1  **Profiles of Adolescents' Perceptions of Democratic Classroom Climate and Students' Influence: The**

2  **Effect of School and Community Contexts[1]**

3  Frank Reichert*, The University of Hong Kong, Hong Kong, Hong Kong SAR

4  Jiaxin Chen, East China Normal University, Shanghai, China

5  Judith Torney-Purta, University of Maryland, College Park, USA

6  *Corresponding author:* Room 217, Runme Shaw Building, Faculty of Education, The University of Hong

7  Kong, Pok Fu, Lam Road, Hong Kong, Hong Kong SAR, Phone: +852 2241 5571, Email: reichert@hku.hk

8  **Abstract**

9  Students' learning experiences and outcomes are shaped by school and classroom contexts. Many studies have

10  shown how an open, democratic classroom climate relates to learning in the citizenship domain and helps nurture

11  active and engaged citizens. However, little research has been undertaken to look at how such a favorable

12  classroom climate may work together with broader school factors. The current study examines data from 14,292

13  Nordic ninth graders (51% female) who had participated in the International Civic and Citizenship Education

14  Study in 2009, as well as contextual data from 5,657 teachers and 618 principals. Latent class analysis identifies

15  profiles of students' perceptions of school context, which are further examined with respect to the contextual

16  correlates at the school level using two-level fixed effects multinomial regression analyses. Five distinct student

17  profiles are identified and labeled "alienated", "indifferent", "activist", "debater", and "communitarian."

18  Compared to indifferent students, debaters and activists appear more frequently at schools with relatively few

19  social problems; being in the communitarian group is associated with aspects of the wider community.

20  Furthermore, being in one of these three groups (and not in the indifferent group) is more likely when teachers act

21  as role models by engaging in school governance. The results are discussed within the framework of ecological

22  assets and developmental niches for emergent participatory citizenship. The implications are that adults at school

23  could enhance multiple contexts that shape adolescents' developmental niches to nurture active and informed

24  citizens for democracies.

25  **Keywords:** classroom climate; developmental niche; efficacy at school; person-centered analysis; student voice;

26  youth civic engagement

**Introduction**

In many democratic countries, a major goal of schooling is to prepare active and engaged citizens who contribute to decision-making in their societies and communities. Schools can foster this goal by formal and informal means, and many studies have shown that positive school climates that encourage students to share their opinions and shape aspects of their schools are important in the academic and civic development of students (Mager and Nowak 2012). Schools with positive school and classroom climates are characterized by principals, teachers and other staff who value students' contributions to school life and provide "genuine opportunities for collaboration, cooperation and communication" (Homana et al. 2006, p. 7). According to Barber et al. (2015a) and Knowles et al. (in press), students who perceive that their school provides such a favorable climate are more likely to be interested in politics, to trust civic institutions, to feel politically efficacious and to intend to participate in legal forms of political behavior; they are less likely to engage in illegal political protest. Hence, schools in democratic societies have strong incentives to provide a positive school and classroom environment.

How do students differ in their perceptions of the democratic climate at their school, and what contextual variables explain these differences in students' perceptions? The analysis of students' perceptions of school climate is important, because people usually act in accordance with their perceptions of others, their perceived control over their behaviors and their own goals (Ajzen 2001). Fostering educational outcomes is enhanced when school leaders understand the perspectives and beliefs of students (as well as those of teachers). A school environment designed to be supportive can promote civic development and participation effectively only to the extent that adolescents themselves perceive that school climate as open for student voice.

It was the goal of the current study to identify distinct groups or clusters of students characterized by different patterns or profiles in their perceptions of school context using a person-centered statistical approach. A person-centered approach enables researchers to identify groups of students characterized by distinct and similar patterns in their perceptions of school climate, and it better accounts for potential heterogeneity than variable-centered approaches (Collins and Lanza 2010).

A limitation of previous studies is that most have examined students' perceptions of school context as individual predictors of other variables, such as civic knowledge or expected participation (Knowles et al. in press). A nuanced analysis of the contextual effects on these perceptions is missing in the literature, and the extent to which patterns of contextual factors and students' perceptions of school climate are associated with valued outcomes remains unclear. Yet as Eckstein and Noack (2014) analyzing longitudinal data from three age cohorts of German adolescents suggest, contextual factors should be seriously considered when studying adolescents'

57    civic development. Characteristics of the community context can have indirect effects on the civic development

58    of young people through adolescents' perceptions of their schools' contexts. A second goal of the current analysis

59    was therefore to examine the school-level and community-level correlates of distinct profiles of students'

60    perceptions of school climate.

61        This article addresses these goals using data collected in 2009 from nationally representative samples of ninth

62    grade students in four countries with well-developed structures for democratic school participation and decision-

63    making: Denmark, Finland, Norway, and Sweden. Despite some differences among the Nordic societies, this

64    context provides a suitable background for analyzing differential perceptions of school climate and how contextual

65    variables relate to these distinct perceptions. Among other reasons, these countries have long histories of stable

66    representative, parliamentary democratic traditions. Further, their educational policies, schools and curricula

67    emphasize the value of civic education (Gilljam et al. 2010), and their citizens are better prepared to participate

68    in politics and less likely to be politically alienated than citizens of many other countries (Amnå and Zetterberg

69    2010; Dahl et al. 2017). Although student voice and participation at school is valued in such contexts according

70    to the policy documents, the ideal of student participation may not be fully realized at the local level (Blossing et

71    al. 2014). In other words, students may not perceive the welcoming climate for their voices and participation at

72    school that the policy documents and curricula prescribe.

73        This analysis is framed within aspects of ecological frameworks of civic and human development. The study

74    utilizes the concept of "ecological assets" (e.g., Theokas and Lerner 2006) commonly referred to in research on

75    positive youth development. Schools can be compared to ecological systems situated in their communities where

76    multiple assets may help students to develop their strengths (or prevent them from doing so). Furthermore, this

77    analysis is also framed by the "developmental niches model" that explicitly links students' political socialization

78    and citizenship engagement to the contexts in which they develop (Torney-Purta and Amadeo 2011). These

79    approaches provide more meaningful interpretations of students' perceptions of the school context than previous

80    studies; they also offer evidence that these perceptions and civic development are related to the available

81    ecological assets.

82    **Developmental Niches for Emergent Participatory Citizenship**

83    Contemporary literature on youth development focuses on the associations between individual development and

84    contextual factors. According to Torney-Purta and Amadeo (2011), adolescents' participation in civic and political

85    life can be labeled as "emergent participatory citizenship". Although adolescents cannot participate in political

86    life as adults do, they can develop the knowledge, skills and dispositions essential for future engagement and

87   participation as adult citizens through their present participation in the civic and political activities available to

88   them (Barber et al. 2015b). Furthermore, these researchers argue that emergent participatory citizenship develops

89   in a particular *niche*. There are a number of dimensions to this niche that can reinforce each other, some reflecting

90   present circumstances in which the young person is developing and other reflecting the past (e.g., traditions of a

91   particular group). Torney-Purta and Amadeo (2011), based on a review of qualitative studies, propose an

92   ecological model that is particularly designed to frame the civic development of adolescents.

93       Specifically, Torney-Purta and Amadeo (2011) identified three dimensions of developmental niches

94   contributing to emergent participatory citizenship. First, they identified settings that are directly relevant to

95   adolescents' development, such as characteristics that are unique to them and their families (e.g., ethnicity or how

96   individuals in a family interact); characteristics that may be shared within a local community (e.g., economic

97   resources, opportunities for civic engagement); and schools, where they may (or may not) be offered opportunities

98   to practice forms of participation that can strengthen their sense of efficacy and help them develop a civic identity.

99   Based on the results of a secondary analysis of survey data from ten countries, Torney-Purta and Barber (2011)

100  emphasize that positive social interactions in these everyday settings have the potential to prevent alienation from

101  politics. This finding aligns with reviews of research that argue that a civic identity develops in social interactions

102  within everyday contexts (Carretero et al. 2016), and that collective activities over time based on shared rules (i.e.

103  involvement in "communities of practice") foster such development (Homana in press).

104      Second, Torney-Purta and Amadeo (2011) note that parents and educators attempt to organize developmental

105  niches in line with their own experiences, affiliations, and the economic, educational, and social resources that

106  are available to them. Torney-Purta and Barber (2011) also emphasize the role of adults' beliefs in the civic

107  development of adolescents. Longitudinal survey research on African-American and Latino adolescents in the US

108  utilizing this model further suggests that social interactions with teachers and aspects of the school and classroom

109  climate can support the development of positive civic engagement (Jagers et al. 2017).

110      Finally, societal customs and cultural beliefs determine some characteristics of the developmental niche.

111  Torney-Purta and Amadeo (2011) and Torney-Purta and Barber (2011), for example, refer to mandatory civic

112  education in schools, limitations on speaking openly about social and political issues, or a belief that educators

113  should not express partisan points of view. In addition, characteristics of the individual adolescent also influence

114  the developmental niche and, hence, the development of the qualities essential for future participation. The

115  development of emergent participatory citizenship to a large extent depends on "external" and "internal" assets.

116    Applied to the civic realm, the developmental assets framework suggests that the civic development of young

117    people can be enhanced if ecological (external) assets, such as social networks and access to resources in their

118    families, schools and communities, align with or promote adolescents' individual strengths (i.e. internal assets)

119    (Lerner et al. 2014). Assets can also be generated by providing opportunities for adolescents to actively engage

120    with their environments. Thereby, positive youth development can be stimulated and result in adolescents'

121    contributions to society, such as civic engagement that is in accordance with a democratic political process, and

122    at the same time lessen anti-social behaviors (Lerner et al. 2014; Torney-Purta et al. 2007).

123    **School Climate and Emergent Participatory Citizenship**

124    Schools are an important developmental niche for emergent participatory citizenship; adolescents are responsive

125    to both curricular influences and the participatory climate (Eckstein and Noack 2016). In fact, the school climate

126    has been identified as an important asset for the academic and civic development of adolescents (Barber et al.

127    2015a; Mager and Nowak 2012). Students who share beliefs with other school members, are aware of and respect

128    school rules, and sense that they are valued at school have the potential to develop character and school

129    connectedness, which have been identified as protective factors for positive youth development (Torney-Purta et

130    al. 2007). The present study focusses on an open classroom climate for discussion and on opportunities for students

131    to participate more broadly in interconnected aspects of a school's overall climate (see also Eckstein and Noack

132    2014): Schools with a positive climate value students input both in the form of active engagement and the sharing

133    of views about issues, which support positive civic development (Torney-Purta and Amadeo 2011; Torney-Purta

134    and Barber 2011).

135    **Civic knowledge.** One of the most commonly studied correlates of school and classroom climate in variable-

136    centered analyses is the association with civic and political knowledge. For example, Persson (2015) analyzed

137    panel data from Swedish adolescents who were approximately 16. He found evidence for a causal effect of

138    students' perception of an open classroom climate on civic knowledge. In additional analyses of the cross-

139    sectional international Civic Education Study (CivEd) that collected data from 14-year-olds in 28 countries in

140    1999, Persson (2015) identified similar relationships both for the Swedish sample and across all 28 countries.

141    Analyses of the cross-sectional data from eighth graders who participated in the International Civic and

142    Citizenship Education Study (ICCS) in 38 countries in 2009 also found positive associations between both

143    classroom and school climate (considered separately) and students' levels of civic knowledge (e.g., Lin 2014;

144    Schulz et al. 2013).

**Civic efficacy.** Studies using the US CivEd data also found positive associations between efficacy (i.e. students' perceived capacity to influence public decisions and/or the responsiveness of public institutions) and classroom-level measures of open classroom climate for discussion (Barber et al. 2015a; Godfrey and Grayman 2014). A multilevel analysis of data from 14 European countries in the ICCS showed that eighth graders' perceptions of their classroom as open for discussion were positively associated with measures of internal political efficacy (Knowles and McCafferty-Wright 2015). Manganelli et al. (2015) used the Italian sample of the ICCS and found that citizenship self-efficacy mediates the effect of an open classroom climate on students' intentions to engage in civic activities. This is similar to the analysis of cross-sectional data from Australian tenth graders by Reichert and Print (2017a), who found that the effect of self-reported participation at school on expected political participation is mediated by the perception that students' participation at school is valued.

**Citizenship-related attitudes.** In their variable-centered analysis of the US CivEd data, Barber et al. (2015a) further found a positive association between individual students' trust in government institutions and the classroom-level aggregate of openness of classroom climate. Similarly, Dassonneville et al. (2012) using panel data from Belgian adolescents aged 16 and 18 years identified a positive effect of the school-level aggregate of an open classroom climate on adolescents' trust in governmental institutions. Other analyses of the CivEd data also found positive associations between a classroom climate that students perceive as open for discussion and their support for women's rights as well as for immigrants' rights (Barber et al. 2015a; Barber et al. 2015b; Torney-Purta et al. 2007).

**Civic participation.** Finally, analyses of the US CivEd data have shown that students who perceive their classroom as more open for discussion are more likely to intend to vote in elections as adults (Campbell 2008) and less prone to participate in illegal protest activities (Barber et al. 2015a). Analyses of data from 35 countries that participated in the ICCS also support the view that an open classroom climate is positively associated with voting intentions, legal political protest and informal political participation (Quintelier and Hooghe 2013).

**Conclusion.** The school climate is often conceptualized as a characteristic of the school context but frequently measured using student reports. Previous research using several sources of data has identified the perceived school climate as an important predictor of adolescents' civic development in multiple domains of participatory citizenship. However, students' perceptions often vary significantly within a school, and there are likely to be groups of students who share different perceptions of their school's climate (Shukla et al. 2016). Yet it remains unclear how adolescents' perceptions of the school climate hang together or diverge, and how such patterns are associated with civic development. No analysis has been conducted on patterns of adolescents' perceptions of the

175     school context as supportive for student voice and participation, and little is known about how different ecological

176     assets are associated with students' perceptions of their school's climate.

177     **Ecological Assets and Youth Development**

178     According to Theokas and Lerner (2006), the following assets can influence adolescents' development: human

179     resources (e.g., parent's education); physical and institutional resources (e.g., opportunities to engage with others);

180     joint activities; as well as ease of access to resources and safety of the environment. These assets can be found in

181     different forms in the everyday settings where adolescents are embedded and may be regarded as potential

182     predictors of school climate.

183     **Individual and family context.** Among the human assets that are associated with positive youth development

184     and likely also with the development of emergent participatory citizenship are gender, ethnicity, and

185     socioeconomic status (SES) (Li and Lerner 2011; Torney-Purta and Amadeo 2011). Li and Lerner (2011), for

186     instance, examined longitudinal data from US students over four years from grades five to eight. They found

187     lower behavioral and emotional school engagement among boys and adolescents from lower income families;

188     African Americans reported lower behavioral engagement, and Latino adolescents reported lower emotional

189     engagement, than other youths (Li and Lerner 2011). Reichert and Print (2017b), in their cross-sectional analysis

190     of data from Australian tenth grade students, report that girls perceived their schools as more supportive of student

191     participation. In their longitudinal analysis of German adolescents, Eckstein and Noack (2014) found that girls in

192     Germany reported a higher sense of community at school than boys, but there were no gender differences with

193     respect to other aspects of the school climate. Yet, Barber et al. (2015a), in their analysis of the US sample from

194     the cross-sectional CivEd study, report that girls perceived more open discussion climates at school. Another

195     analysis of these data found that boys and African American students perceived the classroom climate as less open

196     for discussion than girls and students from other ethnic backgrounds (Campbell 2007).[2] Finally, using the first

197     wave of data they collected from fifth grade students in the US, Theokas and Lerner (2006) also found that joint

198     activities within a family predicted positive youth development. Shared discussions with family or peers may

199     enable adolescents to recognize opportunities to share their opinion in other settings, which in turn could be

200     associated with their perceptions of classroom and school climates.

201     **School context.** Several aspects related to the availability of school assets were considered in this analysis. On

202     one hand, research has shown that the background of the student body, also referred to as student composition of

---

[2] Note that data about ethnic group membership was collected as a national option and categories varied across countries, limiting the analysis possible with the CivEd and ICCS datasets.

203  the school, provides a context that can be more or less nurturing (Harris 2010). Studies using the US CivEd data

204  found that adolescents' perceptions of classroom climate were more similar among students at schools with higher

205  percentages of students from high SES backgrounds (Barber et al. 2015a). Furthermore, Reynolds et al. (2014)

206  who reviewed studies of student achievement conclude that it is generally beneficial to be at a school with a high

207  proportion of girls. The absence of social problems at school is also an important ecological asset (Theokas and

208  Lerner 2006), but factors like this have not been the focus in research on school climate.

209  On the other hand, there are teacher-related assets, such as years of experience and skills in teaching, as well

210  as opportunities for students to observe teachers taking on leadership by participating in collaborative school

211  governance (Theokas and Lerner 2006). Again, limited research exists. However, in a cross-sectional study of

212  fifth grade students in the United States Koth et al. (2008) found that students' perceptions of the school being a

213  safe place were more positive the more experienced the teachers were.

214  **Community context.** Many schools are part of a neighborhood, and students' perceptions of the school climate

215  may also be shaped by community contexts. For example, Zaff et al. (2011) report a longitudinal analysis using

216  data from US adolescents from grades eight to eleven, according to which active and engaged citizenship is

217  positively associated with participation in religious activities and youth development programs. A study using

218  data from the ICCS found that students at schools in urban communities are less likely to intend to participate in

219  the future, and the presence of social tensions in the community were negatively associated with students' civic

220  knowledge (Isac et al. 2014). However, Campbell's (2007) analysis of the US CivEd data yielded no significant

221  effect of urbanicity on perceived classroom climate. Research on other community factors that may be associated

222  with students' perceptions of the school climate, such as physical resources in the community (e.g., libraries,

223  youth facilities) and opportunities for student participation in community organizations, is limited. Whether

224  characteristics of the community are associated with the perceived climate at school deserves further exploration.

225  <div align="center">**Current Study**</div>

226  Using data from four countries with well-developed structures for democratic school participation that participated

227  in the International Civic and Citizenship Education Study (ICCS) 2009, the current analysis addressed some

228  limitations of previous studies. This analysis was guided by two research questions: First, we wanted to know

229  whether there are distinct groups of students characterized by different patterns in their perceptions of school

230  contexts. The focus was on aspects of the school climate and within-school heterogeneity in students' perceptions

231  of the school climate. That is, students may perceive the school climate differently despite them being enrolled in

232  the same school. Distinct patterns of adolescents' perceptions of the school context as supportive for student voice

233 and participation could also be associated in different ways with civic development. Therefore, we further asked

234 whether adolescents' perceptions of the school climate correlate with indicators of emergent participatory

235 citizenship.

236     In particular, we hypothesized that it would be possible to identify multiple groups and at least one group

237 would show signs of alienation. That is, students in such a group would be characterized by negative perceptions

238 of school climate and score low on correlates of school climate. Previous research by Torney-Purta (2009) using

239 data on civic attitudes from an earlier study (CivEd) found a small group of students who were generally alienated

240 from democratic norms. This politically alienated group expressed anger about ethnic minorities and immigrants

241 in their country and were cynical about national government institutions. This analysis did not examine alienation

242 specific to the school context. Similar results were reported by Reichert (2016b) in a more recent analysis of

243 survey data from Australian secondary school students. The current study therefore sought to investigate whether

244 there is a group expressing attitudes of alienation when asked about the contexts of their classrooms and schools.

245     Generally speaking, a person-centered approach is required to examine whether there are definable groups of

246 students with respect to their perceptions of school and classroom contexts. This approach, which identifies

247 clusters or latent classes of students, is better suited to identify patterns of heterogeneity among adolescents than

248 the variable-centered approaches that dominate research on civic development (Reichert 2016a). In addition, the

249 findings of person-centered research tend to be easier to grasp for policy makers, educators and the public than

250 the results of variable-centered analyses of large-scale assessments (Torney-Purta and Barber 2011). This is true

251 in particular when complemented by follow-up analyses that can link response profiles to external variables

252 (Reichert 2016b), such as indicators of emergent participatory citizenship.

253     This analysis first identifies patterns of student responses to questions about the contexts they experience in

254 their schools (whether students have voice in decisions) and in their classrooms (whether an open and respectful

255 classroom climate prevails). Previous analysis has focused on the latter and has not conceptualized these as two

256 distinct but closely related arenas in which students can experience positive participation. Second, the analysis

257 explores which contextual variables – found in the way the school is organized and governed and in characteristics

258 of the local community – are associated with the distinct patterns of students' perceptions of school context for

259 student voice and participation. To put it differently, if there is within-school heterogeneity in students'

260 perceptions, it is helpful to explore which aspects of everyday contexts such as families, schools, and communities

261 are associated with distinct profiles in these perceptions of the school and classroom climate.

**Methods**

263     **Data**

264     The International Civic and Citizenship Education Study (ICCS) 2009 database was utilized to investigate whether

265     profiles of attitudes toward participation in classroom and schools could be identified. If such profiles (latent

266     classes) existed, how were they related to contextual variables at the school and community levels? ICCS is an

267     international large-scale assessment of fourteen-year-olds' civic knowledge and understanding, dispositions and

268     attitudes (Schulz et al. 2011). The database also includes contextual variables about students' family background

269     (from student surveys), the school and community context (from surveys of school principals), and about teachers

270     of the sampled schools. ICCS used a stratified two-stage probability sample design, based on schools sampled

271     with probability proportional to size during the first stage, and one intact class of target-grade students and a fixed

272     number of target-grade teachers randomly selected during the second stage (for details on the samples and data

273     collection procedures see Schulz et al. 2011). Table 1 reports the raw sample sizes; however, in subsequent

274     analyses all four countries were weighted equally to balance the unequal sample sizes.

275                                                      <INSERT TABLE 1 HERE>

276     **Student sample.** A total of 14,292 eighth grade students from 664 schools in Denmark, Finland, Norway and

277     Sweden participated in ICCS. Student participation rates were above 91% in all four countries. However, school

278     participation rates were slightly below 90% in Denmark and Norway. Therefore, the (weighted) overall

279     participation rates in the student survey were somewhat lower in Denmark (78%) and Norway (79%) compared

280     to Finland (90%) and Sweden (93%).

281     **Teacher sample.** All four countries met the rigorous sampling criteria set by the International Association for the

282     Evaluation of Educational Achievement (IEA) in relation to the student survey (Schulz et al. 2011), but Denmark

283     and Norway had relatively low overall response rates in the teacher survey. While the participation rates were

284     acceptable at the teacher level, only roughly half of the Danish and Norwegian schools decided to participate in

285     the teacher study. Hence, the (weighted) overall participation rates in the teacher survey were quite low in

286     Denmark (42%) and Norway (35%), whereas these rates were acceptable in Finland (85%) and Sweden (76%).

287     In sum, 5,657 teachers from 516 schools participated in ICCS.

288     **Measures**

289     All students were assessed and surveyed in class, and the assessment was conducted by a trained test administrator

290     (details about data collection procedures in Schulz et al. 2011). Before students completed the international student

291     questionnaire (about 40 minutes), they also participated in an assessment of their civic knowledge and

292 understanding (exactly 45 minutes). Teacher questionnaires were sent to each school for each sampled teacher,

293 and a school questionnaire was sent to the school principal, except for Sweden where the principal and teacher

294 questionnaires were administered online. All measures utilized in the present study are based on the ICCS

295 framework; the school and class climate measures had also been included in previous administrations of the survey

296 (Torney-Purta et al. 2001). The scales utilized were created using item response theory techniques (see Schulz et

297 al. 2011, for a list of items used, scales constructed, and additional references). The use of these scales eases

298 interpretation, as these estimates were scaled in a way that makes it possible to compare them across all countries

299 participating in the administration of the test and survey in 2009. Scales derived from questionnaire items have an

300 international mean of 50 and an international standard deviation of 10 across all 38 countries that participated in

301 the ICCS (Schulz et al. 2011). Civic knowledge and understanding was rescaled to that scale for the present

302 analysis. For all scales, higher scores mean "more" of the respective construct.

303 **School climate.** Twelve items measured students' perceptions of two dimension of school climate. In many of

304 the analyses of the CivEd and ICCS data, this item set has been separated into two scales – "Open Classroom

305 Climate for Discussion" and "Confidence in Participation at School" (e.g., Torney-Purta et al. 2001). Both aspects

306 can be considered indicators of school climate or of democratic experiences at school (see Eckstein and Noack

307 2014). Two innovations in the current analysis are to use the items from both scales without distinguishing

308 between classroom and school climate and then to identify clusters of students who have definable profiles of

309 experience in the classroom and the school as a whole. The perception of classroom climate as being open for

310 discussion was measured by items one to seven in Table 2, followed by the question: "When discussing political

311 and social issues during regular lessons, how often do the following things happen?" Students could respond on

312 a four-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often). Items eight to twelve in Table 2 measured

313 students' perception of the value of student participation at school following the question: "How much do you

314 agree or disagree with the following statements about student participation at school?" (reverse coded into: 1 =

315 strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). Although items and not scales were analyzed here,

316 both climate scales were reliable in all four countries (Cronbach's $\alpha \geq .74$).

317                                                   <INSERT TABLE 2 HERE>

318 **Distal outcomes.** Six additional scales were used to explicate the meaning of the student profiles. The mean of

319 five measures provided in the international database was used to measure *civic knowledge and understanding*

320    ($\alpha \geq .81$).[3] Students' internal political efficacy was measured by means of six items (e.g., I am able to understand

321    most political issues easily; $\alpha \geq .87$). Citizenship-related attitudes were measured by five items on students'

322    support for *democratic values*. This scale combines the aspects of freedom of speech and citizenship-related rights

323    (e.g., all people should have their social and political rights respected; $\alpha \geq .68$). Finally, three measures of students'

324    expected participation as adults were used: On the one hand, students' expectations to participate in elections

325    (*future electoral participation*) were measured by three items (e.g., expectation to vote in national elections;

326    $\alpha \geq .79$). On the other hand, protest-related political participation was measured via two scales: The six-item scale

327    *future legal protest* (e.g., collecting signatures for a petition; $\alpha \geq .78$) was used as a measure of widely accepted

328    protest participation in democracies, whereas *future illegal protest*, as anticipated by the adolescents, was also

329    included (3 items, e.g., occupying public buildings; $\alpha \geq .86$).

330    **Student- and family-level correlates.** [4] At the student level, sociodemographic information that reflects

331    individual or family-based assets shaping the developmental niche for emergent participatory citizenship is used

332    in correlational analyses: students' *gender* (0 = boy, 1 = girl) and family SES, measured via the common proxy

333    *home literacy* (six-point scale from 0 = 0-10 books to 5 = more than 500 books; see Persson 2015, for a

334    justification of this measure). *Discussions* of political and social issues with parents and/or peers *outside of school*

335    was measured by four items (e.g., talking with parent(s) about political and social issues) as another aspect of the

336    developmental niche ($\alpha \geq .79$).

337    **School-level predictors.** At the school-level, the *percentage of girls* in the school sample was used, and the *school*

338    *SES* was measured as the average of students' home literacy background. These aggregate measures reflect

339    important aspects of the school. Further, ease of access to educational resources was measured as the ratio of

340    students per teacher at school (*student-teacher ratio*). Safety of the school environment was measured as *social*

341    *problems at school*, indicating the prevalence of disruptive behaviors of students at school (e.g., frequency of

342    vandalism, bullying etc.), as reported by the principal (9 items, $\alpha \geq .71$).

343    **Community-level predictors.** All community-level measures of ecological assets were measured via the

344    principal questionnaire. The *size of the community* (five-point scale, from 0 to 4: village, small town, town, city,

345    large city) was used as an indicator of urbanicity. The available *resources in the community* are ecological assets

346    and were measured by six items (e.g., public library, museum or art gallery; $\alpha \geq .72$). Furthermore, *opportunities*

---

[3] Following the tradition of other large-scale assessments of the IEA, the items that assessed students' civic knowledge have not been made available to those conducting secondary analysis.

[4] Although information about students' immigration status was collected (see first note), these data were reserved for future analysis.

347 *for student participation* in the local community are institutional resources and were measured by means of seven

348 items (e.g., human rights projects, cultural activities; α ≥ .66). Finally, 12 items measured potential *social tension*

349 *in the community* (e.g., youth gangs; α ≥ .83). This is another measure of safety of the physical environment

350 located at the community-level.

351 **Teacher-level predictors.** Teachers and the nature of their teaching play a vital role in students' opportunities for

352 open discussions and meaningful participation at school. The specific sampling strategy employed in ICCS results

353 in teachers of all subjects being sampled and in teachers' responses being aggregated to the school level. Three

354 variables were used as indicators: The indicator of gender balance was the *percentage of female teachers*. In

355 addition, *teachers' experience* in teaching students was measured in years (averaged); their self-reported ability

356 to apply a range of teaching methods (*confidence in teaching methods*) was also examined. The confidence in

357 teaching methods scale contained eight items (e.g., group work, lecturing; α ≥ .65). Finally, the school is a place

358 where teachers can serve as role models for students by demonstrating collaborative *participation in school*

359 *governance*. Seven items measured this ecological asset (e.g., teachers actively take part in school development

360 activities; α ≥ 80).

361 **Data Analysis**

362 The research questions were addressed in several steps. First, two-level latent class analysis (LCA) was performed

363 in Latent Gold 5.1 (Vermunt and Magidson 2016) to identify distinct groups of students, where students within

364 groups would be more homogenous in relation to their perceptions of school climate than students between groups.

365 The two-level analyses accounted for the data structure with students being nested in schools; missing responses

366 were handled in the Likelihood function while conducting the LCA (Vermunt and Magidson 2016). Relative fit

367 measures were utilized and triangulated against classification reliability to decide on the number of groups (latent

368 classes) that would be most suitable to describe the student sample in terms of their perceptions of school context.

369 The identified latent classes were then inspected with respect to a range of potential student-level correlates (distal

370 outcomes) to better understand the groups and to validate their distinctiveness.

371 Finally, two-level fixed effects multinomial regression analyses were performed to predict group membership

372 using contextual variables. On the one hand, school, community and teaching contexts are distinct conceptually

373 and with respect to the types of measures and the participation rates. On the other hand, the number of schools is

374 limited, and the higher-level model might be inflated by considering all contexts in one analysis. Therefore,

375 separate models were estimated to examine: (1) characteristics of the student and home background, which shape

376 the developmental niche above and beyond other contextual influences; (2) school-related characteristics; (3)

community context; and (4) the aggregated teacher variables. The analyses described in points (2) through (4) were performed controlling for student characteristics. Because missing data in the predictor variables could not be properly handled as part of these analyses, a two-level multiple imputation ("EM imputation") was performed. Furthermore, predictors that were scaled by means of item response theory were grand mean-centered in these analyses.

<center>**Results**</center>

**Distinct Groups**

In a first step, LCA of students' perceptions of the classroom climate and overall school climate items (see Table 2) were performed separately for each country. The fit indices indicated that five latent classes would be most suitable to describe the data in each country (based on the relatively smallest information criteria; Collins and Lanza 2010). In a next step, LCA of the pooled data from all four countries were performed. In Table 3, we see that several fit indices favored a solution with four or five latent classes, as some did not decline substantially (Collins and Lanza 2010).[5] Additional tests were conducted to examine whether the identified groups have the same response profiles in each country. All slopes were found to be invariant across the four countries. However, two items were identified to have non-invariant thresholds using item-level invariance tests (Kankaraš, Miloš, Moors, Guy and Vermunt 2011).[6] In addition, models with different group sizes across countries performed better than models assuming that group sizes would be identical in all four countries (see Table 4). Therefore, the latent class model with two direct effects and unequal group sizes was selected as most appropriate to describe the data.

<center><INSERT TABLE 3 HERE></center>

The following section presents the profiles of students' perceptions of the school climate and how these profiles are associated with civic knowledge, attitudes, and expected adult participation. This characterization helps us to better understand the differences and similarities among the identified groups. Given that a group of alienated students identified according to their more general social attitudes had been found in earlier analysis, in this analysis we wanted to examine whether there is a group of students alienated from participation in their schools. Subsequently, associations between contextual variables and student profiles are presented to understand which ecological assets are meaningful predictors of group membership.

---

[5] Had we chosen six latent classes, one of these five latent classes would have split into two latent classes (one of them of extremely small size). Furthermore, the fit indices of separate LCA on each aspect of the school climate supported three- to six-class models. Their triangulation suggested five latent classes as the optimal solution, which reflects the student profiles very well. More complex latent class models performed worse than the models reported here.

[6] "Teachers present several sides of the issues […]." and "All schools should have a <school parliament>."

403      <INSERT TABLE 4 HERE>

404  **Latent Class Profiles based on Classroom and School Climates**

405  Figure 1 shows the mean scores for each item and group, whereas Figure 2 provides a more nuanced image of the

406  distinct differences. In addition, student-level distal outcomes were used to provide more detailed descriptions of

407  these groups and to help label each of them (see Figure 3 and Table 5). Table 6 summarizes the group sizes per

408  country and overall.

409      <INSERT FIGURE 1 HERE>

410      <INSERT FIGURE 2 HERE>

411  **Activist.** Starting with the group that reports the most positive school climate, the first group of students was

412  labeled *Assured activists*, as they consistently reported perceiving their school context as very open and supportive

413  for student voice and participation (see Figures 1 and 2). *Activists* are also likely to score high on most indicators

414  of emergent participatory citizenship (see Figure 3): This group on average has the highest levels of civic

415  knowledge and understanding, as well as the highest levels of political efficacy, and the most positive attitudes

416  towards democracy. While this group also shows the highest expectations to participate in a range of political

417  activities in the future, their intentions to participate in illegal protest activities is significantly lower than in most

418  other groups. In total, roughly 16% of all students were in this group, though Finnish and Swedish students were

419  somewhat underrepresented among *Activists* (compared to Danish and Norwegian students).

420      <INSERT FIGURE 3 HERE>

421      <INSERT TABLE 5 HERE>

422  **Debater.** The second and third group had contrasting response patterns. *Constructive debaters* commonly use the

423  two highest response categories, and for the first three items on classroom climate, they primarily respond that

424  this is "often" the case. Although members in this group tend to perceive the classroom as very open for discussion,

425  their perception of the value of student participation in the school as a whole tends to be lower than for *Activists*

426  and the *Communitarians*. Although about one quarter of the students was in this group, almost half of all Danish

427  students were *Debaters*. What makes members of this group distinct from *Communitarians* (the next group to be

428  discussed) is their tendency to engage somewhat more frequently in civic discussions outside school (one tailed

429  $p < .01$), which explains the label. They also had relatively low support for democratic values.

430  **Communitarian.** *Confident communitarians* were given this name due to their high probability to strongly agree

431  with indicators of the value of student participation at the school level. In fact, members of this group and *Activists*

432  never disagreed or strongly disagreed that their participation at school is meaningful. However, these students on

average had the second to lowest perceptions of their classroom being open for discussion, and they were in between the *Indifferent* and *Activist* groups in terms of indicators of emergent participatory citizenship. What makes them different from the *Debaters* is their significantly stronger support for democratic values, as well as their less frequent involvement in discussions about social and political issues with peers and parents outside school. *Communitarians* represent the next to smallest group overall and are especially rare in Denmark (see Table 6).

<INSERT TABLE 6 HERE>

**Indifferent.** The majority of students labeled the *Indifferent* group, reported moderate perceptions of their school context as open and supportive for student voice and participation. Students in this group more frequently used the second highest response category throughout when indicating their perceptions of school climate. Although they were basically in the middle between the previously described groups and the last group that is described below, they were below average on most indicators of emergent participatory citizenship and had attitudes to democracy that were as negative as *Alienated* students. Finally, it is noteworthy that this group comprised less than a third of all students in Denmark, whereas more than half of all Finnish students were categorized as *Indifferent*.

**Alienated.** Despite the comparatively negative perception of classroom context among members of the last group, their average perceptions of the value of student participation at school are quite moderate. At the same time, members of this group have a higher likelihood of using the most extreme, negative response category than members of the other groups (see Figure 2). This negative view on school context is associated with the most negative results on other indicators of emergent participatory citizenship: On average, students in this group are least knowledgeable in the civic domain, are least efficacious and have the most negative attitudes towards democracy. Although they are least likely to expect to participate in legal forms of political action in the future, they report the highest levels of expected illegal protest behavior. *Alienated* students form the smallest group in Denmark, Finland and Norway (less than 8%), but in Sweden they are more common than *Communitarians*.

**Prediction of Group Membership**

Finally, we examined the associations between contextual variables and the student profiles to learn which characteristics of adolescents' contexts are nurturing for emergent participatory citizenship, and which contexts appear conducive to alienation. The largest group of students, the *Indifferent* group, was used as a reference group in the analyses that are presented below.

462   **Group membership and home context.** The student-level analysis (no table) as well as the multilevel analyses

463   displayed in the following tables suggest that girls are more likely than boys to be *Debaters* or *Activists*. The odds

464   of being in the *Alienated* group compared to membership in the *Indifferent* group are significantly higher for boys

465   than for girls. Socioeconomic background, measured via home literacy resources, is negatively associated with

466   being in the *Indifferent* group, that is, higher socioeconomic background goes with better chances of being an

467   *Activist*, a *Debater,* or a *Communitarian*. Finally, the more students discuss social or political issues outside

468   school, the larger their odds of being in the groups of *Activists* or *Debaters*, and the less likely students are to be

469   in the *Alienated* group.

470   **Group membership and school context.** The results in Table 7 show no significant effect for the student gender

471   ratio. However, the odds of being in the *Alienated* group are higher the higher the average socioeconomic status.

472   Furthermore, the principals' report of fewer social problems at the school is positively associated with membership

473   in the *Debater* and *Activist* groups.[7]

474                                    <INSERT TABLE 7 HERE>

475   **Group membership and community context.** The results in Table 8 suggest that community context *per se*

476   matters less than school context. Variations in community context are primarily associated with membership in

477   the *Communitarian* group. Specifically, smaller, more rural communities, and more opportunities for student

478   participation in the local community are associated with higher odds of being a *Communitarian* rather than an

479   *Indifferent* student. On the other hand, opportunities for student participation in the local community are

480   negatively associated with being a *Debater* (in the classroom setting). In addition, social tension in the community

481   predicts higher levels of membership in the *Alienated* group.

482                                    <INSERT TABLE 8 HERE>

483   **Latent class membership and teaching context.** Finally, Table 9 shows the effects of teacher variables

484   (aggregated at the school level due to the ICCS sampling design) on group membership. The results indicate that

485   being in schools with a large proportion of male teachers is associated with higher odds of their students being

486   *Activists* or *Debaters*. More importantly, teacher role models seem to matter for the development of emergent

487   participatory citizenship: The more teachers at school are involved in school governance, the higher the odds that

488   students will be in one of the three more advantaged groups in terms of emergent participatory citizenship.

489   Specifically, a one-point increase in teacher participation in school governance goes hand in hand with 3% higher

---

[7] All results were compared to analyses in which cases with missing data were eliminated, yielding only one significant difference: Had cases been eliminated from the analyses, we would have identified a significant negative effect of the student-teacher ratio on being in the *Alienated* group ($p < .05$).

490 odds of students being an *Activist*, a *Debater*, or a *Communitarian* instead of an *Indifferent* student. Students at

491 schools where teachers on average are more confident in using a range of teaching methods have higher odds of

492 being in the *Alienated* group and lower odds of being *Communitarians*. Further analysis of teacher data will be

493 necessary to clarify this, remembering that teachers respond to curriculum requirements as well as to perceptions

494 of what will work with their students in developing and using various instructional modes.

495 <INSERT TABLE 9 HERE>

496 **Discussion**

497 This analysis examined ninth graders' perceptions of school context as open and supportive of student voice and

498 participation using large-scale nationally representative cross-sectional data from four Nordic countries. Many

499 studies have shown that positive school climates that encourage students to share their opinions and to contribute

500 to decisions about the school are important for the civic development of adolescents (Knowles et al. in press;

501 Mager and Nowak 2012), but the distinct features and the contextual predictors of how students perceive the

502 school climate remain unclear. The current analysis is the first to show how adolescents differ in their perceptions

503 of the school and classroom climates considered together, and that multiple ecological assets shape how young

504 people perceive the climate at their school. Thus, the contexts that surround young people may contribute to their

505 civic development through multiple and inter-related aspects of the developmental niche (Torney-Purta and

506 Amadeo 2011).

507 Based on a latent class analysis, and in line with the expectation that there is within-school heterogeneity in

508 adolescents' perceptions of school climate contexts, five distinct groups of students with distinct profiles in their

509 perceptions of school context were identified. Subsequent analyses showed that group membership was associated

510 with different levels of civic knowledge, efficacy, and support for democratic values. Furthermore, group

511 membership was also predictive of students' expected participation in political activities in the future. One group

512 expressed negativity about their classes and schools, was unwilling to become engaged and was labeled *Alienated*.

513 The other groups were labeled *Indifferent*, *Activist*, *Debater*, and *Communitarian*, based on students' perceptions

514 of school context. These groups were also characterized by different levels of emergent participatory citizenship.

515 In short, students' perceptions of their contexts at school appear helpful in understanding civic development.

516 Schools and communities should consider encouraging adolescents to share their views and to contribute more

517 fully to decision-making in their schools as Flanagan et al. (2007) and Knowles et al (in press) also argue.

518 In addition, ecological assets at the individual, family, school and community levels were significant

519 predictors of the profiles summarizing perceptions of class and school climate. These results suggest that

ecological assets are associated with the civic development of adolescents and that the contexts that surround adolescents form niches that can support or hinder the development of emergent participatory citizenship (Torney-Purta and Amadeo 2011). More precisely, compared to *Indifferent* students, *Alienated* students on average were less frequently engaged in civic discussions outside of school. Members of all the other three groups reported more frequent such discussions than did *Indifferent* students. Furthermore, *Debaters* and *Activists* were more commonly found at schools where principals reported relatively few social problems like bullying. Aspects of the community context such as urbanicity and opportunities for student participation were predictive of being a *Communitarian*; and membership in one of these three groups was more likely if teachers collaboratively engaged in school governance activities. Therefore, both adolescents' distinct perceptions of student voice and influence at school as well as contextual predictors can help identify adolescents who may be at risk of being alienated at school (and potentially in broader settings, which could be examined in future research). These insights may be useful to promote aspects of a productive school climate that can further a positive civic development at a time when young people are susceptible to a variety of potentially negative external influences (Eckstein and Noack 2014).

**Developmental Niches**

In the ecological assets framework, relatively proximal ecological settings are considered in relation to the civic development of young people. These include social networks and access to family, school and community resources (Lerner et al. 2014). These everyday settings are predictors of students' civic development, and are part of the developmental niches model. More precisely, Torney-Purta and Amadeo (2011) identified three dimensions of developmental niches: settings where adolescents have face-to-face contact with others that are directly relevant to adolescents' development (family, school, peers, community organizations), societal customs, and characteristics and beliefs of those who care for or teach adolescents. The present analysis addressed these dimensions by examining the associations between students' perceptions of the setting of school context and characteristics of their homes, schools, and communities, as well as teaching-related factors. These are daily life settings that matter. Examining both classroom- and school-level opportunities for students to express themselves should be more central to future research on civic development.

The idea behind the endpoint of "emergent participatory citizenship" to which these developmental niches contribute is a complex one. It is not that there is a simple relation between living in a home with activist parents or attending a school where students cooperate for the common good and outcomes often associated with participatory citizenship. These niches are multidimensional and often interactive, and they require a multilevel

perspective on the civic development of young people that extends beyond formal education processes (see also Amnå 2012; Eckstein and Noack 2016; Lerner et al. 2014). Male and female students may have different experiences, as may be the case for students whose families live below the poverty line (to give just two examples). However, identifying the dimensions that are important, as this analysis does, can provide useful guidance to those who wish to enhance the process of developing emergent participatory citizenship.

**Student characteristics and family background.** Previous studies have shown that boys are at greater risk for showing signs of alienation in their general social attitudes (Reichert 2016b; Reichert 2017; Torney-Purta 2009; Torney-Purta and Barber 2011). Similarly, this study found that boys and girls have different likelihoods of being in the *Alienated* group with respect to perceptions of schooling. Even in Nordic schools that provide relatively well-developed structures for democratic school participation (Blossing et al. 2014), boys are less likely to be interested in debate or to believe that their participation at school is valued. At the same time, additional analyses found that boys are less likely to expect to participate in future civic activities, but more likely than girls to report expected participation in illegal protest activities. Future research needs to address the ways in which male and female students differ in how the aspects of the developmental niche at school can positively influence participatory citizenship. For instance, Eckstein and Noack (2014) found stronger sense of community among girls than boys, and that students' sense of community at school was a positive predictor of other aspects of school climate. Building community at school appears to be an important aspect of a nurturing developmental niche (Jagers et al. 2017). Future studies are required to clarify the gender differences in perceiving school climate. Other factors might be considered such as the role of peer interaction outside school in reinforcing alienation among boys (Barber et al. 2015b; Ellis et al. 2018).

Home resources also play a role in predicting membership in the identified groups, a finding that is neither novel nor surprising. Especially important is the effect of discussions with peers and parents, however. If students have opportunities to engage in discussions about social or political issues outside of school, they are likely to perceive their school as more valuing and are at less risk of being alienated. Discussions with parents often reflect beliefs that their offspring need to learn about and be able to discuss social and political issues. These experiences could equip adolescents to participate constructively when teachers encourage students to express themselves.

**School context.** Schools serve as an important niche for the civic development of adolescents and can provide an environment that reduces alienation. Unsurprising is the finding that the existence of social problems at school (e.g., bullying or vandalism) is associated with lower probabilities of being an *Activist* or a *Debater*. The fewer social problems students encounter at school, the more open and positive will they perceive the school context for

sharing opinions and contributing to the school. Students who feel safe at school are more likely to sense that their perspectives and contributions are valued, and disruptive behaviors of other students at school has the potential to hamper emergent participatory citizenship and achievement (Ferrín Pereira et al. 2015; Koth et al. 2008). Hence, schools should continue to place priority on reducing social tensions that present negative contexts for emergent participatory citizenship.

**Community context.** The results suggest that community context *per se* matters less than school context in the prediction of membership in the identified groups of students. Furthermore, aspects of the community were primarily associated with membership in the *Communitarian* group, which supports the validity of the chosen label. Smaller communities and communities that provide spaces for participation of adolescents are more likely to be those in which *Communitarians* emerge at school. The provision of opportunities for student participation is an important characteristic of the local community that helps to develop citizens that are neither *Indifferent* nor *Alienated*.

**Teaching context.** Adults' expectations and beliefs about education and civic communities have the potential to influence the interactions that take place within the developmental niche where the individual is embedded (Torney-Purta and Amadeo 2011). An important message here is that teachers can serve as models for students. Teachers who are able to take action in school governance can shape developmental niches and become role models for positive development of emergent participatory citizenship. Although Nordic curricula and education policies emphasize the value of democratic participation (Oftedal Telhaug et al. 2006), the significance of teachers' participation in school governance for motivating students' democratic participation at school could be further emphasized. Blossing et al. (2014) note that the ideal of participation at Nordic schools may not be fully realized at the local level. By way of example, focus group interviews showed that Swedish adolescents do not recognize their schools as places where democracy is practiced (Arensmeier 2010). Schools could intensify their efforts to show that the opinions and contributions of teachers and students matter above and beyond those of school administrators.

Amnå and Ekman (2014) discuss the concept of "standby citizens" who are able to and will participate if motivated by worrisome political events. Therefore, adolescents need to be able to identify social and political problems in order to participate in times of need. Developing this ability could be enhanced by small group discussions and reciprocal cooperation in class through which students are encouraged to listen to others and take their perspectives (Arensmeier 2015). However, teachers need to be prepared to scaffold such discussions and to interact with students in ways that encourage them to contribute to their schools.

On the other hand, the measures of teaching confidence in this dataset did not relate in expected ways to membership in one of the five groups. One explanation could be that teachers whose classes have many alienated or otherwise difficult students may try to develop the ability to use a wide range of teaching methods to engage them (but will not always succeed). Also remember that the teachers sampled were from a range of subject matters (some of which are less appropriate than others for using the methods listed in the teacher survey).

Bayram Özdemir et al. (2016) examined adolescents' civic engagement at school in relation to students' perceptions of teachers' behaviors. Their results revealed that only engaged and inspiring teaching styles fostered adolescents' initiations of civic and political discussions in class. Consequently, the way that civic and political issues are presented for discussion in classrooms may matter more than teachers' confidence in using particular methods. Observational studies are needed to extend the results from the self-reported measures here.

**Societal context.** Although the countries in this sample were comparatively homogenous in relation to their cultural and historic traditions, certain profiles were more common in some countries than in others. It appears that students in Denmark are especially likely to live in supportive developmental niches: Only one third of students in this country were in the *Indifferent* or *Alienated* groups, whereas it was nearly half of the students in each of the other three countries. Though the *Indifferent* group was the largest in the other three countries, Danish students were especially likely to be in the group of *Debaters*. Hahn (1998, 2015), who has studied Danish civic education over several decades, raises several possibilities, especially that Denmark is a nation where discussion is valued and widespread (although the term "debater" assigned in this study may indicate somewhat more contention than is common). Sweden – the country with the largest number of students who experience alienation from their schools (compared to Denmark, Finland and Norway) – has taken the market-oriented school system further than other Nordic countries and has implemented a national school inspection system (Blossing et al. 2014). Again, we can only speculate whether these facts may be causally related to these country differences. However, it is noteworthy that the ethos of Swedish school inspections has changed over the previous decades (Gustafsson et al. 2014). Furthermore, Ekholm and Lindvall (2012) examined the potential effects of school inspections on value-adjusted marks in Swedish schools with ninth-grade students. These authors found that in 46% of the schools that were inspected in 2003 or 2004, the marks declined in the following years, with improvements only in 29% of all schools. Therefore, future research may also need to consider the interaction between the implementation of school inspection and movement toward a market-oriented school system.

**Limitations and Future Research**

Finally, a few limitations of the present study need to be noted, which also provide avenues for future research. First, the ICCS provides cross-sectional data, hence this research was correlational in nature. Yet it is plausible that contextual variables at the school, community and teaching levels precede students' perceptions of school context (or have a stronger effect on students' perceptions than vice versa). Although large-scale longitudinal data collections are challenging at an international level, future waves of quantitative large-scale studies should make the collection of longitudinal data a priority in order to provide more possibilities for causal analyses in comparative perspective. Using person-centered analysis, longitudinal data would also enable researchers to examine whether, at which age, and perhaps even why transitions in views of school climate take place. Another question is how the effects of developmentally relevant assets may change over time. The combination of longitudinal data and a person-centered approach to its analysis would enable developmental psychologists and school educators to establish nurturing developmental niches for youth at different stages during adolescence.

Second, this study had a regional focus on highly developed countries with stable democratic traditions. Future studies should apply person-centered analyses to data from other regions. The ICCS 2009 database provides opportunities in many other countries to extent the present analysis, and another wave (ICCS 2016) will soon be available for analysis.

Third, the Danish and Norwegian teacher samples were quite small. Therefore, caution needs to be exercised when drawing conclusions from the teacher analysis. Yet it is also noteworthy that the effect of teachers as role models makes sense. Future research might examine how schooling can be conceived as part of a developmental niche, and analyze the role of concurrent teacher practices across classrooms at school (Jagers et al. 2017). Furthermore, we need a better conceptualization of how peers contribute to these niches. Research has shown that spending time with peers in unstructured contexts out of school is associated with lower levels of civic knowledge and relatively poor attitudes toward women's rights (Barber et al. 2015b), and is also associated with a higher propensity of political alienation (Torney-Purta and Barber 2011).

Fourth, the measurement of community context was constrained as it relied on reports by the school principals. It would be better if survey data could be linked with official data and perhaps location. However, this raises issues of data privacy, and the way these data were collected certainly balances costs and benefits quite well.

Last, the effects of contextual variables may seem relatively small. It is possible that aspects not measured in the current study are important contextual predictors of the student profiles. However, it is also necessary to note

668     that the scales of the contextual variables differed from those of the student level predictors. For example, being

669     a girl instead of a boy is qualitatively different from a 1% change in the relative number of girls at a school.

670                                          **Conclusion**

671     Several important conclusions emerge from this study. First, the analysis showed that students' perceptions of

672     whole school contexts and of classroom contexts both contribute to their overall view of their schools as open and

673     supportive for student voice and participation (or alternatively, not open or supportive). Second, these views are

674     intertwined with school and community contexts as reported by teachers and school administrators. Multiple

675     contexts shape the developmental niches of adolescents, as Torney-Purta and Amadeo (2011) proposed. Students'

676     perceptions are not merely a result of individual characteristics or specific classroom experiences. Instead

677     ecological assets in each of these contexts contribute to adolescents' overall perceptions of their school's climate.

678     Characteristics of both the classroom and the school as a whole contribute to this process.

679        These perceptions of the classroom and school are associated with indicators of emergent participatory

680     citizenship. By enhancing the niches in which emergent participatory citizenship develops, students may also

681     perceive more opportunities to shape their environments, which may further support positive youth development.

682     Raising teachers' and community leaders' awareness of the associations between contextual assets, students'

683     perceptions of the school climate, and factors associated with alienation from school are important. Setting ground

684     rules, preparing teachers to scaffold discussions, and more generally building schools in which adolescents can

685     experience a sense of community and practice democratic participation is a promising direction.

686        In addition, the present analysis found differences even among a relatively homogenous set of highly

687     developed countries with long democratic traditions. This aligns with the developmental niches model, which

688     argues that besides historically rooted customs and cultural beliefs, political and social institutions also shape the

689     developmental niches and, hence, emergent participatory citizenship (Torney-Purta and Amadeo 2011).

690     Comparative studies on the development of adolescents are fruitful sources to identify directions for promoting

691     positive youth development. If the aim of civic and citizenship education and related programs is to foster the

692     development of emergent participatory citizenship among adolescents, then adults who surround adolescents need

693     to consider ways to enhance the *various contexts* that constitute adolescents' developmental niches. The present

694     study has shown that multiple contexts may need enhancement in order to support adolescents' civic development

695     and has shown the relevance of ecological assets in that endeavor.

696

## References

697

698 Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52*, 27–58.

699 Amnå, E. (2012). How is civic engagement developed over time? Emerging answers from a multidisciplinary

700 field. *Journal of Adolescence, 35*, 611–627.

701 Amnå, E., & Ekman, J. (2014). Standby citizens: Diverse faces of political passivity. *European Political Science*

702 *Review, 6*, 261–281.

703 Amnå, E., & Zetterberg, P. (2010). A political science perspective on socialization research: Young Nordic

704 citizens in a comparative light. In L. R. Sherrod, J. Torney-Purta, & C. A. Flanagan (Eds.), *Handbook of*

705 *research on civic engagement in youth* (pp. 43–65). Hoboken, NJ: Wiley.

706 Arensmeier, C. (2010). The democratic common sense: Young Swedes' understanding of democracy -

707 Theoretical features and educational incentives. *Young, 18*, 197–222.

708 Arensmeier, C. (2015). Swedish students' conceptual knowledge about civics and citizenship: An interview

709 study. *Citizenship Teaching & Learning, 11*, 9–27.

710 Barber, C., Sweetwood, S. O., & King, M. (2015a). Creating classroom-level measures of citizenship education

711 climate. *Learning Environments Research, 18*, 197–216.

712 Barber, C., Torney-Purta, J., Wilkenfeld, B., & Ross, J. (2015b). Immigrant and native-born adolescents' civic

713 knowledge and attitudes in Sweden and the United States: Emergent citizenship within developmental

714 niches. *Research in Comparative and International Education, 10*, 23–47.

715 Bayram Özdemir, S., Stattin, H., & Özdemir, M. (2016). Youth's initiations of civic and political discussions in

716 class: Do youth's perceptions of teachers' behaviors matter and why? *Journal of Youth and Adolescence,*

717 *45*, 2233–2245.

718 Blossing, U., Imsen, G., & Moos, L. (2014). Schools for all: A Nordic model. In U. Blossing, G. Imsen, & L.

719 Moos (Eds.), *The Nordic education model*: *'A school for all' encounters neo-liberal policy* (pp. 231–239).

720 Dordrecht: Springer.

721 Campbell, D. E. (2007). Sticking together: Classroom diversity and civic education. *American Politics*

722 *Research, 35*, 57–78.

723 Campbell, D. E. (2008). Voice in the classroom: How an open classroom climate fosters political engagement

724 among adolescents. *Political Behavior, 30*, 437–454.

725 Carretero, M., Haste, H., & Bermudez, A. (2016). Civic education. In L. Corno & E. M. Anerman (Eds.),

726 *Handbook of educational psychology* (3rd ed., pp. 295–308). New York: Routledge.

727 Collins, L. M., & Lanza, S. T. (2010). *Latent class and latent transition analysis: With applications in the*

728     *social, behavioral, and health sciences*. Hoboken, NJ: Wiley.

729 Dahl, V., Amnå, E., Banaji, S., Landberg, M., Šerek, J., Ribeiro, N., et al. (2017). Apathy or alienation? Political

730     passivity among youths across eight European Union countries. *European Journal of Developmental*

731     *Psychology*, https://doi.org/10.1080/17405629.2017.1404985.

732 Dassonneville, R., Quintelier, E., Hooghe, M., & Claes, E. (2012). The relation between civic education and

733     political attitudes and behavior: A two-year panel study among Belgian late adolescents. *Applied*

734     *Developmental Science, 16*, 140–150.

735 Eckstein, K., & Noack, P. (2014). Students' democratic experiences in school: A multilevel analysis of social-

736     emotional influences. *International Journal of Developmental Science, 8*, 105–114.

737 Eckstein, K., & Noack, P. (2016). Classroom climate effects on adolescents' orientations toward political

738     behaviors: A multilevel approach. In P. Thijssen, J. Siongers, & J. van Laer (Eds.), *Political engagement of*

739     *the young in Europe*: *Youth in the crucible* (pp. 161–177). New York: Routledge.

740 Ekholm, M., & Lindvall, K. (2012). Skolinspector – i tid och otid. (School inspections - in due time and not so

741     due time). *Pedagogisk Forskning i Sverige, 13*(1), 41–58.

742 Ellis, W., Zarbatany, L., Chen, X., Kinal, M., & Boyko, L. (2018). Peer groups as a context for school

743     misconduct: The moderating role of group interactional style. *Child Development, 89*, 248–263.

744 Ferrín Pereira, M., Fraile, M., & Rubal, M. (2015). Young and gapped? Political knowledge of girls and boys in

745     Europe. *Political Research Quarterly, 68*, 63–76.

746 Flanagan, C. A., Cumsille, P., Gill, S., & Gallay, L. S. (2007). School and community climates and civic

747     commitments: Patterns for ethnic minority and majority students. *Journal of Educational Psychology, 99*,

748     421–431.

749 Gilljam, M., Esaiasson, P., & Lindholm, T. (2010). The voice of the pupils: An experimental comparison of

750     decisions made by elected pupil councils, pupils in referenda, and teaching staff. *Educational Assessment,*

751     *Evaluation and Accountability, 22*, 73–88.

752 Godfrey, E. B., & Grayman, J. K. (2014). Teaching citizens: The role of open classroom climate in fostering

753     critical consciousness among youth. *Journal of Youth and Adolescence, 43*, 1801–1817.

754 Gustafsson, J.-E., Lander, R., & Myrberg, E. (2014). Inspections of Swedish schools: A critical reflection on

755     intended effects, causal mechanisms and methods. *Education Inquiry, 5*, 461–479.

756    Hahn, C. L. (1998). *Becoming political: Comparative perspectives on citizenship education*. Albany, NY: State

757        University of New York Press.

758    Hahn, C. L. (2015). Teachers' perceptions of education for democratic citizenship in schools with transnational

759        youth: A comparative study in the UK and Denmark. *Research in Comparative and International*

760        *Education, 10*, 95–119.

761    Harris, D. N. (2010). How do school peers influence student educational outcomes? Theory and evidence from

762        economics and other social sciences. *Teachers College Record, 112*(4), 1163–1197.

763    Homana, G. (in press). Youth political engagement in Australia and the United States: School student councils

764        and volunteer organizations as communities of practice. *Journal of Social Science Education*.

765    Homana, G., Barber, C, Torney-Purta, J. (2006). *Assessing School Citizenship Education Climate. Implications*

766        *for the Social Studies.* (CIRCLE Working Paper No. 48). College Park, MD: CIRCLE.

767    Isac, M. M., Maslowski, R., Creemers, B., & van der Werf, G. (2014). The contribution of schooling to

768        secondary-school students' citizenship outcomes across countries. *School Effectiveness and School*

769        *Improvement, 25*, 29–63.

770    Jagers, R. J., Lozada, F. T., Rivas-Drake, D., & Guillaume, C. (2017). Classroom and school predictors of civic

771        engagement among Black and Latino middle school youth. *Child Development, 88*, 1125–1138.

772    Kankaraš, Miloš, Moors, Guy, & Vermunt, J. K. (2011). Testing for measurement invariance with latent class

773        analysis. In E. Davidov, P. Schmidt, & J. Billiet (Eds.), *Cross-cultural analysis*: *Methods and applications*

774        (pp. 359–384). New York: Routledge.

775    Knowles, R. T., & McCafferty-Wright, J. (2015). Connecting an open classroom climate to social movement

776        citizenship: A study of 8th graders in Europe using IEA ICCS data. *The Journal of Social Studies Research,*

777        *39*, 255–269.

778    Knowles, R. T., Torney-Purta, J., & Barber, C. (in press). Enhancing citizenship learning with international

779        comparative research: Analyses of IEA Civic Education datasets. *Citizenship Teaching and Learning, 13*(1).

780    Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of

781        school climate: The effect of classroom-level factors. *Journal of Educational Psychology, 100*, 96–104.

782    Lerner, R. M., Wang, J., Champine, R. B., Warren, D. J. A., & Erickson, K. (2014). Development of civic

783        engagement: Theoretical and methodological issues. *International Journal of Developmental Science, 8*(3-

784        4), 69–79.

785   Li, Y., & Lerner, R. M. (2011). Trajectories of school engagement during adolescence: Implications for grades,

786       depression, delinquency, and substance use. *Developmental Psychology, 47*, 233–247.

787   Lin, A. R. (2014). Examining students' perception of classroom openness as a predictor of civic knowledge: A

788       cross-national analysis of 38 countries. *Applied Developmental Science, 18*, 17–30.

789   Mager, U., & Nowak, P. (2012). Effects of student participation in decision making at school: A systematic

790       review and synthesis of empirical research. *Educational Research Review, 7*, 38–61.

791   Manganelli, S., Lucidi, F., & Alivernini, F. (2015). Italian adolescents' civic engagement and open classroom

792       climate: The mediating role of self-efficacy. *Journal of Applied Developmental Psychology, 41*, 8–18.

793   Oftedal Telhaug, A., Asbjørn Mediås, O., & Aasen, P. (2006). The Nordic model in education: Education as part

794       of the political system in the last 50 years. *Scandinavian Journal of Educational Research, 50*, 245–283.

795   Persson, M. (2015). Classroom climate and political learning: Findings from a Swedish panel study and

796       comparative data. *Political Psychology, 36*, 587–601.

797   Quintelier, E., & Hooghe, M. (2013). The relationship between political participation intentions of adolescents

798       and a participatory democratic climate at school in 35 countries. *Oxford Review of Education, 39*, 567–589.

799   Reichert, F. (2016a). Students' perceptions of good citizenship: A person-centred approach. *Social Psychology

800       of Education, 19*, 661–693.

801   Reichert, F. (2016b). Who is the engaged citizen? Correlates of secondary school students' concepts of good

802       citizenship. *Educational Research and Evaluation, 22*, 305–332.

803   Reichert, F. (2017). Young adults' conceptions of 'good' citizenship behaviours: A latent class analysis. *Journal

804       of Civil Society, 13*, 90–110.

805   Reichert, F., & Print, M. (2017a). Civic participation of high school students: The effect of civic learning in

806       school. *Educational Review*, https://doi.org/10.1080/00131911.2017.1316239.

807   Reichert, F., & Print, M. (2017b). Mediated and moderated effects of political communication on civic

808       participation. *Information, Communication & Society, 20*, 1162–1184.

809   Reynolds, D., Sammons, P., Fraine, B. de, van Damme, J., Townsend, T., Teddlie, C., et al. (2014). Educational

810       effectiveness research (EER): A state-of-the-art review. *School Effectiveness and School Improvement, 25*,

811       197–230.

812   Schulz, W., Ainley, J., & Fraillon, J. (Eds.). (2011). *ICCS 2009 technical report*. Amsterdam: IEA.

813   Schulz, W., Ainley, J., & Fraillon, J. (2013). *Student participation at school and future civic engagement:

814       Results from ICCS 2009,* IEA International Research Conference. IEA, Singapore, 2013.

815  Shukla, K., Konold, T., & Cornell, D. (2016). Profiles of student perceptions of school climate: Relations with

816      risk behaviors and academic outcomes. *American Journal of Community Psychology, 57*, 291–307.

817  Theokas, C., & Lerner, R. M. (2006). Observed ecological assets in families, schools, and neighborhoods:

818      Conceptualization, measurement, and relations with positive and negative developmental outcomes. *Applied*

819      *Developmental Science, 10*(2), 61–74.

820  Torney-Purta, J. (2009). International psychological research that matters for policy and practice. *American*

821      *Psychologist, 64*(4), 825–837.

822  Torney-Purta, J., & Amadeo, J.-A. (2011). Participatory niches for emergent citizenship in early adolescence:

823      An international perspective. *The ANNALS of the American Academy of Political and Social Science, 633*,

824      180–200.

825  Torney-Purta, J., & Barber, C. (2011). Fostering young people's support for participatory human rights through

826      their developmental niches. *American Journal of Orthopsychiatry, 81*, 473–481.

827  Torney-Purta, J., Lehmann, R., Oswald, H., & Schulz, W. (2001). *Citizenship and education in Twenty-eight*

828      *countries: Civic knowledge and engagement at age fourteen*. Amsterdam: IEA.

829  Torney-Purta, J., Barber, C. H., & Wilkenfeld, B. (2007). Latino adolescents' civic development in the United

830      States: Research results from the IEA Civic Education Study. *Journal of Youth and Adolescence, 36*, 111–

831      125.

832  Vermunt, J. K., & Magidson, J. (2016). *Technical guide for Latent GOLD 5.1: Basic, Advanced, and Syntax*.

833      Belmont, MA: Statistical Innovations Inc.

834  Zaff, J. F., Kawashima-Ginsberg, K., Lin, E. S., Lamb, M., Balsano, A., & Lerner, R. M. (2011). Developmental

835      trajectories of civic engagement across adolescence: Disaggregation of an integrated construct. *Journal of*

836      *Adolescence, 34*, 1207–1220.

837

868



869 

870 *Figure 1*. Mean scores of the indicators of the five latent classes. *Note:* Data sourced from ICCS 2009.

871

ACTIVIST

DEBATER

COMMUNITARIAN

INDIFFERENT

ALIENATED

OFTEN / STRONGLY AGREE

SOMETIMS / AGREE

RARELY / DISAGREE

NEVER / STRONGLY DISAGREE
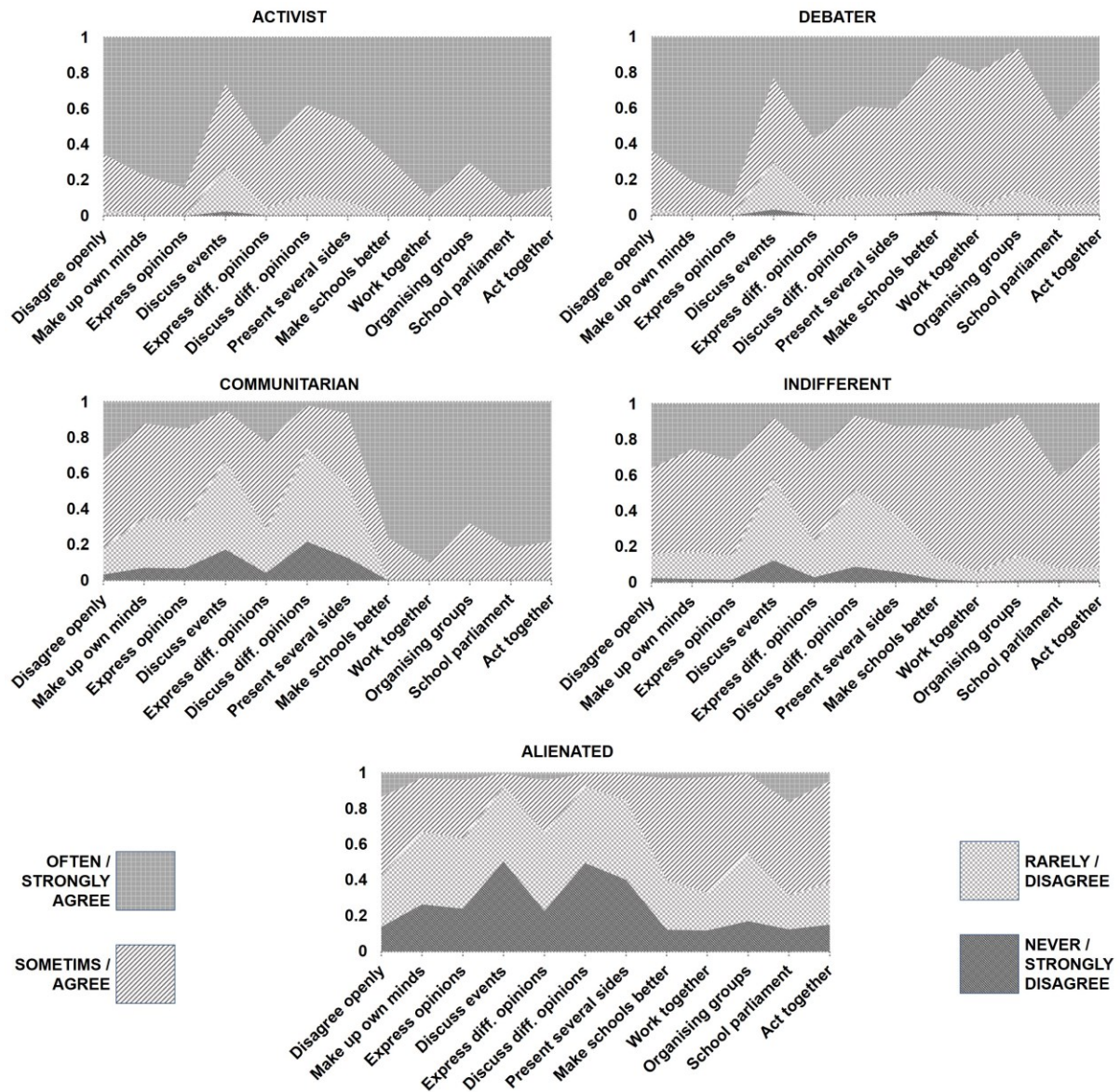
*Figure 2.* Response probabilities per category of each indicator for each of the five latent classes. *Note:* Data sourced from ICCS 2009.

876
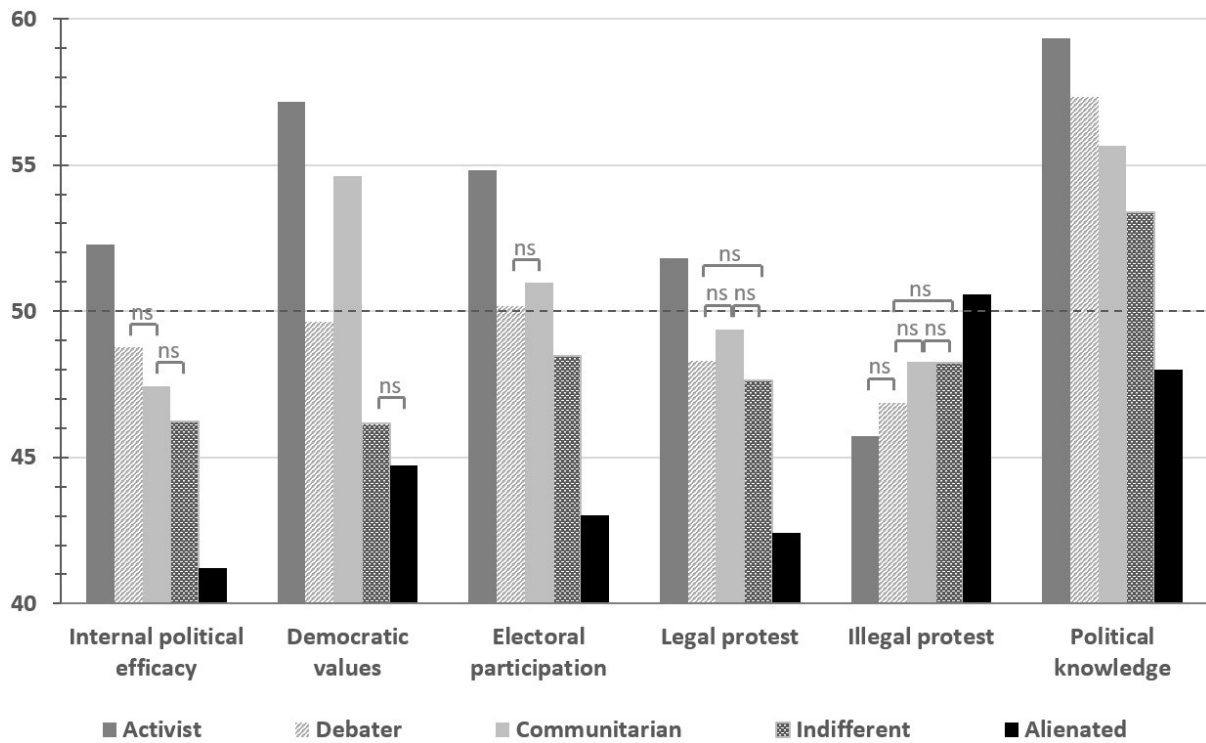
*Figure 3.* Mean scores of student outcomes by latent classes. Higher scores mean "more" of the respective

construct (ns = mean difference between respective groups is non-significant, *p* > .05). *Note:* Data sourced from

ICCS 2009.

881    Table 1

882    *Unweighted Sample Sizes*

| Country | Student Survey | | Teacher Survey | | Principal Survey |
|---|---|---|---|---|---|
| | Schools | Students | Schools | Teachers | |
| Denmark | 193 | 4,508 | 113 | 928 | 171 |
| Finland | 176 | 3,307 | 174 | 2,295 | 174 |
| Norway | 129 | 3,013 | 73 | 492 | 118 |
| Sweden | 166 | 3,464 | 156 | 1,942 | 155 |
| **Total** | **664** | **14,292** | **516** | **5,657** | **618** |

883    *Note.* Data sourced from ICCS 2009.

884

885 Table 2

886 *Means and Standard Deviations of All Measures*

| Variable | M | SD |
|---|---|---|
| **Indicators of school climate** | | |
| Students are able to disagree openly with their teachers | 3.30 | 0.76 |
| Teachers encourage students to make up their own minds | 3.25 | 0.81 |
| Teachers encourage students to express their opinions | 3.33 | 0.80 |
| Students bring up current political events for discussion in class | 2.52 | 0.87 |
| Students express opinions in class even when their opinions are different from most of the other students | 3.15 | 0.81 |
| Teachers encourage students to discuss the issues with people having different opinions | 2.68 | 0.89 |
| Teachers present several sides of the issues when explaining them in class | 2.85 | 0.86 |
| Student participation in how schools are run can make schools better | 3.12 | 0.67 |
| Lots of positive changes can happen in schools when students work together | 3.28 | 0.61 |
| Organising groups of students to express their opinions could help solve problems in schools | 3.07 | 0.65 |
| All schools should have a \<school parliament\> | 3.44 | 0.67 |
| Students can have more influence on what happens in schools if they act together rather than alone | 3.27 | 0.66 |
| **Distal outcomes** | | |
| Political knowledge and understanding | 55.11 | 9.40 |
| Internal political efficacy | 47.51 | 10.88 |
| Democratic values | 50.02 | 10.22 |
| Future electoral participation | 49.75 | 9.56 |
| Future legal protest | 48.17 | 9.52 |
| Future illegal protest | 47.72 | 9.41 |

887

888    Table 2 continued

| Variable | *M* | *SD* |
|---|---|---|
| **Student and home context** | | |
| Female student | 0.51 | 0.50 |
| Home literacy | 2.61 | 1.31 |
| Discussion outside school | 47.73 | 10.36 |
| **School context** | | |
| Percentage of girls | 51.54 | 11.36 |
| School SES | 2.61 | 0.53 |
| Student-teacher ratio | 10.10 | 3.15 |
| Social problems at school | 53.99 | 8.54 |
| **Community context** | | |
| Size of community | 1.37 | 1.15 |
| Resources in community | 53.42 | 8.64 |
| Opportunities for student participation | 48.45 | 10.47 |
| Social tension in community | 47.35 | 9.13 |
| **Teaching context (school averages)** | | |
| Confidence in teaching methods | 49.32 | 5.01 |
| Participation in school governance | 49.20 | 4.73 |
| Teacher experience (in years) | 14.45 | 5.00 |
| Percent female teachers | 63.06 | 16.39 |

889    *Note.* Data sourced from ICCS 2009.

890

891    Table 3

892    *Comparison of Fit Indices of Different Latent Class Models Using the Pooled Sample*

| Latent class model | LL | BIC | AIC | AIC3 | CAIC | SABIC | Error |
|---|---|---|---|---|---|---|---|
| One-class model | -24596 | 50286 | 49479 | 49623 | 50430 | 49828 | 0.00 |
| Two-class model | -23354 | 48198 | 47100 | 47296 | 48394 | 47576 | 0.08 |
| Three-class model | -22789 | 47463 | 46074 | 46322 | 47711 | 46675 | 0.11 |
| Four-class model | -22427 | 47133 | 45453 | 45753 | **47433** | 46180 | 0.12 |
| Five-class model | -22206 | **47088** | 45116 | 45468 | **47440** | **45970** | 0.15 |
| Six-class model | -22082 | 47235 | 44973 | 45377 | 47639 | **45952** | 0.16 |
| Seven-class model | -21993 | 47452 | 44898 | **45354** | 47908 | 46003 | 0.17 |
| Eight-class model | -21921 | 47704 | **44858** | 45366 | 48212 | 46090 | 0.20 |
| Nine-class model | -21875 | 48007 | 44871 | 45431 | 48567 | 46228 | 0.21 |

893    *Note.* LL = Log-Likelihood; BIC = Bayesian Information Criterion; AIC = Akaike Information Criterion; AIC3

894    = AIC with 3 as penalizing factor; CAIC = Consistent AIC; SABIC = Sample-size Adjusted BIC; Error =

895    classification error. Numbers in bold indicate candidate models given the respective fit index. Data sourced from

896    ICCS 2009.

897

898    Table 4

899    *Comparison of Model Fit in Relation to Measurement Invariance across Four Countries*

| Model | LL | BIC | *cmP* | Error |
|---|---|---|---|---|
| H0: Heterogeneous | -22206 | 47088 | 0.00 | 0.15 |
| H1: Partial invariance (equal slopes) | -22257 | 46094 | 0.00 | 0.15 |
| H2: Structural invariance (H1 with equal thresholds) | -22517 | 45795 | 0.00 | 0.15 |
| **H3: H2 with two direct effects** | **-22413** | **45723** | **1.00** | **0.15** |
| H4: H3 with equal class sizes | -22475 | 45755 | 0.00 | 0.15 |

900    *Note.* LL = Log-Likelihood; BIC = Bayesian Information Criterion; *cmP* = approximate correct model

901    probability; Error = classification error. Model in bold selected for further examination (see text for details).

902    Data sourced from ICCS 2009.

903

904　Table 5

905　*Predicting Distal Outcomes from Group Membership (Reference Group: Indifferent Students)*

| | Civic knowledge | | Internal political efficacy | | Democratic values | | Electoral participation | | |
|---|---|---|---|---|---|---|---|---|---|
| Activist | 5.96*** | (0.75) | 6.05*** | (0.88) | 10.85*** | (0.79) | 6.35*** | (0.78) | 4 |
| Debater | 3.95*** | (0.76) | 2.54** | (0.86) | 3.44*** | (0.78) | 1.71* | (0.79) | 0 |
| Communitarian | 2.28* | (0.93) | 1.21 | (1.06) | 8.33*** | (0.99) | 2.50** | (0.97) | 1 |
| Alienated | -5.37*** | (1.00) | -5.01*** | (1.21) | -1.55 | (0.96) | -5.44*** | (1.05) | -5 |
| Intercept (Indifferent) | 53.68*** | (0.50) | 46.22*** | (0.57) | 46.17*** | (0.51) | 48.48** | (0.52) | 47 |

906　*Note.* Standard errors of the coefficients are in parentheses. Intercepts are tested against the international scale

907　mean of 50. Data sourced from ICCS 2009.

908　*p < .05; **p < .01; ***p < .001.

909

910     Table 6

911     *Distribution of Students per Country*

| Country | Activist | Debater | Communitarian | Indifferent | Alienated |
|---|---|---|---|---|---|
| Denmark | 18.5% | 41.6% | 5.3% | 31.1% | 3.6% |
| Finland | 12.2% | 14.3% | 14.7% | 51.0% | 7.8% |
| Norway | 19.8% | 17.6% | 13.7% | 41.6% | 7.4% |
| Sweden | 14.5% | 26.2% | 7.3% | 40.6% | 11.4% |
| **Overall** | **16.2%** | **24.9%** | **10.2%** | **41.1%** | **7.5%** |

912     *Note.* Data sourced from ICCS 2009.

913    Table 7

914    *Predicting Group Membership Using School Context (Reference Group: Indifferent Students)*

| | Activist | | | Debater | | | Communitarian | | | Alienated | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 95% CI | | | 95% CI | | | 95% CI | | | 95% CI | |
| Predictor | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* |
| Student level | | | | | | | | | | | | |
| Student gender (boy/girl) | 1.42*** | 1.23 | 1.65 | 1.33*** | 1.14 | 1.54 | 0.90 | 0.75 | 1.09 | 0.34*** | 0.27 | 0.43 |
| SES (books at home) | 1.16*** | 1.08 | 1.23 | 1.07* | 1.01 | 1.13 | 1.14** | 1.05 | 1.24 | 0.95 | 0.87 | 1.03 |
| Discussions outside school | 1.06*** | 1.05 | 1.07 | 1.04*** | 1.03 | 1.04 | 1.01* | 1.00 | 1.02 | 0.94*** | 0.93 | 0.95 |
| School level | | | | | | | | | | | | |
| % Girls | 1.00 | 0.99 | 1.01 | 1.00 | 0.99 | 1.01 | 1.00 | 0.99 | 1.00 | 1.00 | 0.99 | 1.01 |
| Avg. home literacy | 1.03 | 0.83 | 1.29 | 0.88 | 0.70 | 1.11 | 0.96 | 0.79 | 1.18 | 1.40*** | 1.06 | 1.85 |
| Student-teacher ratio | 1.04 | 0.97 | 1.11 | 1.09 | 0.98 | 1.21 | 1.00 | 0.94 | 1.06 | 0.96 | 0.90 | 1.02 |
| Social problems at school | 0.98*** | 0.96 | 0.99 | 0.97*** | 0.95 | 0.98 | 1.00 | 0.99 | 1.01 | 1.01 | 0.99 | 1.03 |

915    *Note.* Avg. = school average; *OR* = odds ratio; CI = confidence interval; *LL* = lower limit; *UL* = upper limit. Data sourced from ICCS 2009.

916    *$p < .05$; **$p < .01$; ***$p < .001$.

917

918 Table 8

919 *Predicting Group Membership Using Community Context (Reference Group: Indifferent Students)*

| | Activist | | | Debater | | | Communitarian | | | Alienated | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 95% CI | | | 95% CI | | | 95% CI | | | 95% CI | |
| Predictor | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* | *OR* | *LL* | *UL* |
| Student level | | | | | | | | | | | | |
| Student gender (boy/girl) | 1.42*** | 1.22 | 1.64 | 1.32*** | 1.14 | 1.53 | 0.89 | 0.74 | 1.08 | 0.34*** | 0.27 | 0.43 |
| SES (books at home) | 1.17*** | 1.10 | 1.25 | 1.06 | 1.00 | 1.12 | 1.14** | 1.05 | 1.23 | 0.99 | 0.91 | 1.08 |
| Discussions outside school | 1.06*** | 1.05 | 1.07 | 1.04*** | 1.03 | 1.05 | 1.01* | 1.00 | 1.02 | 0.94*** | 0.93 | 0.95 |
| Community level | | | | | | | | | | | | |
| Size of community | 0.94 | 0.85 | 1.05 | 0.94 | 0.84 | 1.05 | 0.90* | 0.82 | 0.99 | 0.97 | 0.86 | 1.11 |
| Resources in community | 1.00 | 0.99 | 1.02 | 1.00 | 0.99 | 1.02 | 1.00 | 0.99 | 1.02 | 1.01 | 0.99 | 1.02 |
| Opportunities for student participation | 1.00 | 0.99 | 1.01 | 0.98** | 0.97 | 1.00 | 1.01* | 1.00 | 1.02 | 1.00 | 0.99 | 1.01 |
| Social tension in community | 1.01 | 1.00 | 1.02 | 1.00 | 0.99 | 1.01 | 1.01 | 1.00 | 1.02 | 1.01* | 1.00 | 1.03 |

920 *Note. OR* = odds ratio; CI = confidence interval; *LL* = lower limit; *UL* = upper limit. Data sourced from ICCS 2009.

921 *\*p* < .05; \*\**p* < .01; \*\*\**p* < .001.

922

923    Table 9

924    *Predicting Group Membership Using Teaching Context (Reference Group: Indifferent Students)*

| Predictor | Activist OR | Activist 95% CI LL | Activist 95% CI UL | Debater OR | Debater 95% CI LL | Debater 95% CI UL | Communitarian OR | Communitarian 95% CI LL | Communitarian 95% CI UL | Alienated OR | Alienated 95% CI LL | Alienated 95% CI UL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Student level** | | | | | | | | | | | | |
| Student gender (boy/girl) | 1.42*** | 1.23 | 1.65 | 1.33*** | 1.14 | 1.54 | 0.89 | 0.74 | 1.07 | 0.34*** | 0.27 | 0.43 |
| SES (books at home) | 1.16*** | 1.09 | 1.24 | 1.06* | 1.00 | 1.13 | 1.13** | 1.05 | 1.23 | 0.97 | 0.89 | 1.06 |
| Discussions outside school | 1.06*** | 1.05 | 1.07 | 1.04*** | 1.03 | 1.04 | 1.01 | 1.00 | 1.02 | 0.94*** | 0.93 | 0.95 |
| **Teacher level** | | | | | | | | | | | | |
| Avg. confidence in teaching methods | 0.99 | 0.96 | 1.01 | 0.98 | 0.95 | 1.01 | 0.97* | 0.95 | 0.99 | 1.04** | 1.01 | 1.07 |
| Avg. participation in school governance | 1.03** | 1.01 | 1.06 | 1.03* | 1.00 | 1.07 | 1.03* | 1.00 | 1.06 | 0.99 | 0.96 | 1.02 |
| Avg. teacher experience (years) | 0.99 | 0.96 | 1.01 | 1.01 | 0.98 | 1.04 | 0.99 | 0.97 | 1.02 | 0.99 | 0.96 | 1.02 |
| % Female teachers | 0.99* | 0.98 | 1.00 | 0.99** | 0.98 | 1.00 | 1.00 | 1.00 | 1.01 | 1.00 | 0.99 | 1.00 |

925    *Note.* Avg. = school average; *OR* = odds ratio; CI = confidence interval; *LL* = lower limit; *UL* = upper limit. Data sourced from ICCS 2009.

926    *p < .05; **p < .01; ***p < .001.

927