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Title	Strategies and methods for teaching values transference from physical education to the classroom and home: A case study
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Strategies and Methods for Teaching Values Transference from Physical Education to the  
Classroom and Home: A Case Study

9

**Abstract**

10 Many studies in recent years have shown the effectiveness of Physical Education and Sports  
11 (PES) as a vehicle for teaching values and personal development among youth. However,  
12 despite research showing values transference is crucial for optimal learning, a gap in the  
13 literature remains regarding the strategies and methods underlying how values can be  
14 transferred beyond the PES context. The purpose of the present study was to identify the  
15 strategies and methods that facilitate the transfer of values learned in PE to the classroom and  
16 home settings. A preliminary needs assessment was conducted with two PE teachers and one  
17 youth sport coach who had received PES values-based training. Results of this preliminary  
18 study led to the development of a five-week intervention programme that was used to address  
19 the purpose of the present study. In particular, two PE teachers, two Character and  
20 Citizenship Education (CCE) teachers, and two parents were required to simultaneously teach  
21 and transfer values to their students/children. Individual semi-structured interviews were  
22 conducted with the six aforementioned participants and two of their students/children. Results  
23 suggested the collaborative work between PE teachers, CCE teachers and parents was an  
24 important strategy in teaching and transferring values beyond PE. Results are discussed in  
25 light of the values and life skills literature. Practical implications are addressed to enhance the  
26 learning and transfer of values in PE to the classroom and home settings.

27

*Keywords:* values, physical education, transference strategy, training programme

28 **Strategies and Methods for Teaching Values Transference from Physical Education to**  
29 **the Classroom and Home: A Case Study**

30 Physical Education and Sports (PES) provides students and athletes with opportunities  
31 for social and moral development (Aksoy & Gürsel, 2017). PES is defined as ‘structured,  
32 supervised physical activities that take place at school and during the school day’ (Bailey  
33 2006, p. 398). Empirical evidence suggests the positive impact of PES stems from approaches  
34 employed by PE teachers and sport coaches that explicitly address opportunities for  
35 development among their students and athletes (Authors, 2016; Pierce et al., 2017). The  
36 emergence of studies highlighting the advantages of PES for teaching life skills and values  
37 has led to the creation of several programmes designed to develop students and athletes  
38 holistically (Authors, 2016; Balderson & Martin, 2011). Researchers on life skill promotion  
39 have shown that youth must internalise and transfer life skills to other domains in order to  
40 gain maximum benefits from their learning process (Pierce et al., 2017). In turn, studies  
41 examining values promotion have indicated that the regularity teachers, coaches, and parents  
42 reinforce values are among the factors that impact a learner’s ability to internalise and apply  
43 such values (Bailey, 2006; Pierce et al., 2018). Although the concept of life skill and values  
44 have been used interchangeably in the literature in youth development, these concepts are  
45 different and greater clarity is needed for advancement of research in this area.

46 Life skills are described as “internal personal assets, characteristics, and skills ... that  
47 can be facilitated or developed in sport and are transferred for use in non-sport settings”  
48 (Gould & Carson 2008, p. 287). Important life skills include goal setting, time and stress  
49 management, emotional regulation, teamwork, and moral development (Gould et al., 2009).  
50 A key aspect in the definition of life skills in relation to sport-based programmes is the notion  
51 of transfer to domains beyond sport. More specifically, Pierce et al. (2017) defined transfer as  
52 an ongoing process in which an individual internalises life skills in sport and apply them to

53 other life domain, which in turn provokes personal changes. This has become a central  
54 component of life skill promotion of recent publications in the field.

55 In an effort to investigate the strategies and methods<sup>1</sup> that facilitate the transfer of life  
56 skills beyond sport, Turnnidge et al. (2014) argued that PES educators may utilise either  
57 explicit or implicit approaches. The explicit approach entails a deliberate effort by coaches to  
58 teach life skills and their transfer to youth. Teachers and coaches who use this approach  
59 intentionally provide instructions about life skills that youth participants can learn through  
60 PES, help them recognise how they can be applied in other settings, and provide them with  
61 strategies to practice their skills in a variety of contexts (Authors, 2017b; Camiré et al., 2009;  
62 Petitpas et al., 2005). In turn, the implicit approach entails a non-deliberate focus on teaching  
63 life skills and their transfer. Still, this approach suggests life skills can be learnt and  
64 transferred in contexts focusing on sport-skill development. It is important to highlight that  
65 implicit transfer is not considered as an automatic part of PES participation, certain  
66 conditions must be present within the context (e.g., committed teachers, supportive  
67 environment, positive interactions with peers) in order for youth participants to learn and  
68 transfer values and life skills (Turnnidge et al., 2014).

69 Inspired by the notion of implicit and explicit approaches, Bean et al. (2018) proposed  
70 a model that went beyond the implicit/explicit dichotomy, suggesting a six-level continuum  
71 describing multiple levels of coaches' engagement. In particular, the six levels were: (a)  
72 structuring the sport context – deliberately design lessons that enable learners to feel  
73 physically and psychologically safe enough to take risks and make mistakes; (b) facilitating a  
74 positive climate – model good behaviours and create a positive climate for learning; (c)  
75 discussing life skills – define and discuss life skills within sports context to ensure learners

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<sup>1</sup> In the context of the present study, the terms *strategy and methods* refer to *pedagogical techniques* that teachers and parents have adopted to transfer values (Bean et al., 2018; Turnnidge et al., 2014).

76 understood the life skills; (d) practicing life skills – create opportunities within sports context  
77 for learners to apply and reflect on the life skills that they have just learnt; (e) discussing  
78 transfer – set aside time during lesson to discuss the transfer of life skills to various contexts  
79 in daily life to help learners see the applicability of the life skills outside of sports; and (f)  
80 practicing transfer – work closely with the learners, their parents, subject teachers, and  
81 community members to enable them to practice the life skills beyond sports context. In  
82 addition, other researchers have suggested that transferability is continuously influenced by  
83 multiple ecological systems within an individual’s socio-cultural environment (Pierce et al.,  
84 2018). As students spend majority of their time in school and at home, the effectiveness of  
85 PES programmes is largely determined by the interaction and support received in these  
86 contexts, which may include, among other, teachers, coaches, and parents who play a crucial  
87 role in the process of learning and transferring life skills (Authors, 2016; Bailey, 2006;  
88 Camiré et al., 2012).

89         Albeit similar, values differ from life skills in that they are fundamental beliefs that  
90 guide or motivate attitudes or actions and enable an individual to function as a competent and  
91 moral agent (Schwartz, 1992). In his seminal work, Schwartz (1992) described 10 basic  
92 values: self-direction, stimulation, hedonism, achievement, power, security, conformity,  
93 tradition, benevolence, and universalism. These values are comprehensively recognised  
94 across cultures encompassing values which individuals consider important (Schwartz, 1992).  
95 A commonly used framework built to teach values through PES is the Teaching Personal and  
96 Social Responsibility (TPSR: Hellison, 2011). This framework applies a holistic approach to  
97 teaching responsibility related to personal and social well-being and selected values-based  
98 goals. More recently, Gordon (2020) introduced an alternative TPSR model inspired by the  
99 notion that participation outside a TPSR-based programme’s context is crucial to measure the  
100 success of values learnt. It places *transfer of learning* at the core of the model that should be  
101 planned for and emphasised throughout the programme. In addition, values such as respect,

102 effort, self-direction, caring and leadership are also non-hierarchical (Gordon, 2020). Studies  
103 examining how TPSR-based programmes transferred values beyond PES have focused on  
104 organisational elements and programme characteristics describing that commitment and  
105 engagement, relationship building, and adaptability to the context allowed programme leaders  
106 to improve relationships and draw on local strengths and resources (Martinek & Hellison,  
107 2016; Martinek & Lee, 2012; Lee & Martinek, 2013).

108         Several studies have highlighted the importance of values transference beyond PES,  
109 and the role of parents and classroom teachers in reinforcing these values (Gordon, 2020;  
110 Authors, 2016; Authors, 2017a; Authors, 2017b). This is a common concept used by  
111 researchers in Asia, a culture that emphasises the development and transfer of values. Indeed,  
112 in Singapore, the Ministry of Education deemed values and social-emotional competencies  
113 (e.g., develop a sense of responsibility, care and concern for others, make responsible  
114 decisions and act for the good of self, others and the society) a priority in student's education.  
115 Social-emotional competencies are taught and learnt through within the broader context of  
116 values learning and application (MOE, 2014). In the opening address at the 2018 National  
117 Schools Games, the Minister highlighted PES must serve as a vehicle to facilitate students'  
118 learning of the values needed to succeed in adult life. The Ministry believed that school  
119 sports could build a nation by teaching values that define Singapore youth, developing a  
120 sense of belonging, and establishing strong ties across students of all races and social  
121 backgrounds (MOE, 2018). As such, applied research is warranted in this context to help  
122 teachers and coaches acquire the knowledge and tools necessary to effectively teach values  
123 (Authors, 2017a). Unfortunately, the majority of programmes that aim to teach values  
124 through sports were designed in Western countries and are not always successfully  
125 implemented to Asian contexts due to cultural differences in the way students learn and  
126 practice values, as well as what values are deemed important to them (Hoon, 2004; Joy &  
127 Kolb, 2009).

128           In order to meet this demand in Asian contexts, Authors (2016) designed and  
129 implemented a Values-based Training Programme (VTP) in Singapore that aimed to equip  
130 PES practitioners with the knowledge to plan and teach values systematically and explicitly.  
131 Results from their study revealed that students and athletes who participated in the VTP  
132 showed a deeper understanding of the values taught in the programme than those who did not  
133 participate. In a subsequent study, the same participants highlighted that the collaboration  
134 between teachers, coaches, and parents facilitated effective transfer of values (Authors,  
135 2017b). In addition, the study found that an open and effective communication system  
136 between these key stakeholders supported the values transference process and increased the  
137 likelihood that transfer occurred beyond PES contexts. Furthermore, recognising the need to  
138 engage classroom teachers and parents, Authors (2017a) investigated how PE teachers and  
139 coaches transferred values beyond PES. They designed three training workshops to equip  
140 practitioners with the skills required to teach and transfer values beyond PES. Results  
141 revealed the programme helped PES practitioners better understand the importance of  
142 actively reaching out to classroom teachers and parents getting them involved in the process  
143 of values development.

144           Despite the positive results, few studies have examined the strategies and methods of  
145 values transference. The work by Aksoy and Gürsel (2017) has shown that strategic planning  
146 plays an important role in helping organisations coordinate activities involving multiple  
147 people and groups for effective transfer of learning. Hence, the current study adopted  
148 strategic planning by engaging teachers, coaches, and parents in the design and  
149 implementation of an intervention programme to guide them in teaching and transferring  
150 values to students. Furthermore, a key component of the strategic planning process was to  
151 assess how values education was being taught in schools and communities at the time of the  
152 study, before designing and implementing a plan (Bryson, 2011). Taken together, the purpose

153 of this study was to identify the strategies and methods that facilitated the transfer of values  
154 learned in PE to the classroom and home setting.

155 To achieve this purpose, the current study conducted a preliminary needs assessment  
156 study followed by an intervention programme. The aim of the preliminary needs assessment  
157 study was to guide the development of the intervention programme. Hence, the preliminary  
158 study involved three PES practitioners who were previously participants of Authors' VTP  
159 (2017a). Based on the participants' experiences and needs from the preliminary study, an  
160 appropriate intervention programme was developed (cf. Balderson & Martin, 2011).

161 Following the preliminary study, the five-week intervention programme comprised two  
162 phases: training followed by the implementation phase. In the training phase, six participants  
163 (two PE teachers, two CCE teachers and two parents) attended a series of workshops to be  
164 equipped with the knowledge and techniques to teach their student/child values.

165 Subsequently, the second implementation phase required the six participants to apply their  
166 learning from the workshops to their child/student. Their experiences in the intervention  
167 programme were used to address the purpose of the study.

### 168 Preliminary Needs Assessment Study

#### 169 Methods

170 **Participants.** Two female PE teachers and one female sport coach between 31 and 53  
171 years old ( $M = 40$ ;  $SD = 11.5$ ) participated in the preliminary study. The PE teachers had  
172 more than 13 years of experience, and the coach had more than eight years of experience. In  
173 addition, one of the PE teachers was the Head of her school's PE Department. The credibility  
174 and experience of the participants helped to ensure that the intervention programme would be  
175 designed with the appropriate rigour that meets the expectations of the present study  
176 objectives.

177 **Procedures.** Approval was obtained from the first author's university ethics  
178 committee before data collection for this preliminary needs assessment study. Subsequently,

179 the first author approached five PE teachers and coaches who were involved in Authors'  
180 (2017a) study. Among them, three were available and willing to participate in this  
181 preliminary study. Consent was obtained from the participants who were guaranteed  
182 confidentiality and anonymity for their participation. They were also assured they could  
183 withdraw from the study at any time.

184 **Interviews.** Individual interviews were conducted with the participants to understand  
185 their experiences transferring values to their student-athletes during their participation in  
186 Authors' VTP (2017a). A semi-structured interview guide was developed consisting of open-  
187 ended questions addressing (a) effectiveness of intentional values transference during PES,  
188 (b) challenges faced while transferring values, and (c) recommendations to overcome the  
189 challenges identified (see Appendix A). All interviews were audio recorded, each lasting  
190 between 48 and 66 minutes.

191 **Data analysis.** The interviews were transcribed verbatim and analysed using Braun  
192 and Clarke's (2013) inductive thematic analysis procedures. The inductive analytical phase  
193 identified key features of data that were labelled using codes. Next, the authors interpreted  
194 the data combining the codes into themes. These themes were then reviewed, defined, and  
195 named. In particular, three themes were identified: (a) lack of engagement of CCE teachers  
196 and parents; and (b) additional workload and different beliefs; and (c) cross-departmental  
197 collaboration and synchronicity. Finally, these themes were used to frame the result section  
198 of this preliminary needs assessment study.

## 199 **Results**

200 **Lack of engagement of CCE teachers and parents.** Although, all three participants  
201 revealed their student-athletes exhibited the values learned during PES, not all believed the  
202 values learnt were transferred beyond the PES context. For example, one of the PE teachers  
203 noticed that despite learning *Respect* as a value in PES, students behaved otherwise in the  
204 classroom by "talking while their classmate was responding to questions posted by the CCE

205 teacher". The participants felt that classroom teachers' and parents' negative attitude and lack  
206 of availability hindered efforts to collaborate in teaching and transferring values.

207         **Additional workload and different beliefs.** The most important challenge raised by  
208 the participants was the additional workload necessary to engage CCE teachers and parents.  
209 They believed it was impractical to maintain personal and frequent communication with  
210 parents because of the large number of classes and students under their responsibility  
211 (approximately 200 students from five classes). In addition, PE teachers also held secondary  
212 roles in the school, which were time-consuming. For example, one participant was also the  
213 Head of Department for students' leadership development. Another barrier to parental  
214 involvement in education was the different beliefs of CCE teachers and parents. The PE  
215 teachers felt that CCE teachers and parents often neglected teaching of values because of the  
216 overemphasis on academic results. They believed that different interpretation of values  
217 between CCE teachers and parents could undermine the effectiveness of deliberately  
218 transferring the values to the students.

219         **Cross-departmental collaboration and synchronicity.** Responding to these  
220 challenges, participants from the preliminary study provided several suggestions to encourage  
221 the engagement of CCE teachers and parents in the values transference process. To overcome  
222 the additional work required to engage CCE teachers, one PE teacher suggested a structured  
223 school system consisting of a 'cross-department' collaboration between the PE and CCE  
224 teachers. The PE teacher explained how weekly CCE lessons that are dedicated to values  
225 education are viable to reinforce values that were taught and transferred during PES without  
226 adding extra work or compromising teaching hours. Another PE teacher suggested PE and  
227 CCE teachers could teach and transfer the same values intentionally and regularly to their  
228 students to achieve a higher success rate. The sport coach in the present study believed that  
229 getting the support of school leaders will be vital in helping PES practitioners and parents  
230 come to a common understanding of values education and transference process.

231 In sum, the needs assessment study revealed that participants believed that: (a) values  
232 were not transferred beyond PES because of the lack of engagement of CCE teachers and  
233 parents in the transference process; (b) challenges like additional workload and different  
234 beliefs of the CCE teachers and parents must be overcome to facilitate better engagement;  
235 and (c) a cross-departmental approach supported by school leaders to teach and transfer  
236 values intentionally and regularly may facilitate value transference beyond PES more  
237 effectively. The findings were used to guide the development of the following intervention  
238 programme.

### 239 **The Intervention Programme**

240 An intervention programme was developed based on the results of the needs  
241 assessment. It was designed to teach PE teachers, CCE teachers, and parents how to build  
242 sustainable and collaborative partnerships among themselves while facilitating values  
243 transference from PES classes to classroom and home. The intervention programme was  
244 supplemented with the use of explicit approaches that promote a better understanding of  
245 values (Authors, 2016). Thus, it consisted of four topics deemed important steps in the values  
246 teaching and transfer processes: (a) involvement of stakeholders and communication, (b) use  
247 of CCE lessons, (c) use of discussion worksheet, and (d) development of values action plan.

#### 248 **Involvement of Stakeholders and Communication**

249 Two briefing sessions were conducted for PE teachers, CCE teachers, and parents to  
250 equip them with the information required to facilitate values transference. More specifically,  
251 it guided CCE teachers on how to explicitly plan and transfer values in the classroom, and  
252 guided parents on how to use the worksheets to facilitate in-depth discussions of values at  
253 home with their child. Furthermore, being aware of the values being taught helped minimise  
254 the additional work required to communicate with CCE teachers and parents after a value is  
255 taught and transferred beyond PES.

#### 256 **Use of Character and Citizenship Education (CCE) Lessons**

257           The intervention programme utilised Character and Citizenship Education (CCE)  
258 lessons to transfer values from PES to the classroom. According to the Singapore’s Ministry  
259 of Education (2014), every secondary school in Singapore is required to set aside two hours  
260 every week for CCE lessons. With dedicated hours for values education, CCE teachers may  
261 be more motivated to reinforce values in their classrooms. In addition, as CCE resources are  
262 readily available in most schools, CCE teachers can use existing lesson plans of similar  
263 values and modify them to suit the values taught and transferred by PES practitioners. As the  
264 programme was supplemented with the use of explicit approaches, CCE teachers were trained  
265 on how to explicitly plan and transfer these values in their classroom during a briefing  
266 session held in the school.

#### 267 **Use of Discussion Worksheet**

268           In this study, the findings from the needs assessment revealed that engaging the help  
269 of parents increased the workload of teachers. To address this issue, a values discussion  
270 worksheet (Table 1) was created to encourage students to seek their parents’ assistance in  
271 facilitating values transference at home. They also served as a mode of communication  
272 between teachers and parents reducing the workload required to contact parents. The  
273 questions in the worksheet were designed using Socratic Questioning Techniques (Paul &  
274 Elder, 2016) and Bloom’s Digital Taxonomy (Churches, 2009) to promote reflection and  
275 foster deeper understanding of the values taught in school and transferred to the home setting.  
276 In addition, parents were also equipped with the facilitation skills during the pre-intervention  
277 programme briefing to complement the use of the values discussion worksheet.

278           \_\_\_\_\_

279           Insert Table 1 Here

280           \_\_\_\_\_

#### 281 **Development of Values Action Plan**

282 According to Nagy and Fawcett (2017), detailed action plans can ensure intervention  
283 programmes meet their objectives. For the present work, the preliminary needs assessment  
284 study served this purpose by facilitating the development a *Values Action Plan* (Table 2).

285 \_\_\_\_\_

286 Insert Table 2 here

287 \_\_\_\_\_

288 Figure 1 illustrates how a school value was transferred regularly by teachers and  
289 parents. For example, if the value of an intervention was *Respect* followed by *Integrity*,  
290 teachers and parents were briefed on the values-based programme and the action plan prior to  
291 the programme's implementation. This allowed PE teachers and CCE teachers to focus on the  
292 same values in their respective lessons for consistency. The values were intentionally planned  
293 so that PE teachers could explicitly teach and transfer them beyond the PE context through  
294 experiential learning, as described in the VTP (Authors, 2017a). Subsequently, CCE teachers  
295 would reinforce the same values taught during PE lesson in their class. At the end of their  
296 lesson, CCE teachers assigned students with the values discussion worksheet as homework.  
297 Students are required to complete the worksheet with their parents at home.

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299 Insert Figure 1 here

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### 301 **Implementing the Intervention Programme**

302 A five-week intervention programme based on the needs assessment study was  
303 developed and implemented with the participants. The PE teachers, CCE teachers, and  
304 parents were required to teach and transfer two values (*Respect* for two weeks, *Integrity* for  
305 three weeks) simultaneously guided by the values action plan. All participants were given a  
306 standard document that outlined the meanings of these values, and how the students could  
307 possibly display them through their behaviours. The participants were also required to attend

308 a pre-intervention briefing once before the start of the intervention period. Precautionary  
309 measures were undertaken to ensure that participants adhered to the programme, including  
310 the submission of lesson plans by PE and CCE teachers and field observations conducted by  
311 the first author. The observations served as a means to verify if the PE and CCE teachers  
312 have performed according to their lesson plans, which were developed according to the pre-  
313 intervention programme briefing. Constant communication between the first author and  
314 parents were also maintained through text messages to ensure that students had sought their  
315 parents' involvement to complete the values discussion worksheets. This also allowed parents  
316 to report any problems they faced during the intervention programme. Lastly, the values  
317 discussion worksheets were cross-checked by the first author with the observations to ensure  
318 that students learned the values taught in PE and the classroom.

### 319 **Strategies and Methods that Facilitate Values Transference**

320 A case study approach was adopted in order to obtain in-depth and natural real-life  
321 context results (Creswell, 2013). Yin (2013) stated that a case study is suited to develop a  
322 deep understanding of the holistic and meaningful characteristics of real-life events, persons,  
323 or contexts. It is also meaningful if complex phenomena are the subject of investigation. The  
324 case study approach was underpinned by interpretivist approach, which assumes knowledge  
325 is relative to the context (i.e., relativistic ontology) and is interpreted and constructed (i.e.,  
326 constructionist epistemology) by individuals (Braun & Clarke, 2013). The case study was an  
327 appropriate methodology given the objective was to understand the experiences of  
328 participants and examine the strategies and methods they used for values transference.

### 329 **Methods**

330 **Participants.** Eight participants from a high school in Singapore volunteered to  
331 participate in the present study. They included two PE teachers (aged 34 and 47 years old)  
332 who had a minimum teaching experience of eight years, two CCE teachers (aged 31 and 41  
333 years old) who had a minimum teaching experience of three years, two students (aged 14 and

334 16 years old), and their parents (aged 43 and 45 years old) respectively. Participants were  
335 divided into two groups based on the school's classes (i.e., one lower secondary level and one  
336 upper secondary level each) and their relationship. More specifically, each group consisted of  
337 one student, one of his parents, his PE teacher, and his CCE teacher (see Figure 2).

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Insert Figure 2 Here

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**Procedures.** Prior to data collection, ethical approval was obtained from the first author's university specifically for the examination of strategies and methods that facilitate values transference. The inclusion criteria required PE teachers who had experience in explicitly planning and transferring values beyond PE context. Hence the present study recruited participants of the Authors (2017a) study. Six secondary schools were approached and invited to participate, but only one was available and willing to participate. The Head of Department for PE in that school was asked to help recruit PE teachers, CCE teachers, students, and their parents. The data collected was later triangulated and analysed as two case studies, which allowed insight on how the same value taught during PE lessons were transferred and reinforced in CCE lessons and at home. Participants were assured that participation in the study was voluntary, and that they had the right to withdraw at any time. Their confidentiality and anonymity were also assured. To ensure standardisation, the first author carried out all data collection based on a standard protocol.

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**Interviews.** All individual interviews were conducted one week after the conclusion of the intervention programme. They were conducted at the school premises in enclosed classrooms to encourage participants to share their honest opinions (Creswell, 2013). The participants were told that there is no right or wrong answer, and they are free to voice their opinions. The confidentiality of their responses was also assured. A semi-structured interview guide was developed by the authors and used for all the participants, with minor changes to

360 the wordings to suit each particular group (Appendix B). The interview guide followed a  
361 sequence of general to specific questions allowing participants to gradually delve deeper into  
362 the topic of discussion. The interview guide consisted of three sections. The first focused on  
363 establishing rapport and gathering demographic information. The second asked participants  
364 about the perceived effectiveness of the intervention programme in facilitating values  
365 transference beyond PE and values discussion worksheets. Participants were also asked to  
366 discuss how they transferred values in their respective context. The third section focused on  
367 the challenges participants faced during the intervention programme and how they believed  
368 the intervention programme could be improved. All interviews were conducted by the first  
369 author and lasted between 45 to 70 minutes.

370         **Data analysis.** The interviews were transcribed verbatim and analysed inductively  
371 using Braun and Clarke's (2013) thematic analysis procedures. It allowed the researchers to  
372 identify key features across the data set with a strong emphasis on interpretation of the data.  
373 The first author led the data analysis. He first fully immersed himself in the data over five-  
374 week period in which the interviews were conducted. Transcribing, note taking, and writing  
375 of the research report occurred over this period. Second, he segmented the data into initial  
376 codes, labelling them and delineating themes. Third, he reviewed the themes to ensure  
377 accuracy comparing them with the research questions to further enhance interpretations of the  
378 data. For example, the sub-themes of "use of scenarios" and "use of videos" were grouped  
379 under the theme "strategies and methods of values transference" eventually after checking to  
380 ensure that they are coherent and related to other sub-themes to form a logical structure in  
381 relation to the research questions.

382         **Quality standard.** This study engaged member reflections to ensure rigour in  
383 interpretation of data. The first author engaged the participants at the end of the interview by  
384 summarising important discussion points to explore any gaps concerning interpretations of  
385 the findings as part of the co-participatory process and dialogue (Schinke et al., 2013). This

386 created a robust and intellectually enriched account of the research matter as it facilitated  
387 deeper reflections between the interviewer and the participants. It also considered both  
388 complementary and contradictory perspectives from the two parties (Braun & Clarke, 2013).  
389 Furthermore, the second author, who had more than 12 years of experience conducting  
390 qualitative research, acted as critical friend to encourage reflectivity by challenging the first  
391 author's assumption and construction of knowledge. Specifically, he provided critical  
392 feedback regarding interpreting, grouping and labelling of codes, sub-themes, and themes.  
393 For example, the first author coded the sub-theme "use of case studies" under the theme  
394 "strategies of values transference" initially. After discussions with the critical friend, both  
395 agreed this sub-theme would be more appropriately coded under the "use of scenarios". This  
396 approach led the first author to reflect on and explore alternative interpretations of the data to  
397 ensure that codes and themes which represented the data were not "forced" or biased (Cowan  
398 & Taylor, 2016).

### 399 **Results**

400 Results from the individual semi-structured interviews were organised into the four  
401 main themes that were developed from the data analysis: (a) effectiveness on values  
402 transference beyond the PE, (b) strategies and methods of values transference, (c)  
403 effectiveness of engaging PE teachers, CCE teachers, and parents, and (d) participants'  
404 recommendations. These themes will be used to describe the findings, and quotes will be  
405 used to exemplify them. Participants' identities were protected using codes that indicate their  
406 role and group. Specifically, participants are identified as follows: PE teacher (PE), CCE  
407 teacher (CCE), parent (P), and student (S); their group number is indicated after their code  
408 (e.g., PE1, CCE1, P2, and S2).

409 **Effectiveness on values transference beyond PE.** This theme addressed the  
410 effectiveness of the intervention programme on facilitating values transference beyond the PE  
411 context. Students from the present study were asked to elaborate on how they learned and

412 applied the values beyond PE lessons. Teachers and parents were also asked to explain if  
413 their students/children have exhibited those values taught to verify if values transference was  
414 successful.

415 In group 1, values beyond PE were exemplified by S1 when discussing how the  
416 values of *Respect* and *Integrity* could be applied at home:

417 I can apply the values learned at home...like for *Respect*, I will make sure that I will  
418 respect my family and my own things, and not be careless with my things. I can also  
419 show integrity when I don't lie to my friends or family and tell them the truth.

420 Both P1 and CCE1 explained how they observed S1 displaying the values of respect after the  
421 intervention programme:

422 When my son and I did the worksheet on *Respect*, he asked me a question  
423 regarding a time he disrespected his parents. When we were talking about it,  
424 he apologised because he had talked back to me before. After that, he has  
425 been better behaved and never talked back to me when he is angry. (P1)

426 He [S1] would be respectful to some teachers by greeting them when walking  
427 by them at school. He likes to joke in class. When sometimes his joke was  
428 overboard, he apologised. (CCE1)

429 Similar results were evident in group 2. S2 identified and explained how the values of  
430 *Respect* and *Integrity* applied beyond the PE context, as well as the likelihood that he would  
431 practice these values: "I think I can show respect outside by for example, respecting my  
432 friends in class so they will respect me back. I can show integrity in studies or sports, so I  
433 will learn to be more mature in life."

434 Participants believed that values taught in school were successfully transferred to the  
435 home setting. In particular, P2 noticed her son was able to control his temper after the  
436 intervention programme:

437           Instead of arguing with his sister over small issues, such as where to sit at the dinner  
438           table, he knows how to control his emotion now. He is able to demonstrate how to  
439           ‘give in’ to his sister or reason with her in a calm manner.

440       However, unlike group 1, CCE2 did not observe an improvement in the behaviour of S2 in  
441       the classroom because she did not “... think the effect is so immediate.” Still, she felt the  
442       programme helped increase S2’s “awareness of the two values taught”. She also attributed the  
443       lack of improvement to the fact that S2 was already a well-behaved student prior to the  
444       intervention programme. To better validate if students have successfully transferred the  
445       values to classroom within the five weeks, S2 suggested that students could partake in a test  
446       or game where the values learned are more likely to be called into play.

447           Besides facilitating discussion with their parents, participants thought the values  
448       discussion worksheet promoted reflection and helped students revisit and apply what was  
449       taught in school. S1 illustrated this point:

450           After I did the worksheet, I knew the value better. Because I needed to fill in the  
451           questions, so I needed to think about the value that my CCE teacher and PE teacher  
452           talked about. I tried to practice it subsequently based on what had been written on the  
453           worksheet.

454           **Strategies and methods of values transference.** This theme addressed the strategies  
455       and methods adopted by PE teachers, CCE teachers, and parents to transfer values in their  
456       respective contexts. According to the data collected in the interview results, lesson  
457       observations, and information from the values discussion worksheets, the PE and CCE  
458       teachers used different methods to explicitly plan for the values of *Respect* and *Integrity* to be  
459       transferred in their lessons. These methods included the use of scenarios, videos, and  
460       teachable moments. Interestingly, all methods were supported with discussions on how  
461       values could be transferred to various contexts such as home and school.

462            **Use of scenarios.** Both students described that analysing and discussing scenarios that  
463 were related to the values taught during CCE lessons helped them better understand the  
464 values. For example, S2 said a scenario presented in a CCE lesson on the value of *Respect*  
465 taught her how it could be applied in his daily life.

466            I thought the scenarios she [CCE teacher] talked about in class were  
467 useful because we could use them in our daily lives. She asked us what  
468 qualities a mentor must have, what we should do to our juniors when we  
469 are seniors. After that she told us why the value was important and how  
470 we can use it.

471            **Use of videos.** CCE teachers used videos related to the values to facilitate discussion  
472 among students. For example, CCE1 used a video clip of how a baseball team dealt with an  
473 umpire's poor decision respectfully. He believed the video would help students relate better  
474 to the value of *Respect*. His efforts paid off as S1 claimed to remember and understand the  
475 value better after watching the video:

476            The teacher showed us a baseball video to teach us about *Respect* in class. He also  
477 told us what to do to show respect, because sometimes bad things happen against us...  
478 I have a better idea of what and how to respect others now...

479            **Teachable moments.** Although the values of *Respect* and *Integrity* were explicitly  
480 planned and transferred in their lessons, all CCE teachers in the present study took advantage  
481 of teachable moments to reinforce other values. For example, CCE1 explained how it was  
482 important for teachers to capitalise on teachable moments to transfer values as it would help  
483 students to understand them better. He further described how he took advantage of teachable  
484 moments to discuss the value of *Integrity* during one of the CCE lessons:

485            For *Integrity*, something happened in the class that week where things were missing  
486 and stolen so I used it to reinforce the value of *Integrity*. As a teacher, you have to be

487 very observant for those teaching moments... Because if you draw these teaching  
488 moments right, they can really relate well [with the students] since they witness it.

489 **Effectiveness of engaging PE teachers, CCE teachers, and parents.** This theme  
490 addressed the effectiveness of the intervention programme in engaging PE teachers, CCE  
491 teachers, and parents in the transference process. The participants believed the intervention  
492 programme played an important role in overcoming the initial challenges that inhibited the  
493 engagement of CCE teachers and parents in the values transference process. Elaborating on  
494 the programme's advantages, the participants first discussed how the values action plan  
495 facilitated simultaneous reinforcement of values by removing the additional work that was  
496 required to engage CCE teachers and parents. For example, CCE2 said:

497 Whatever the PE teachers taught [in] their lessons, we didn't communicate to  
498 the other subject teachers initially because everybody was busy... The  
499 [intervention programme] gave us a structure, everybody knew what  
500 everybody else was doing. I think it was good that in a way when you told the  
501 kids to go back and talk to their parents, that relieved the work of having to be  
502 the ones telling parents what was going on [in school].

503 Understanding their role in the transference process, parents in the present study  
504 discussed how the values discussion worksheets were effective as a form of communication  
505 and guidance. P1 said:

506 Usually, we didn't know what the school was doing, but this worksheet  
507 allowed us to know about the school's initiative. We thought "if we know  
508 what the school is doing, we can work with the school to help teaching the  
509 same value". The question in the worksheet helped because sometimes we  
510 didn't know how to help our children.

511 P2 appreciated the discussion worksheets, saying: "I didn't know what values were  
512 taught in school before. With this worksheet, I knew what values the school was teaching

513 now and I can be more involved in my child's education". CCE2 also described how she  
514 initially had doubts about the worksheet's feasibility but was surprised at the outcome as she  
515 was reading through the completed worksheets, saying: "I was impressed that my kids went  
516 home to do the worksheet with their parents. I thought they would not take it seriously...but  
517 they really put in the effort."

518 Lastly, CCE teachers appreciated their engagement and involvement in the values  
519 transference process because they believed they were playing a greater role in teaching values  
520 and acknowledged that "this is the role and responsibility of the CCE teacher (CCE1)." PE2  
521 agreed that tapping onto CCE lessons was "more feasible as it would avoid taking away  
522 teaching time that classroom teachers require to complete their syllabuses".

523 **Participants' recommendations.** This theme addressed participants'  
524 recommendations to improve the intervention programme and the values transference  
525 process. Despite the perceived benefits of the intervention programme, participants in the  
526 present study encountered several challenges. For example, CCE1 described how he faced  
527 difficulties reinforcing the values taught because the intervention programme took place  
528 during the examinations period where "the focus of the students and teachers was on the  
529 preparation for examinations." To overcome this challenge, future intervention programme  
530 should take into consideration the school calendar in order to ensure optimal conditions for  
531 values' learning and transfer.

532 PE1 emphasised the importance of building good rapport with students and parents  
533 because he believed that conflicts between them could hinder the effectiveness of the  
534 programme. His suggestion was supported by P2 who explained how her child tended to  
535 respond more favourably to teachers that he preferred, saying: "There is this PE teacher who  
536 he really likes, even though he is very tired, he will still go [to class]."

537 Although most of the participants favoured the values discussion worksheets, some  
538 felt that there was room for improvement. CCE teachers found it a challenge to collect the

539 worksheets from their students on time. Parents and students also expressed how there was  
540 insufficient time for them to complete the worksheets at home. For example, P2 explained  
541 that her son completed one of the worksheets without seeking her help because “he assumed  
542 she was busy and tired after work and did not have time or interest to complete such task”. P1  
543 also felt that more time should be given to complete the worksheets:

544 I came back home late after work...so there was not enough time for [my son  
545 and I] to do the worksheet because he needed to sleep early. Maybe you can  
546 give them more time to complete it, so if the parents are busy, the children  
547 can ask them to do it other day.

#### 548 **Discussion**

549 The purpose of the present study was to identify the strategies and methods that  
550 facilitated the transfer of values learned in PE lessons to the classroom and home settings.  
551 The findings revealed the intervention programme successfully engaged CCE teachers and  
552 parents in the values transference process that was otherwise difficult due to time constraints  
553 or negative attitudes of CCE teachers and parents in values inculcation and transfer process  
554 (Authors, 2017a; Pierce et al., 2018). The programme’s ability to overcome these difficulties  
555 can be attributed to the adopted strategic planning processes (Aksoy & Gürsel, 2017). More  
556 specifically, findings from the preliminary needs assessment study revealed the challenges  
557 faced by PES practitioners in Singapore. The results were used to guide the design of the  
558 intervention programme (Authors, 2017a). Although literature suggests direct parent-teacher  
559 contact to increase parental involvement in their child’s education (Ho & Kwong, 2013), the  
560 needs assessment approach revealed this direct contact was challenging because of the  
561 additional work for teachers and an academic result driven school culture (Martinek & Lee,  
562 2012). Results from the present study are unique in suggesting that adopting a whole-school  
563 approach guided by careful strategic planning (e.g., using values action plan, involving  
564 parents and their students) can show positive results in the teaching and transfer of values

565 beyond the PE context. One of the strengths of this approach was the alignment of the values  
566 being targeted by these key stakeholders. It allowed students to be exposed to the same values  
567 in different contexts during the same period of time, contributing to the process of  
568 transferring values. Such approach is consistent with the alternative TPSR model proposed by  
569 Gordon (2020) that places transfer at the core of the programme, planning values transference  
570 from the start of the programme and reinforcing them over time. Findings from the present  
571 study may be used to guide schools in teaching and transferring values, especially since  
572 values education is a high priority for Ministry of Education in Singapore. This can be  
573 achieved through professional development workshops organised by Ministry aiming to teach  
574 PE and CCE teachers strategic planning and strategies to engage parents and students  
575 effectively. Outside of Singapore, our findings may be used to inform policy makers and  
576 educators who are keen to implement values or life skills transfer beyond PES.

577         The effectiveness of employing explicit and implicit approaches to facilitate the  
578 transfer of values have been widely documented (Authors, 2017a; Camiré et al., 2012; Lee &  
579 Martinek, 2013). Seemingly, findings from the present study corroborate the work of Côté et  
580 al. (2014) and Pierce et al. (2018). Specifically, the present study contributes to the existing  
581 literature by involving all key stakeholders who teach values and their transfer (i.e., students,  
582 PE teachers, CCE teachers, and parents). It demonstrated what explicit methods (i.e., use of  
583 scenarios, videos, and values discussion worksheets) and implicit methods (e.g., use of  
584 teachable moments) can be used to teach and transfer values beyond the context they were  
585 learned. Although the sample size is small, data gathered from the PE teachers, CCE teachers,  
586 parents, and their students/child allowed the research team to triangulate the results and have  
587 a better understanding of the perceived effectiveness of the explicit and implicit strategies  
588 and methods in helping students learn and transfer values beyond PE contexts.

589         Although participants reported evidence of values transferred from PE to home and  
590 classroom settings, one of the CCE teachers from the present study did not observe the same

591 outcome in the classroom attributing it to the short time frame between the implementation  
592 and evaluation process. Other studies support this finding revealing the transfer of learning  
593 between different contexts is not immediate as students require time to make mindful  
594 abstraction from the learning context and exploration of possible connections for transfer of  
595 learning between different contexts (Authors, 2017a; Lee & Martinek, 2013; Perkins &  
596 Salomon, 1992). Indeed, Authors (2017a) found that optimal values transference requires  
597 both time and regular reinforcement by key stakeholders. Even though the intervention  
598 programme successfully facilitated simultaneous reinforcement of values, more time should  
599 be provided for students after the programme to reflect on the values taught and transfer  
600 opportunities.

601         Although participants spoke highly of the intervention programme's effectiveness,  
602 they felt that addressing the schools' values action plan and providing more time to complete  
603 the values discussion worksheets could improve the programme. These suggestions further  
604 reinforced the importance of strategic planning when developing an effective and sustainable  
605 values-based intervention programme as there are no one-size-fits-all model that will be  
606 effective for all contexts (Nagy & Fawcett, 2017; Pierce et al., 2018). More importantly,  
607 results of the present study highlighted the importance of engaging different key stakeholders  
608 in co-designing and implementing the values programme in a context-specific setting (Aksoy  
609 & Gürsel, 2017; Authors2017b). Continued efforts to explore strategies and methods of  
610 values transference with different populations, cultures, and context are needed to advance  
611 this line of research. The six-level continuum in understanding the implicit and explicit of life  
612 skills development and transfer (Bean et al., 2018) could be useful in identifying the strengths  
613 and weaknesses of different stakeholders and providing targeted assistance to in the values  
614 development and transfer process. For example, if PE teachers or coaches lack the  
615 competency in creating opportunities within the sports context for students or athletes to  
616 apply and reflect on values learnt (i.e., practicing values), specific strategies and methods on

617 how to select appropriate activities to infuse and discuss values can be provided to them to  
618 guide their learning and development.

### 619 **Implications to Practice**

620 Findings from the present study suggest that practitioners must be properly trained to  
621 employ explicit and implicit approaches for values to be learned and transfer beyond PES  
622 contexts. Hence, to maximise effectiveness of both approaches, it is recommended that key  
623 stakeholders such as school leaders, teachers, and parents should be involved in the  
624 development of an intervention programme. Briefing sessions should also be conducted to  
625 ensure clarity about the process and provide the necessary support to the process of learning  
626 and transferring values. It will also be helpful for schools to plan a yearly curriculum that  
627 includes values and share it with teachers, students, and parents so that they can be  
628 emphasised by different stakeholders, at the same time, in different contexts, as a way to  
629 reinforce learning and facilitate transfer.

### 630 **Limitations and Future Research Directions**

631 While the present study contributes to the literature by identifying the transfer  
632 strategies and methods adopted by PE teachers, CCE teachers, and parents, limitations must  
633 be acknowledged. First, the participants were selected from a single high school, which may  
634 not be representative of other schools in Singapore because of different curriculum structures  
635 and school culture. Future studies should explore other school contexts (e.g., junior schools,  
636 colleges, independent schools) and countries with a larger sample size to investigate the  
637 transfer strategies and methods used by students of different educational levels and cultural  
638 backgrounds. Future studies may also include school administrative staff (e.g., vice-principal  
639 and principal) because their perspectives could offer an alternative understanding. Second,  
640 there was no control group in the present study. Hence, the perceived positive intervention  
641 effects cannot be fully attributed to the intervention programme. Lastly, the duration for the

642 intervention programme may have been insufficient for values transference. Future studies  
643 should consider a longer intervention period to determine the programme's effectiveness.

644 **Conclusion**

645 The purpose of the present study was to identify the strategies and methods that  
646 facilitated the transfer of values learned in PE lesson to the classroom and home settings. Our  
647 results provide insights on the importance of involving all key stakeholders in teaching values  
648 and facilitating students' transferring them from PE lessons to classroom and home. In  
649 addition, the use of strategic planning processes including conducting a preliminary needs  
650 assessment study, development of a values action plan, and use of transfer strategies and  
651 methods proved to be beneficial. As our understanding of effective strategies and methods of  
652 values transference is still in its infancy, more empirical evidence involving key stakeholders  
653 is required to improve the understanding of this burgeoning field.

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758

**Appendix A**

759

**Needs Assessment Interview Questions**760 Opening Questions

761

762 1. Briefly describe why you chose to embark on teaching/coaching as a career?

763

764 2. When you think of PES, what is the first thing that comes to your mind?

765

766 3. Why did you choose to participate in the Teaching Values through PE and Sports  
767 Programme?

768

769 4. What did you expect to gain from the programme when you first found out about it?  
770 Did the end result differ from your expectations? If yes, in what ways?

771

772 Key Questions

773

774 5. Do you still practice what you learnt from the Teaching Values through PE and Sports  
775 Programme? If yes, what are some of the values that you focused on during your  
776 PES? Give some examples of how you incorporated these values. If no, why?

777

778 6. Did you observe any values exhibition by your students during PES as a result of your  
779 intentional values inculcation? If yes, in what ways? If no, why not?

780

781 7. Did you explain to your students how the values they learnt during PES can be  
782 applied in areas outside of sports such as in other classes or their daily life? If yes,  
783 could you briefly describe how you did so? Give some examples. If no, why not?

784

785 8. What are some of the challenges you faced when inculcating values into your PES?  
786 Give some examples.

787

788 9. In your opinion, do you think it is important to engage the help of classroom teachers  
789 and parents to reinforce the values that you inculcate in your PES? If yes, why do you  
790 think it is important to do so? If no, why?

791

792 10. Were you aware that as part of the Teaching Values through PE and Sports  
793 Programme, you were required to engage the help of classroom teachers and parents  
794 to reinforce the values that you taught in class?

795

796 11. What were your reasons for not engaging their help to reinforce the values that you  
797 inculcated in your PES?

798

799 12. In response to the previous question, how would you address the problems you face?

800

801 13. Since you have inculcated values in your PES, could you give some suggestions on  
802 how classroom teachers and parents can help reinforce these values in classrooms and  
803 at home?

804

- 805 14. Would you be willing to engage the help of classroom teachers and parents if you  
806 were given the transfer mechanisms of values for them to reinforce the values you  
807 inculcated in your PES? If yes, why? If no, why not?  
808

809 Concluding Questions

- 810  
811 15. Would you like to add anything else related to the interview?  
812  
813  
814  
815

**Appendix B****Interview Questions for PE Teachers**Opening Questions

1. Before this programme, how did you inculcate values in your students during PES?
2. In your opinion, do you think it is important to engage the help of classroom teachers and parents to reinforce the values that you inculcated in your PES? If yes, why do you think it is important to do so? If no, why?
3. What were some of the challenges you faced when engaging the classroom teachers and parents to reinforce the values beyond PES in the past? How would you address the problems you faced?

Key Questions

4. As part of this programme, how did you reinforce the values' that you were required to (Respect and Integrity)? Briefly describe how you reinforced the values during PES.
5. Did you explain to your students how the values they learnt during PES can be applied in areas outside of sports such as in other classes or their daily life? If yes, could you briefly describe how you did so? Give some examples. If no, why not?
6. What are some of the challenges you faced when inculcating values in your PES lessons? Give some examples.
7. How would you address the problems you faced?
8. Do you think having a framework like this would help in engaging classroom teachers and parents to reinforce the values you taught in PES? If yes, why do you think it helps? If no, why not?
9. Do you think their role (CCE teacher and Parents) has been effective in the transference of values beyond PES? If yes, why is it effective? If no, why not?
10. After implementing the PES programme for 5 weeks, what are some suggestions you believe would value-add to this programme? Explain your suggestions.
11. Do you believe that a framework like this is feasible and useful? If yes, why? If no, why not?

Concluding Questions

13. Would you like to add anything else related to the interview?

1 Table 1

2 A sample of the Values Discussion Worksheet for Respect

Name: _____		Date: _____	
Class: _____			
<b>RESPECT</b>			
<i>The following questions require you to <u>discuss</u> with your parents/guardian and write down their responses:</i>			
1. What is the meaning of <b>respect</b> ?			
You		Parent/Guardian	
1a. Do you agree with your parent/guardian's definition of respect? Explain.			
2. Who should we show <b>respect</b> to?			
You		Parent/Guardian	
3. Name one person you <b>respect</b> a lot in your life. Explain why you respect this person.			
You		Parent/Guardian	
4. Ask your parent/guardian about a time when you failed to show respect to them. Knowing this, how would you behave differently if you were given another chance? Write down your answers below.			
_____			
_____			
_____			
5. Discuss with your parent/guardian the role that respect play in a country like Singapore and write down your answers below.			
_____			
_____			
_____			

3

4 Table 2

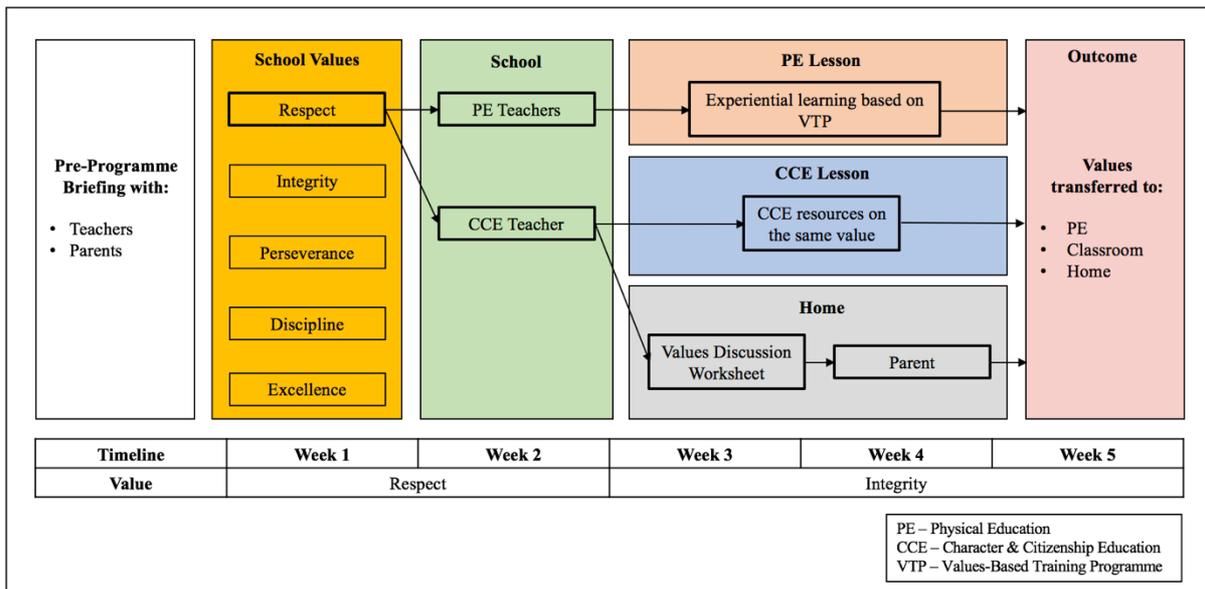
5 Values Action Plan

VALUES ACTION PLAN			
Action Step	Person(s) Responsible	By Values	Desired outcome
Pre-programme briefing with teachers on the intervention programme conducted by the first author	<ul style="list-style-type: none"> <li>• First author</li> <li>• Teachers</li> </ul>	Before implementation of intervention programme	Teachers understand their role in the intervention programme and are aligned with the programme's objectives
Pre-programme briefing with parents on the intervention programme conducted by the first author	<ul style="list-style-type: none"> <li>• First author</li> <li>• Parents</li> </ul>	Before implementation of intervention programme	Parents understand their role in the intervention programme and are aligned with the programme's objectives
Values transferred intentionally during PE lessons through experiential learning based on Koh et al.'s (in press) VTP	<ul style="list-style-type: none"> <li>• PE teachers</li> </ul>	Respect – 2 weeks Integrity – 3 weeks	Students gain a greater understanding of the values learned during PE lessons
Same values transferred during CCE lessons  Assign the values discussion worksheet after class	<ul style="list-style-type: none"> <li>• CCE teachers</li> </ul>	Respect – 2 weeks Integrity – 3 weeks	Same values are reinforced by the CCE teacher to facilitate values transference to classroom
Values discussion between students and parents through values discussion worksheet	<ul style="list-style-type: none"> <li>• Parents</li> <li>• Students</li> </ul>	Respect – 2 weeks Integrity – 3 weeks	Same values are reinforced by parents through discussion of values to facilitate values transference to home

6

7 Figure 1

8 Example of how the value of *Respect* is transferred by PE teachers, CCE teachers, parents  
9 and children from school to home



10

11 Figure 2

12 Relationships between participants in group one and group two

13 *Note:* Numbers in Parenthesis = Age of participants; M = Male; F = Female.

14

