijten, 2021). Coaching based on positive psychology and highlighting core qualities has in fact shown to be successful, increasing multiple skills such as creativity and openness (Korthagen, 2014; Ruit et al., 2019; Ruit et al., 2021; Smith et al., 2023). However, there is still a lack of research into its effects on certain aspects, such as students' general self-concept

(Ruit, 2021; Ruit et al., 2021) and happiness (Ruit et al., 2019), along with the influence of other variables, such as gender (Ruit, 2021; Shoshani & Slone, 2017).

In this research, an intervention is investigated in which primary school teachers incorporate coaching strategies in their education, by actively focusing on and stimulating their students' core qualities. This paper focuses specifically on how the students' happiness and self-concept is affected. It also investigates whether the gender of primary school children plays a moderating role in these effects. In other words, this thesis aims to give a more in-depth insight on specific advantages of coaching primary school students in core qualities and a broader overview of what could influence these advantages.

Literature Review

Positive Education and the Use of Coaching in Core Qualities

In the past decennia, it has become increasingly important to focus on people's subjective well-being, alongside their objective achievements. One movement in psychology that is mostly based on this focus is positive psychology, which aims to develop different areas of general well-being, such as gratitude, optimism, self-confidence, hope, compassion, self-respect, and life satisfaction (Ackerman, 2018). It has been shown to increase such positive mental health factors, but also decrease negative issues like anxiety and depression (Smith et al., 2023). When integrating this area of psychology into the classroom, Positive Education emerges. In this form of education, not only academic skills are promoted, but also skills that increase positive emotions and behaviour, general happiness, and the development of well-being (Seligman et al., 2009). Positive Education has proven to be successful for subjective well-being and positive learning behaviours among both older and younger children in a preschool environment (Shoshani & Slone, 2017).

A meta-analysis by Schiavon et al. (2020) has shown that within Positive Education, stimulating the development of character strengths is specifically important. One way to

achieve this, is by finding and focusing on people's core qualities, which are personal characteristics that can be expressed in their feelings, thinking and behaviour (e.g., decisiveness, openness, flexibility, courage, etc.) (Ruit et al., 2021). A useful method to discover and exploit core qualities, is Core Reflection, in which there is a focus on strengths instead of weaknesses and problems. It has been shown that focusing on successes increases creativity, motivation, and openness, whereas focusing on failures causes these factors to decrease (Korthagen, 2014). In practice, a person first identifies their core qualities, followed by any and inner obstacles that lead to them not using these core qualities to their full potential. Core Reflection provides methods to limit these obstacles by accepting them, but not giving into them (Korthagen & Nuijten, 2021).

Implementing Core Reflection into the educational system can be done by coaching both teachers and students. Teachers can be coached in becoming more aware of their own core qualities and how they can use these qualities in their teaching. Thereafter, they can be coached in how to coach their students in discovering and using their core qualities in school (Korthagen, 2014). From an organizational perspective, coaching has proven to have many beneficial outcomes on wellbeing, coping, work attitudes, performance/skills, and goal-directed self-regulation (Theeboom et al., 2013). In the educational context, coaching has also given promising results, such as the development of resilience and self-confidence (Seraj & Leggett, 2023). Thus, the integration of positive psychology into school systems through Positive Education, focusing on core qualities through Core Reflection, gives a promising base for an educational coaching intervention.

The Effectiveness of Core Quality Coaching on Students' Happiness

As stated before, there has been some evidence of the effectiveness of Positive Education on happiness (Ruit et al., 2019). The term happiness can be interpreted in three different realms, according to positive psychological theories. The best fitting realm for this

research is meaning or purpose, in which it is fundamental to know what your greatest strengths are to be able to use them for the greater good and feel like you generally belong (Seligman et al., 2009). The second realm is positive emotion: the literal feelings of love, pleasure, and joy, whereas the third realm is a person's engagement/state of flow, in which a loss of self-consciousness and losing track of time are central aspects (Seligman et al., 2009). These last two realms are more in-the-moment, which makes them less relevant for this research, in which we focus on a more general state of happiness.

It has already been established that coaching can have beneficial outcomes for general well-being (Theeboom et al., 2013), and Positive Education has the same effect (Shoshami & Slone, 2017). Research has also shown the positive effect of several types of coaching on happiness (Reddy, 2023; Smith et al., 2023). Yet, research in which we get indications of a direct effect of Core Quality Coaching (CQC) on happiness, is scarcer. A study by Ruit et al. (2019) however, has discovered that making primary school students aware of their core qualities and supporting them in using these, shows an increase in their happiness. Although further confirmatory research is desirable, this gives us an indication of the expected positive relation between CQC and happiness.

Hypothesis 1. As the teachers take a coaching role in primary education, based on promoting the students' core qualities, the students' happiness will increase.

The Effectiveness of Core Quality Coaching on Students' Self-Concept

The term self-concept can be interpreted as a person's own image and description of themselves in terms of identity, qualities, and typical behaviours. It is a broad term which can contain several different dimensions, such as physical appearance and -abilities, parent and peer relations and school (Ruit et al., 2021). In this thesis we focus on general self-concept, which includes feeling worthy, satisfied with the self, useful, proud, valuable, and positive

about the self (Ruit et al., 2021). Self-concept gives people the possibility to evaluate themselves, which affects one's self-esteem (Ruit et al., 2021).

Prior research by Ruit et al. (2021) examined the effects of Core Quality Coaching on primary school students' general self-concept and numerous domains within it. The study showed no effect on general self-concept, but they did find positive effects on various domains of self-concept (peer relations, general school, and mathematics) (Ruit et al., 2021). Furthermore, CQC and Positive Education have had multiple other beneficial effects concerning mental health (Smith et al., 2023), as highlighted before. The fact that an effect has not yet been found of CQC on general self-concept, makes it an interesting variable to investigate further in this research. The studies showing a positive correlation between CQC and different domains of self-concept (Ruit et al., 2021), as well as other mental health benefits (Smith et al., 2023), gives an indication that this type of coaching will also positively affect student's general self-concept in this intervention.

Hypothesis 2. As the teacher takes a coaching role in primary education, based on promoting the students' core qualities, the students' self-concept will improve.

The Moderating Role of Gender

Even though there have been several studies about the effects of Core Quality Coaching in primary education, there is barely any research showing whether gender influences these effects in any way. However, there has been research in different areas, in which gender shows a moderating role. Froh et al. (2009) show that boys derive more social benefit from gratitude than girls in different areas of subjective well-being. This result suggests that gender can take a moderating role. Additionally, Shoshani & Slone (2017) discovered gender baseline differences in personality traits in their research on Positive Education for young children. They found more behavioural problems and less emotions, both positive and negative, in boys than in girls. It could be argued that such contrasts in

personality could influence the effects of interventions. Girls might be more emotionally affected by coaching interventions, as they experience more emotions than boys. Ruit (2021) did research on the influence of gender on the effect between CQC and different domains of self-concept. The results showed that, while dependent on the domain, gender did influence some effects. Boys showed stronger growth in arithmetic/mathematics, while girls showed stronger growth in physical abilities when receiving CQC. These results give a direct indication that gender can influence the effects of CQC.

Although none of the named research implies which gender would have a bigger influence on which effect, it does imply that gender can have a moderating role (even in Core Quality Coaching). It also indicates that with gender, there can be differences in personality traits, which might in turn influence intervention or coaching effects. Based on the research of Shoshani & Slone (2017), in which girls scored higher on emotion domains than boys, it is possible that CQC might affect girls more emotionally. Since part of happiness is positive emotion (Seligman et al., 2009), it is expected girls will score higher on happiness after the intervention than boys. Self-concept can also include negative or positive feelings about the self (Ruit et al., 2021), which most of the time goes together with negative or positive emotions. Therefore, it is also expected that girls' self-concept will be more influenced by the intervention than boys' self-concept.

Hypothesis 3. The positive effect of Core Quality Coaching on the students' happiness, as provided by the teacher in primary education, will be larger for girls than for boys.

Hypothesis 4. The positive effect of Core Quality Coaching on the students' self-concept, as provided by the teacher in primary education, will be larger for girls than for boys.

Overview of the Studies

Teachers and students from 11 different Dutch primary schools have been working with an innovation, in which the teachers have taken on a more coaching-oriented role in their education. In this coaching innovation, the focus has been the exploration of student's core qualities. The innovation is about teaching students to experience their own qualities, talents, and interests, developing them, and consciously steering the development of them (Korthagen et al., 2021). The current research is interested in observing whether this innovation has the expected effects. For this, both students and teachers have taken a pre- and post innovation measure by filling in a questionnaire, in which they answered questions about different domains. This thesis focuses specifically on the effects of coaching on students, within the domains of happiness, self-concept, and gender.

Method

Participants

In this research there were two groups (teachers and students) for both the pre- and post-measure, so four samples in total. They were investigated independently from each other. In this thesis, we focus on the student sample only. The student group of the pre-measure includes 425 primary students in the highest grades (group 6-8 in the Dutch system) and were recruited via their teachers to take part in the questionnaire. After deleting 25 datasets that were not completed and 10 datasets for other reasons (see Table A1, Appendix A), there were 390 participants taken into this research. The age of the children ranges from 8 to 13 ($M = 10.460$; $SD = .970$), with a gender distribution of 45.4% girls, 49.5% boys and 5.1% who chose another option.

The post-measure group includes 257 primary students in the highest grades. After deleting two datasets that were not completely filled in and 11 datasets for other reasons (see Table A2, Appendix A), there were 244 participants taken into this research. The age of the

children ranges from 8 to 13 ($M = 10.64$; $SD = 1.157$), with a gender distribution of 43.4% girls, 51.6% boys and 5.0% who chose another option. The attrition-rate is 46.40%.

Procedure

The participants were recruited through the school directors, who shared the study information with the teachers, the students, and the parents of the students. The first participants were recruited for the pre-measure, which took place in January 2022, before the start of this specific bachelor thesis research. In February 2022, the implementation of the innovation started. Recruitment for the post-measure was done in the same way, but was an independent process, meaning while there was overlap in the samples, they were not entirely the same.

For this research, everyone was provided a document with additional information regarding the procedure. Thereafter, we sent the online questionnaires to the school director who distributed them to the teachers and students. When opening the questionnaire, participants were asked if they consented to participating in this research and their data being used for research purposes. Following this, the participants were able to fill in the online questionnaire. The teachers and students received a different questionnaire, focusing on similar elements, but adapted to their role and age. Both teacher groups received the same survey, once as a pre-measure before the implementation of the innovation, the second time after the implementation. The same set-up was used for the surveys for the student groups. The length of the questionnaires was approximately 20 minutes and could be completed at school by the children. The questionnaires and all communication regarding the study was in Dutch. The student questionnaire measured four dependent variables, namely personal development possibilities as provided by the teacher, basic psychological needs, happiness, and general self description. Next to this, we also collected demographic data on students: gender, age, school name, class name, and combination group. We also assessed whether

children sometimes worked on tasks together with older or younger students in their combination group and if so, how often. Students completed the same questions about personal development possibilities as provided by the teachers up to three times. Firstly, about their teacher present on the day of the assessment, then, if applicable, about their other teacher absent that day, and lastly, if applicable, about their teaching assistant.

The participants did not receive any compensation for their participation. Data was modified so that no participant can be privately identified. This research plan was approved by the Ethics Committee of Psychology at the University of Groningen.

Measures

Student Variables

Happiness. Students' overall happiness was measured using a 4-item scale which was based on Lyubomirsky and Lepper (1999) and adapted to be used with children. A sample item of this scale is "When I compare myself to fellow students, I find myself: less happy happier". The items were answered by asking students to position an item on a slider bar. This bar consisted of a 7-number scale (1-2-3-4-5-6-7). See Appendix B for all items. The reliability of this item was questionable in the pre-measure ($\alpha = .630$), and low in the post-measure ($\alpha = .418$). A possible explanation for these low reliability scores is explained in the discussion.

General Self-Concept. The assessment of students' general self-concept was based on the Self Description Questionnaire (SDQ II) of Marsh (1992). This part of the questionnaire consisted of seven items in total, of which three items were reversed. A sample item for a non-reversed positive self-description measure is "I am satisfied with myself". A sample item for the reversed scale would be "Sometimes I think I am not good at all." Answers were rated on a 5-point Likert scale (1 = *does not fit at all*, 5 = *fits very well*). See Appendix C for all

items. The reliability of this item was high in both the pre-measure ($\alpha = .807$) and post-measure ($\alpha = .777$).

Results

Assumptions

For running the analyses, SPSS version 28 was used. Initially, a linear regression analysis would have been conducted to test the within-subject effects of the innovation on the dependent variables (self-concept and happiness). However, for participants who took part in both measures, no anonymous personal ID was issued, with which their pre- and post-measure could be connected. Thus, the pre- and post-measures were approached as two separate groups in the new analysis. To test whether there was a significant difference between the mean scores of the pre-measure and the post-measure, a two-way ANOVA was conducted for both dependent variables (Self-Concept and Happiness) separately. The test was also used to test the moderating effect of gender. Before running the analysis, it was checked whether the assumptions for a two-way ANOVA were fulfilled. According to their Q-Q plots, all variables were normally distributed, meaning that the assumption of normality was fulfilled. Levene's test of equality of error variances was also carried out, resulting in no significant population variance, meaning that the assumption of homogeneity was also fulfilled. Lastly, the assumption of independence has been violated, as the observations in each group are not independent of one another. About 54% of the classes in the post-measure also participated in the pre-measure. The exact number of duplicate participants is not traceable, due to the lack of anonymous personal IDs. The observations within the groups were also not obtained by a random sample. Despite not fulfilling all assumptions, the data analysis will still proceed as planned for the context of this Bachelor thesis. However, this violation must be considered when interpreting the results.

Outliers and Excluded Data

The dataset has been checked for outliers, by creating a boxplot for the pre- and post-measure happiness and general self-concept variables. For the pre-measure of happiness seven outliers were found, and for the post-measure two were found. None of these outliers seemed to indicate false or unreliable data, so they were all kept in the analysis. For the pre-measure of general self-concept one outlier was found, and for the post-measure two were found. These outliers were also kept for the same reason. Participants that were excluded from the dataset for other reasons than being an outlier, can be found in Appendix A.

Preliminary Analysis

Correlations between the study variables are presented in Appendix D. Notable was the significant negative correlation between gender and general self-concept in the pre-measure (see Table D1). Further analysis indicates that this correlation stems from a lower reported self-concept from children who identified as other than male or female ($M = 3.571$, $SD = 1.025$) or didn't want to specify their gender ($M = 3.271$, $SD = .326$), compared to identified males ($M = 3.875$, $SD = .707$) and females ($M = 3.766$, $SD = .672$). Additionally, there were significant positive correlations found in the pre-measure (see Table D1) and post-measure (see Table D2) for happiness and general self-concept. This indicates that higher happiness is connected to higher self-concept and lower happiness is connected to lower self-concept. It is expected that both variables could influence each other, or other variables (e.g., general well-being) could influence them both in the same direction. Thus, these correlations are no surprise.

Hypothesis Testing

To test the hypotheses that Core Quality Coaching by teachers in primary education will increase students' happiness and whether this effect is larger for girls than for boys, a two-way ANOVA was run. The data of the pre- and post-measures for happiness were combined to create the variable happiness. The variable coaching was created, by coding the

participants on whether they received coaching or not (1 = coaching, 0 = no coaching). Happiness was used as the dependent variable and coaching and gender as independent variables. The results of the analysis are presented in Table E1 in Appendix E.

In contrast to the expectations, the test showed no significant main effect of coaching on happiness, nor a significant interaction effect of coaching and gender on happiness. Even the direction of the main result was unexpected, as the happiness score in the pre-measure was slightly higher than the post-measure, although the difference is very small. Female participants did not show a markedly greater difference in happiness between the pre-measure and post-measure, compared to male participants between pre-measure and post-measure. Therefore, the hypotheses that Core Quality Coaching by teachers in primary education will increase students' happiness and that this effect is larger for girls than for boys, were not supported by these outcomes.

The same analysis was used to test the hypotheses that Core Quality Coaching by teachers in primary education will improve students' self-concept and whether this effect is larger for girls than for boys. The variable self-concept was created by combining the data of the pre- and post-measures of self-concept. The results of the analysis are presented in Table E2 in Appendix E.

Unexpectedly, no significant results were found again for both the main effect of coaching on self-concept and the interaction effect of coaching and gender on self-concept. For self-concept, the direction of the change was also surprising, as the participants scored slightly higher on the pre-measure than the post-measure, although the difference is very small. Like the happiness variable, females showed only slightly more difference between pre-measure and post-measure than males between pre-measure post-measure. Therefore, the hypotheses that Core Quality Coaching by teachers in primary education will increase

students' self-concept and that this effect is larger for girls than for boys, were also not supported by these outcomes.

Thus, no evidence was found for positive effects of this specific innovation on students' happiness and self-concept, nor on the moderating effect of gender. All outcomes were almost the same, with no significant differences found.

Discussion

In this study, potential effects of a coaching intervention in primary school, in which teachers actively supported their students to discover and use their core qualities, were investigated. Unexpectedly, considering the existing literature (Reddy, 2023; Ruit et al., 2019; Ruit et al., 2021; Shoshani & Slone, 2017; Smith et al., 2023), no significant growth was found for the students' happiness or self-concept, comparing data from before and after the start of the innovation. Even the direction of the effects was contrary to the hypotheses. These effects were surprising, as prior research had already shown beneficial outcomes of Positive Education on general well-being (Shoshani & Slone, 2017), as well as positive effects of several types of coaching on happiness (Reddy, 2023; Ruit et al., 2019; Smith et al., 2023). Research by Ruit et al. (2021) and Smith et al. (2023) had shown positive effects of Core Quality Coaching on different domains of mental health and self-concept, which gave indications that the innovation would also benefit general self-concept. There was, however, a strong positive correlation found between happiness and self-concept in both pre- and post-measure, indicating that these variables somehow influence each other. This is no surprise, as previous research has shown that happiness and self-esteem strongly correlate, as self-esteem can be seen as an antecedent of happiness (Moza et al., 2019).

Unexpectedly, there was also no moderating effect found in the students' gender, as girls did not benefit more (or less) from the innovation than boys. This was unanticipated, as

research by Shoshani & Slone (2017) discovered that girls generally experience more positive and negative emotions than boys, which could have suggested that they would be more emotionally affected by this innovation. Research by Ruit (2021) showed that gender can play a moderating role in the effects of Core Quality Coaching, which also could have given an indication for a moderating role in this research. Notable however, is the high correlation found between gender and general self-concept in the pre-measure. Further analysis showed that children who identified as other than male or female, or did not want to address their gender, scored significantly lower on self-concept. This could be explained by the fact that children experiencing feelings of gender dysphoria might feel less socially accepted compared to their normative peers, which could lead to a decrease in confidence and self-esteem (Alberse et al., 2019). Their self-esteem might also be negatively affected by their body's sex characteristics not being congruent with their gender identity (Alberse et al., 2019).

Contextual Factors

One possible reason for the unexpected results, could be that the innovation was not successful due to insufficient execution. The coaching aspect is subjective and can be done differently depending on the school, the director, the teachers, and their motivation. According to feedback from several teachers about the innovation, some schools had, in their opinion, other more important learning goals to fulfil that required their attention. Other teachers stated that they were not trained and evaluated enough during the innovation. In future research, the implementation of the innovation could be better monitored to prevent the inadequacy of the execution. Another negative influence on the results could be that the innovation has only been taking place for a year, which might be too short of a time to see results. It could also be that the execution of the innovation did not go smoothly or was inconsistent, depending on the teaching experience of the teachers. Besides that, some schools had inspections during the innovation, which might have increased their work pressure and

affected their way of coaching. Lastly, the lack of growth in happiness and self-concept comparing the pre- and post-measure, could partially be explained by the fact that the participants already scored high on the pre-measure. It is difficult to increase scores that are high to begin with.

Implications

Although no significant effects of the innovation were found, other previous research has shown positive effects (Reddy, 2023; Ruit et al., 2019; Ruit et al., 2021; Shoshami & Slone, 2017; Smith et al., 2023). That is why we believe that the findings from this research could be beneficial to principals, teachers, and students in primary schools, who could experiment with implementing this type of innovation in their education. Core Quality Coaching could be a useful tool to shift from an achievement-based approach to an approach that values personal, socio-emotional development more. This, in turn, could result in the improved well-being of students in different dimensions, which may for example improve their motivation to continue school and work harder. Like this, both personal development and level of achievement may be improved.

The innovation could be implemented in other schools, so that more students can benefit from it. Besides that, the innovation could be better monitored by mentors who train the teachers in their coaching, motivating them to prioritize the coaching way of teaching. This would also improve the quality and consistency of the coaching provided by the teacher. If successful, the innovation could eventually be adjusted to also being implemented in high schools or other institutional/educational programs.

Limitations and Strengths

Regarding the design of this study, one strength can be found in the fact that it is longitudinal. Because the time span of the study was over a year, the results can be generalized over a longer period. It could have been stronger however, if there were more

intermediate assessment points, instead of just a single pre- and post-measure. This way, there would have been information about the changes in between, which would make the study more reliable. Future research could experiment with several intermediate assessment points. The design would also have been stronger if the participants were given anonymous personal IDs with which their questionnaire responses could be linked to one another. This turned out to be a significant limitation, as ultimately it was not possible to use the within-subjects design that we planned for. Comparing the two groups from before and after the innovation as a control and experimental group, gives us some indication of the effects, but no evidence for effects on an individual level. This makes the results less reliable. Using anonymous personal IDs would be integral to strengthening the design of future research. Besides that, other potential mediators, or moderators than the investigated variables (e.g., socio-economic status, country, province) were not accounted for in this research. Thus, there could be other factors influencing the variables or the effects of the variables on each other, which could be investigated in future research.

Regarding the method, limitations can be found in the fact that the survey was online. For one, it decreases the amount of control and insight into the seriousness and willingness of the participants, which could have negatively affected the reliability of their answers. Concentration levels also play a part in this, especially for children, as lack of attention/engagement may have resulted in inaccurate answers. Secondly, the surveys were subjective self-report, allowing participants unrestricted freedom to provide responses of their choice. They could have also been influenced by a social desirability bias, by which they could over-report in socially desirable attitudes or behaviours. This may have been the case for students who were afraid their data would not be anonymously processed. Besides, since some of the questions concerned mental health, students may have scored themselves higher because they want their happiness and self-concept to be higher. Furthermore, as mentioned in

the method section, the happiness scales scored low on reliability. A possible explanation for this, is that because of a technical issue, some numbers (1-7) were shown double. This may have influenced the way the participants interpreted the values, which could have influenced their answers. Lastly, there are limitations in generalizability, in terms of age, country and province. All data collection has been carried out with children from ages 9-12 in Dutch primary schools in one province. Additional research could explore the same innovation, but in other age groups, provinces, and countries. However, there is variability in different school streams between the schools participating in the current research, such as special- and public education, early foreign language education and gifted education, which does improve generalizability. Also, the sample sizes were large and relevant to what was investigated, namely the effects of the innovation on students.

Future Research

Besides the suggestions for additional research as mentioned above, there could be follow-up research in which the same groups or schools are followed in their development of the innovation for several years, or it could be implemented in higher education. Additionally, more investigation could be done on how teacher and student results influence each other. For example, personal development by a teacher could be seen by the students, and rub off on their development as well, or the other way around. Furthermore, some variables could be deepened. Prior research on the effects of Core Quality Coaching on general self-concept (Ruit, 2021; Ruit et al., 2021) and the moderating effects of gender (Ruit, 2021; Shoshani & Slone, 2017) are scarce. However, research by Ruit et al. (2021) did show positive effects of Core Quality Coaching on various domains of self-concept and gave indications of gender as a moderator. Based on these results, a positive effect of the innovation on self-concept and gender as a moderator are still expected, and other research could be done to investigate whether these effects can be found in different settings.

Conclusion

In conclusion, this research investigated the effects of a more person-based form of education. This is an important theme, as a large part of Dutch education is focused on objective achievements, instead of subjective development and well-being. However, the results of this study on a coaching intervention in primary schools did not demonstrate significant improvements in students' happiness and self-concept, nor a significant moderating effect of students' gender. The findings were contrary to expectations and previous research in the field. The lack of significant effects raises questions about the effectiveness and implementation of the coaching intervention. These results highlight the needs for educators and policymakers to carefully consider and monitor programs in schools, as the quality of implementation of the coaching intervention was likely a reason for insignificant results. Other limitations, including the violation of the assumption of independence and the lack of anonymous IDs to individually match the pre- and post-measures, could have also contributed to the lack of expected results. This study shows that implementing coaching interventions in educational settings can be complex, and future research should carefully construct their design and monitor the implementations. However, previous research has given enough evidence to support Core Quality Coaching innovations and their effectiveness, that it remains an important and interesting topic to be investigated further.

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Appendix A

Participants Excluded from Data Analysis

Table 1

Excluded Participants from Pre-measure

Reason for exclusion	<i>n</i>	Response IDs ^a
Questionnaire not completed	25	R_3oC0H7qXIyNF0rc R_2sYbS07kTkRphmK R_wTUSFyuYkc6zApb R_1faac5v6HtQc5p0 R_2dgX6dPiQsuMZho R_9WCqewSop16PZrb R_31HMfuqhGEQE9nP R_2WT5qWzGiSUIVdn R_1EWEFskvPSpMFNW R_1K7JaUDu8yrfZ6B R_1oBclK1wbzjitHY R_2tLRKqZrYgwhApx R_br1q0pfZJHCkKU9 R_1j9BQbGF1YAG4hn R_3Cp1kczbczRAbJf R_262vPCqmuRnC5By R_2D85uMNVyQkbLhH R_3ey6V6uOULPtJk R_2wjkjtFRRshrnnE R_3hrqed85LKFcsGx R_BSywh7WzX0IJ3ID R_3RwnehCQdUNRNTq

		R_3RrLHMb0Z9DTVne
		R_24y77LiJIKn9iWR
		R_3hAR3fzEkz6uBPk
Filled in unserious answers on specifying their gender	4	R_3e8KK1LYqNc6WM5
		R_2tsSvTGQ4ODAAzW
		R_00uKRn6GR9uanXr
		R_3NBYBHfaJIYGohC
Filled in only minimum or maximum answer option	2	R_OBSkCu5O4vKy9Xj
		R_STva9y8hHw3Lwgp
Extremely long duration of questionnaire	4	R_2uR6jh4LZM2y0zq
		R_2q4akoCGzSlwDVm
		R_2rUsisHrPyT5WtX
		R_3gXYS3DHHu6E563
Total	25	

^a The Response IDs were automatically, randomly made and given to each participant by Qualtrics. They were not used in the data analysis, but they are used here to identify the excluded participants.

Table 2*Excluded Participants from Post-measure*

Reason for exclusion	<i>n</i>	Response IDs ^a
Questionnaire not completed	2	R_3nCb8Sp6gJ6Wicj R_1Ca1uv6UEsDzw4
Filled in unserious answers on specifying their gender	3	R_3fPfHweFYkRYcX7 R_3rTgbdQYfPfyQxS R_rrOOVmBKK4o9EaZ
Filled in unserious answers on their age	2	R_u30gRQetKdZfhv3 R_12mQSWkylCjEzPn
Filled in only minimum or maximum answer option	1	R_2B4HqKIT8PwYAjb
Extremely long duration of questionnaire	5	R_1Ca1uv6UEsDzw44 R_1PTqSkfMK1Z3hBH R_2R4COLjSVdVhGrU R_24uOU34TPH9dbFy R_3lWhvEaE2P2qX3K
Total	13	

^a The Response IDs were automatically, randomly made and given to each participant by Qualtrics. They were not used in the data analysis, but they are used here to identify the excluded participants.

Appendix B

Items Happiness Variable

1. Usually I am:

Unhappy ... Happy

Slider: 1-2-3-4-5-6-7

2. When I compare myself to fellow students, I find myself:

Less happy ... Happier

Slider: 1-2-3-4-5-6-7

3. Some people are happy most of the time. They enjoy life no matter what, and they make the most of everything. How strongly does this description fit you?

Does not fit at all ... Fits very strong

Slider: 1-2-3-4-5-6-7

4. Some people are usually not so happy. To what extent does this description fit you?

Does not fit at all ... Fits very strong

Slider: 1-2-3-4-5-6-7

Appendix C

Items Self-Concept Variable

1. I am satisfied with myself

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

2. Sometimes I think I am no good at all

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

3. I can do things as well as most other children

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

4. I feel useless at times

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

5. I don't have much to be proud of

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

6. I feel that I am at least as valuable as others

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

7. I think positively about myself

1 – Does not fit at all

2 – Somewhat fits

3 – Sometimes, sometimes not

4 – Often fits

5 – Fits very well

Appendix D

Correlations

Table 1

Correlations Pre-measure

Variable	1	2	3	4
1. Pre-measure happiness	-			
2. Pre-measure self-concept	.592**	-		
3. Gender ^a	-.028	-.146**	-	
4. Age	.008	-.045	-.016	-

^a 1 = boy, 2 = girl, 3 = different and 4 = rather not say

** $p < .01$

Table 2

Correlations Post-measure

Variable	1	2	3	4
1. Post-measure happiness	-			
2. Post-measure self-concept	.531**	-		
3. Gender ^a	.061	-.041**	-	
4. Age	-.022	-.090	-.016	-

^a 1 = boy, 2 = girl, 3 = different and 4 = rather not say

** $p < .01$

Appendix E

Descriptives and Analyses

Table 1

Means, Standard Deviations, and Two-Way Analyses of Variance in Happiness

Measure	Pre-measure		Post-measure		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Coaching	5.467	.954	5.377	.839	.659	.417
Coaching*Gender	-	-	-	-	.823	.482
Boys	5.442	.959	5.327	.847	-	-
Girls	5.532	.945	5.421	.832	-	-

Table 2

Means, Standard Deviations, and Two-Way Analyses of Variance in Self-Concept

Measure	Pre-measure		Post-measure		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Coaching	3.804	.697	3.765	.671	.354	.552
Coaching*Gender	-	-	-	-	.834	.476
Boys	3.875	.707	3.788	.623	-	-
Girls	3.767	.672	3.751	.691	-	-