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A three-wave longitudinal assessment of socioemotional development in a year-long school-based 'gap year'

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Background. Transition Year (TY) is a quasi-gap year offered midway through post-primary education in Ireland. TY is intended to provide a low-stakes environment to promote maturity and social skills, and to prepare students for adult life. Previous interview-based research has found that TY is seen as a positive experience by many students and teachers. However, no study has sought to quantify the extent to which TY participation may be associated with socioemotional development.

Aims. To gather baseline data before TY and then examine differences in socioemotional outcomes over a 2-year period (three waves of data collection) between students who went on to take part in TY and those who did not.

Sample. A total of 1,563 Grade 9 students (47% female, mean age = 15.4 years) in 20 schools were randomly sampled to provide a nationally representative sample.

Methods. Outcome measures were selected to reflect (1) the intended aims of TY and (2) outcomes consistently identified through qualitative research as being associated with TY. These include student–teacher relations, self-reliance, subjective age, school satisfaction, and social self-efficacy. Latent growth curve models were used to examine differences in students' development over time, controlling for initial (baseline) status and background covariates.

Results. TY participants reported significantly higher increases in subjective age and (for boys) self-reliance over three waves than non-participants. However, expected differences were not observed for other measures.

Conclusions. This is the first study to report longitudinal quantitative analyses of socioemotional outcomes in TY. The results highlight a tension between broadly positive qualitative reports of TY outcomes and the limited quantitative evidence, to date, of same. Some directions for future research are suggested.

This paper reports the findings of an assessment of socioemotional development in 'Transition Year' (TY), a quasi-gap year situated midway through post-primary education in Ireland. TY is the first of 3 years of upper secondary education offered to students following 3 years of lower secondary education (Grades 7–9). Although TY is provided on a compulsory basis in a minority of schools (Smyth, Byrne, & Hannan, 2004), most schools give students the choice to enrol in TY or to skip the year. If students choose to participate,

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they spend a year in TY (Grade 10) before continuing to Grades 11 and 12, whereas, if they opt not to participate in TY, they can progress directly to the final 2 years of secondary education.

TY differs from the preceding and subsequent grade levels in that it is designed to provide students with a break from high-stakes examination pressure (following the completion of lower secondary examinations but before entering the senior examination cycle) and with opportunities to develop their personal interests and interact with the wider world. Students in TY continue to attend classes, but schools are given the 'responsibility for setting appropriate goals and defining the objectives necessary for [students'] achievement' (Department of Education, 1993). The 1993 guidelines for schools are explicit that 'curriculum content [in TY] is a matter for selection and adaptation by the individual school, having regard to these guidelines, the requirements of pupils and the views of parents'. Teachers are encouraged to tailor TY courses to their students' interests and skills (for a case study, see Harrison, Taysum, McNamara, & O'Hara, 2016) and to introduce a wider range of subjects than at other grade levels. However, balancing these aims with TY's position as a standalone year between two more conventional examination cycles can pose challenges for teachers. The programme guidelines (Department of Education, 1993) are clear that TY is not intended to form the first year of a 3-year examination preparation, but also that TY should nonetheless lay 'a solid foundation for Leaving Certificate studies'.[1] Coupled with anxieties expressed by students and parents about falling behind or losing study habits during TY, and pressure on teachers to cover a crowded Leaving Certificate curriculum within 2 years, this means that TY classes are sometimes seen as being at risk of being swamped by examination preparation as a result of being 'colonised by the values of the [Leaving Certificate] examination and the associated "points system"' (Jeffers, 2011, p. 66). The extent to which such colonization occurs in practice varies between schools.

One of the primary aims of TY is to facilitate growth in students' maturity and to develop their self-regulatory and cognitive capacity to engage in work and study within a low-stakes environment, both in and outside school, during a period of considerable personal (Arnett, 1999; Cauffman & Steinberg, 2000) and vocational (Lent, Hackett, & Brown, 1999) development. TY participants generally engage in a variety of off-campus activities throughout the year, including field trips to cultural or historical sites (local, national, or international), international exchanges, community-based activities, and open days at third-level institutions and public buildings. They also take on work placements in real workplaces, during which students are treated as employees and expected to engage appropriately with the working environment and their adult colleagues. As with similar activities that often feature during more conventional gap years (i.e., those taken by young adults after leaving school; Jones, 2004, 2013), students' participation in these and other aspects of TY is intended to give them a more rounded preparation for their final years of secondary education and, thereafter, for participation in civic society (Department of Education, 1993).

Although TY was first introduced in 1974 and has been widely available since 1994 (Clerkin, 2013), it has received relatively little attention from researchers or programme evaluators in the intervening years, which has left policy-makers with limited information on which to base policy and recommendations for teaching practice (Clerkin, 2018a;

[1] *The Leaving Certificate is the name of the high-stakes terminal examination taken by most students at the end of their post-primary schooling. As well as providing a terminal qualification, students' Leaving Certificate results are translated into 'points' and used by third-level institutions to sort and select applicants for courses.*

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NCCA, 2002). The National Council for Curriculum and Assessment, a statutory body, began a new review of senior cycle education (including TY) in February 2018 with a view to possible reforms. Further examination of the outcomes and processes associated with TY therefore seems timely.

A number of studies (most notably Jeffers, 2007 and Smyth *et al.*, 2004) have been carried out since the NCCA's last review in 2002. These have tended to focus on describing the characteristics of schools and students that relate to provision and uptake of TY (Clerkin, 2013, 2018b; Smyth *et al.*, 2004), on academic outcomes (Smyth *et al.*, 2004), and on capturing the views of students, teachers, school principals, and parents through detailed interviews and focus groups (Jeffers, 2007; Smyth *et al.*, 2004). However, no study to date has attempted to directly assess and compare changes in students' maturity or psychosocial characteristics as they relate to participation in TY (which, as noted above, is explicitly intended to promote maturity and personal growth). Smyth *et al.* (2004), in discussing their findings, note that:

> A limitation of this study was the inability to capture the effects of Transition Year on those student outcomes whose promotion represents the primary objective of the programme, namely, personal and social skills development among students. The group interviews with students yielded useful insights into what students perceived to be the impact of the programme. However, a systematic study of the effects of Transition Year on the development of these 'soft skills' would require a large-scale longitudinal study with measures of student development before entry to, and after exit from, the programme (p. 228).

Official programme documentation (e.g., Department of Education, 1993) describes a range of intended student outcomes in broad terms, and the extant qualitative literature (ISSU, 2014; Jeffers, 2007; Smyth *et al.*, 2004) has found particular outcomes to be consistently reported by students, teachers, and parents. However, the issue of systematically assessing the 'soft skills' component of TY participation has not been addressed in any detail since Smyth *et al.*'s remarks in 2004.

The preparatory work for the current study included a synthesis of the research evidence on TY participation and reported programme outcomes. National educational policies underpinning TY, including the official departmental guidelines, historical documents, and position papers from statutory bodies such as the National Council for Curriculum and Assessment, were also reviewed. These sources, describing both the intended (policy-level) outcomes and empirically reported outcomes of TY participation, were consolidated and interpreted with reference to theories of psychological development in adolescence, particularly self-determination theory (Deci & Ryan, 1985, 2000) and stage–environment fit theory (Eccles *et al.*, 1993).

Self-determination theory is particularly relevant in the sense that the development of a stronger sense of *autonomy* and *competence* (and stronger skills underpinning these perceptions) is among the key aims of TY. Further, the development of more positive and deeper relationships with peers and teachers is one of the most commonly reported outcomes of participation, speaking to the *relatedness* aspect of self-determination theory (Deci & Ryan, 1985, 2000). In particular, the autonomy-supportive teaching practices that are a feature of many TY classrooms (Jeffers, 2015) would be expected to contribute towards satisfying these core psychological needs. This, in turn, should support a strong sense of engagement at school and stronger intrinsic or internalized (i.e., extrinsically motivated but internally regulated) motivation among students (Jang, Kim, & Reeve, 2016; Stroet, Opdenakker, & Minnaert, 2015; Vansteenkiste *et al.*, 2018).

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TY's status as a quasi-gap year also points to its function as a bridge between lower and upper secondary education. By providing a low-stakes environment to facilitate the development of personal and academic skills, TY is intended to enhance both the personal and the study-related resources (Salmela-Aro & Upadyaya, 2014) that students can draw on in subsequent years. This is made clear by policy prescriptions that TY participants should emerge from the year 'better equipped and more disposed to study than their counterparts who did not have the benefit of [TY]' (Department of Education, 1993). In this sense, TY is intended to improve the 'fit' between participating students and their school environment (Eccles *et al.*, 1993) as they approach adulthood.

Galambos and colleagues' identification of 'pseudomature' adolescents is interesting in this context (Galambos, Barker, & Tilton-Weaver, 2003; Galambos & Tilton-Weaver, 2000). Pseudomature adolescents, in contrast to their 'immature' or 'mature' peers, are described as feeling mature but lacking functional maturity. They tend to be physically more developed than peers, report high subjective age but desire more adult privileges, and exhibit more conflict with parents. They also report (and are perceived by their parents as showing) less functional maturity (e.g., self-reliance, work orientation) than their more 'genuinely mature' peers. In other words, pseudomature adolescents exhibit poor stage–environment fit and are thus 'caught in the maturity gap' (Galambos *et al.*, 2003, p. 262). By offering students space dedicated to focusing on personal development and supervised, graduated exposure to more 'adult' roles (such as being treated as an employee on work experience, or being given more leeway and responsibility by teachers in school), TY should, in theory, assist any students caught in such a maturity gap to move towards a fuller, more functional maturity and a more appropriate stage–environment fit.

The review of the extant TY literature identified a number of key constructs, collected under four broad categories (student engagement, self-determination, psychosocial maturity, and life satisfaction) that are targeted as important outcomes by policy documentation and were consistently identified as being associated with TY participation by interviewees and focus groups. These constructs are summarized in Table 1. Students' own reports of their TY experience have consistently tended to focus on these outcomes, explicitly or implicitly, both in previous in-depth interviews (Jeffers, 2007; Smyth *et al.*, 2004) and in the current study (see Clerkin, 2019, where self-generated written comments from students are presented in more detail).

The broader study from which the data reported here are drawn entailed gathering both qualitative and quantitative data from the same group of students, meaning that correspondences between students' self-perceptions and any measurable changes over time can be examined. The following quotes (provided by some of the students whose quantitative data are reported below; Clerkin, 2019) provide examples of the types of comments made by many students about their development during TY:

- It *helps to mature [you]* and *the teachers treat you like an adult and they talk to you more*.
- I am very happy with Transition Year. I feel that *my social skills have definitely improved*. I have *gained new confidence in myself* and *feel capable of doing new things* in [Grade 11].
- I feel as though *I have matured* and *become more responsible and organised*. I have seen more of the world.
- I'm *more confident in my abilities to make decisions*. . . I *have grown more mature and confident*. It is the best year ever!

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Table 1. Constructs associated with TY participation (intended and reported outcomes)

Construct	Theoretical outcomes (intended)[a]	Empirical outcomes (reported)
Student engagement (school belonging, student–teacher relationships, cognitive engagement, attitudes towards learning outcomes)	TY participants should experience 'learning strategies which are active and experiential' and, after completion of TY, 'should be better equipped and more disposed to study than their counterparts who did not have the benefit of this year'	Stronger and more positive relationships with teachers and classmates; TY participants are more focused and better able for senior classes; students view TY as a valuable part of the educational experience (reported by students & teachers)
Self-determination (teacher support, sense of competence, autonomous motivation)	'A negotiated approach to planning should seek to facilitate active involvement of the pupils' with a view to producing 'autonomous, participative, responsible members of society'	Students become more independent and focused; enhanced self-regulatory capabilities; students feel teachers treat them with more respect and invite greater discussion (reported by students, teachers, parents)
Psychosocial maturity (self-reliance, work orientation, social self-efficacy, subjective age)	'Education for maturity' that should 'foster healthy growth and adjustment, and effective interpersonal communication and relationships' and lead to 'increased social competence'	Greater functional maturity, enhanced social confidence, and stronger self-perceptions of maturity (reported by students, teachers, parents)
Life satisfaction (global life satisfaction, self satisfaction, school satisfaction)	Student well-being as young members of society and preparedness for adult life (Department of Education, 1995)	Social, personal, and intellectual enjoyment of TY experiences, both in school and out of school (reported by students)

Note. [a]Illustrative quotations taken from the Transition Year Guidelines (Department of Education, 1993).

- Although I did not enjoy it that much, *I have matured a lot as a person* and *without TY I would not have been ready for the pressure* of the Leaving Cert[ificate].

It should be noted that endorsements of TY are not universal. A substantial minority of participants express negative views of the year, describing it as a waste of time or as being boring, or finding it hard to settle back into 'regular' classes in Grade 11. The nuances of students' views of TY (before, during, and after the year) are described more fully in Clerkin (2019) and in Jeffers (2007) and Smyth *et al.* (2004). For the purposes of this paper, however, it is sufficient to note that multiple studies have reported that TY is widely associated, in qualitative terms, with positive socioemotional development for many participants.

Current study

As noted, the available qualitative research evidence suggests that TY is broadly successful in promoting positive development among Irish adolescents. The reports of positive development provided by students, teachers, and parents have tended to congregate most clearly around the constructs identified in Table 1. Therefore, this set of outcomes was selected to form the basis of a first quantitative investigation of the extent to which

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participation in TY may be associated with socioemotional development. The results, described below, are based on a three-wave longitudinal study, beginning from the end of Grade 9 (pre-TY) and continuing for two years thereafter (during TY and post-TY). This is the first study to focus on (1) quantitative and (2) longitudinal measurements of (3) socioemotional outcomes as they relate to participation in TY.[2]

Hypotheses

Based on the findings of previous research and the stated aims underpinning the programme, the hypothesis being tested is that, for each outcome, participation in TY (vs. non-participation) will be associated with a more positive developmental trajectory over the 3 years of the study.

Method

The study was approved by the institutional research ethics committee. *Wave 1* of data collection took place at the end of Grade 9, at the final point when all students are mixed in one grade level before choosing to participate or not to participate in TY. *Wave 2* was administered 1 year later, at the end of TY (for participants) or Grade 11 (non-participants). *Wave 3* took place 1 year after that, at the end of Grade 11 (TY participants) or Grade 12 (non-participants).

Participants

All study participants were students in one of 20 schools around Ireland, which were invited to take part in the study after being randomly sampled from a list of all schools providing TY and stratified by school size, socioeconomic characteristics,[3] and gender mix so as to provide a nationally representative reflection of students' experience.[4] Table 2 shows that the final achieved sample of 1,563 students was broadly representative of the national population.

Response rates to the survey were high. In total, 1,969 Grade 9 students were enrolled in these schools. All of these students were eligible to take part. A total of 1,563 students (79% of total enrolment; 47% female, M_{age} = 15.4 years) returned completed questionnaires on the day of administration. Of these, 363 students (23%) moved directly to Grade 11 in the following academic year, and 1,200 students (77%) took part in TY before moving to Grade 11. The proportion of TY participants here is, therefore, slightly higher than the overall national participation rate (approximately 65%).

Measures

The survey was administered to students by their teachers in class. One class period was allotted to complete the survey. Each student received an information sheet, a consent

[2] *As contrasted with, for example, (1) interview-based reports of development, (2) cross-sectional studies, or (3) longitudinal comparisons of academic outcomes.*

[3] *A dichotomous variable indicating whether or not a school was categorized as serving a high concentration of students from socioeconomically disadvantaged home backgrounds. If so categorized, schools receive extra supports as part of the Department of Education and Skills' 'DEIS' scheme.*

[4] *Schools that did not offer TY were excluded from the sampling frame so as to allow a direct comparison between the socioemotional development of students who did or did not take part in TY* within the same school environments. *An alternative approach would be to also sample students in schools without the option of TY, but this would risk confounding student-level differences between TY participants and non-participants with school-level differences between the types of schools that do or do not offer TY, and would require a larger sample of schools to account for such effects.*

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Table 2. Characteristics of the national Grade 9 population in schools where TY was available and achieved study sample

	Student	School characteristics				
	Male	Sec.	Voc.	Comm./Comp.	DEIS	Irish-medium
Population (N = 46,343)						
N	22,876	29,682	8,658	8,003	5,772	2,776
%	49	64	19	17	12	6
Study participants (N = 1,563)						
N	834	1,067	285	211	240	122
%	53	68	18	13	15	8

Notes. School type: *Sec.* = voluntary secondary; *Voc.* = vocational; *Comm./Comp.* = community/comprehensive.
DEIS = school is in receipt of additional supports due to a socioeconomically disadvantaged student intake.
Irish-medium = the primary language of instruction is Irish.

form, and a questionnaire for their grade level. Students were asked about their background characteristics, attitudes towards their educational and vocational future, and scales drawn from the international literature to assess the selected socioemotional constructs. A small number of grade-specific questions were also presented asking students to describe (in self-generated written format) their perceptions and experiences of TY (e.g., '*Would you recommend Transition Year in your school to [Grade 9] students? Why/Why not?*').

Background characteristics

Gender; date of birth (from which age at the time of the survey was calculated); the highest educational qualification attained by their parents (a proxy indicator for home socioeconomic status); and the primary language spoken at home (English, Irish, or another language).

Educational and vocational attitudes

Intentions after leaving secondary school (presented as a choice between taking a year out, looking for full-time employment, continuing to further education, or 'don't know'); vocational uncertainty (whether they knew what type of job they would like after school; presented as a choice between 'yes – I am sure', 'yes – I think so', 'maybe', 'no – I'm not sure', and 'no – I haven't thought about it' and subsequently recoded into yes/maybe/no); and educational aspirations (the highest educational qualification they would like to attain). Students were also asked to estimate the amount of time spent on homework in a typical week as an indicator of their behavioural investment in educational activities.

Socioemotional characteristics

The psychological literature was reviewed for published scales that had been developed to measure (with adolescent participants) the socioemotional constructs identified as being of interest for this study (Table 1).

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Student engagement. Scales on school belonging (eight items; *I feel included in things*; Cronbach's α (in this study) = .78), student–teacher relationships (five items; *Most of my teachers are interested in my well-being*; α = .87), and attitudes towards learning outcomes (four items; *School has taught me useful things which could be useful in a job*; α = .72) were drawn from the student questionnaire used by the Programme for International Student Assessment. Each of these scales was presented with five response options, from *definitely disagree* to *definitely agree*. The Research Assessment Package for Schools (IRRE, 1998) provided a fourth scale assessing cognitive engagement in learning (eight items; sample item: *I pay attention in class*; α = .79). This scale was also presented with five options, from *not at all true* to *very true*.

Self-determination. Three scales addressing three facets of self-determination were drawn from the Research Assessment Package for Schools (IRRE, 1998). These were as follows: experience of teacher support (four items; *My teachers are fair with me*; α = .80), perceived competence (two items; *I am capable of learning the things we are being taught at school*; Spearman–Brown coefficient (for a 2-item scale) = .67),[5] and autonomous motivation (four items; *I do my schoolwork because I really want to understand what we are studying*; α = .69). Five response options were given, from *not at all true* to *very true*.

Psychosocial maturity. Two subscales of the Psychosocial Maturity Inventory (Greenberger, Josselson, Knerr, & Knerr, 1975; Mantzicopoulos & Oh-Kwang, 1998) were used to assess self-reliance and work orientation (self-reliance: eight items; *Someone often has to tell me what to do*, reverse-coded; α = .69; work orientation: six items; *I like working on things that take a lot of effort*; α = .72). For both of these, five response options were given (*strongly disagree* to *strongly agree*). Social self-efficacy (seven items; *How well can you have a chat with an unfamiliar person?*; α = .77) was assessed via the 'social' subscale of the Self-Efficacy Questionnaire for Children (Muris, 2001). Following its original presentation, seven response options were given, from *not at all* to *very well*. Subjective age was measured using four items drawn from the work of Nancy Galambos and colleagues (e.g., Galambos, Albrecht, & Jansson, 2009; Galambos & Tilton-Weaver, 2000) (four items; *Compared to most people my age, most of the time I feel [younger/the same/older] than my age*; α = .69). This scale had seven response options, ranging from *younger* at one extreme to *older* at the other.

Life satisfaction. The Students' Life Satisfaction Scale (Huebner & Dew, 1996) was used to measure global life satisfaction (seven items; *My life is going well*; α = .86). Finally, the 'self' and 'school' subscales of the Multidimensional Students' Life Satisfaction Scale (Huebner, 2001; Huebner & Gilman, 2002) assessed students' domain-specific self satisfaction (four items; *There are lots of things I can do well*; α = .69) and school satisfaction (four items; *I look forward to going to school*; α = .83). These scales had six response options (*definitely disagree* to *definitely agree*).

[5] *Note that, with only two items, findings arising from this scale may be less reliable than those from the other scales and should be interpreted cautiously.*

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Analysis

The aim of this study was to determine baseline measurements for each of these indicators and then, controlling for baseline responses, to examine the extent of any differences in students' self-reported development over the following 2 years by their subsequent (non-) participation in TY. For these purposes, a separate latent growth curve model was specified for each measure.

In a growth curve model, two latent factors are estimated – the *initial status* (the baseline level) and the *slope* (the subsequent direction and rate of developmental change over time) (Borsboom, Mellenbergh, & van Heerden, 2003; Preacher, Wichman, MacCallum, & Briggs, 2008). Each growth curve model produces four key pieces of information: estimates of the *average initial status* and the *average rate of growth*, and estimates of the *variation in initial status* and *variation in the growth rate* between individuals (Muthén & Khoo, 1998).

The general structure of the series of growth models reported in the next section is shown in Figure 1. It includes students' background (e.g., age) and attitudinal characteristics (e.g., educational aspirations) as covariates in order to control for selection effects (differences in the profile of students who tend to take part in TY and those who tend not to; Clerkin, 2018b; Smyth *et al.*, 2004) and thereby more clearly isolate any additional differences in socioemotional outcomes that are associated with participation in TY. In any cases where students' sex or age were identified as statistically significant predictors of the outcome, an additional interaction term was constructed which, if significant, would imply that the effects of TY participation differed for males and females or by students' age. For each outcome, the latent slope factor was regressed on the latent initial status factor, controlling for differences in the association of students' initial status with the subsequent rate of change over time (Choi, Seltzer, Herman, & Yamashiro, 2004; Curran & Muthén, 1999) so that differences that may be related to TY participation can be identified more clearly regardless of students' initial high or low status on the outcome measure.

MPlus (version 7.4) was used to construct the latent growth models, using the COMPLEX command to take the clustered nature of student-level data within schools into account. This procedure corrects standard errors to produce more conservative parameter estimates, reducing the likelihood of potentially spurious significant effects.[6] Fit statistics are presented to provide an indication of whether the specified model can be considered, broadly speaking, a 'good fit' or 'bad fit' to the observed data. A well-fitting model is one that is consistent with the observed data. However, it must be remembered that even well-fitting models come with the caveat that other equivalent specifications could also be found to fit the data, as well as the fact that the inclusion of any non-measured variables could produce alternative models. Therefore, the most that can be concluded from fit statistics is that a model provides a plausible representation of the relationships underlying the specified variables. The researcher's judgement, and previous theory on the topic, is at least as important to model-building as statistical measures of model fit (Barrett, 2007; Tomarken & Waller, 2003).

Four fit statistics are presented: the chi-square test, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). A non-

[6] *There were too few schools in this study to explicitly model school-level effects in a multilevel framework robustly. This is important to note given previous evidence that the content and quality of the implemented TY programme can vary substantially between schools, dependent on a number of factors (including school resources, the motivation and effectiveness of staff leadership of TY within a school, and student and staff interests) (Jeffers, 2007; Smyth* et al.*, 2004).*

significant chi-square test ($p > .05$) indicates an acceptable model fit. However, this test is known to be sensitive to sample size, meaning that with large samples the chi-square test can return a significant result even in the absence of a substantive misspecification (Barrett, 2007; Hooper, Coughlan, & Mullen, 2008; Tomarken & Waller, 2003).

The other three statistics (CFI, TLI, and RMSEA) provide guideline thresholds for judging the quality of model fit (Schrieber, Nora, Stage, Barlow, & King, 2006). CFI and TLI indicate the extent to which the specified model represents the observed data as compared against a hypothetical null model in which all variables are assumed to be uncorrelated. RMSEA estimates how well the specified model fits the population's covariance matrix (the relationships between all variables). These statistics are particularly recommended for use in evaluating latent growth curve models (Wu, West, & Taylor, 2009). CFI is noted as performing well as a test of models at both small and large sample sizes. TLI and RMSEA are noted as penalizing models that are overly complex (i.e., non-parsimonious). RMSEA is strongly recommended on the grounds that it estimates the extent of model misfit in the population, rather than just the sample (Preacher *et al.*, 2008), and because it provides a confidence interval rather than just a single point estimate.

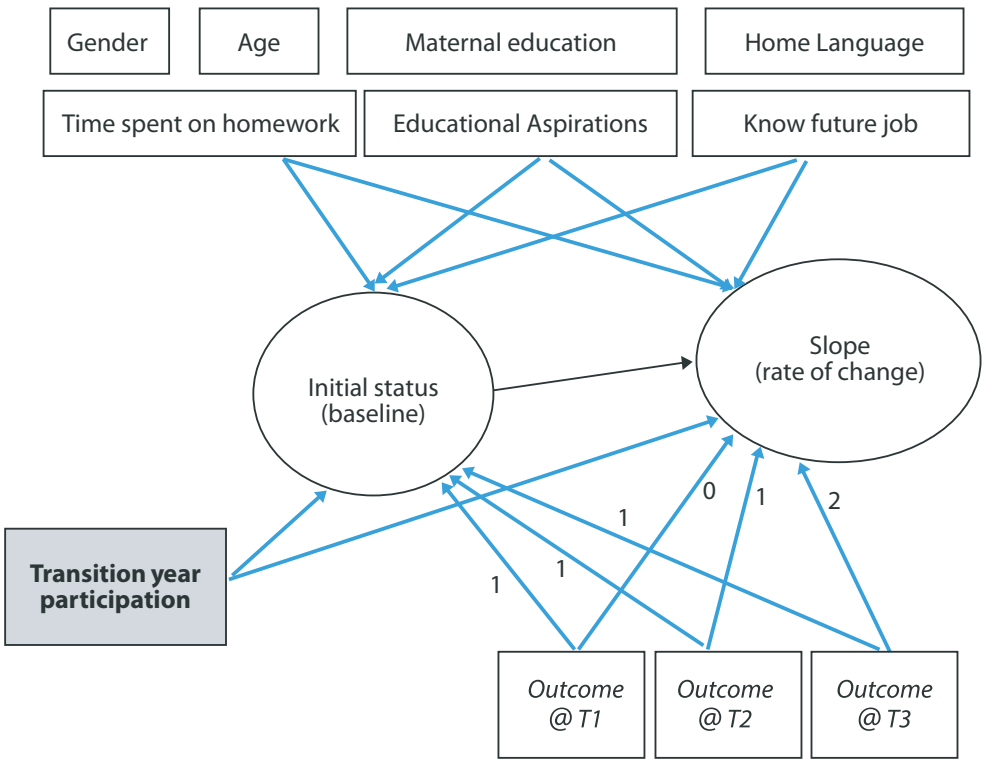

Figure 1. Simplified diagram of the latent growth curve modelling specifications used here. Paths from outcome measures to the initial status and slope latent factors are fixed at the values shown in line with standard growth curve specifications. All other paths are freely estimated. Paths from latent factors to gender, age, maternal education, and language are not shown, for clarity of presentation. Paths from the latent factors to TY participation are highlighted as the parameters of substantive interest here.

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For CFI and TLI, higher values represent a superior fit. Values ≥.90 may represent a reasonable fit, especially when other indicators suggest a well-fitting model, but CFI ≥.95 is generally taken as a stricter guideline value (Cheung & Rensvold, 2002; Hu & Bentler, 1999). In contrast, for RMSEA, smaller values indicate a better-fitting model, with ≤.06 taken as a guideline threshold indicating close model fit (Browne & Cudeck, 1992; Hooper *et al.*, 2008; Hu & Bentler, 1999).

Results

Descriptive statistics are presented separately for students who took part in TY and those who did not (Table 3). The observed differences between the two groups underline the need to include covariates in the growth model specifications. The fit statistics for the latent growth models are shown in Table 4. As shown, the fit for each of the specified growth models was acceptable. Three models (attitudes towards learning outcomes, engagement in learning and perceived competence) returned a statistically significant chi-square test, potentially indicating a problem with the specified model. However, the other fit indices indicated reasonable to good fit for each of these models, suggesting that they can be considered to provide an acceptable representation of the observed data. For all other models, the chi-square test was non-significant, the CFI and TLI values were high, and the RMSEA values (including the upper bound of the associated 90% confidence interval) were below .06. Therefore, the specified models are taken to be valid for further inference.

Tables 5 and 6 show the key output of interest for both latent growth factors (initial status and rate of change over time): the intercept, the coefficient associated with participation in TY, and the residual variance. As noted above, all models controlled for the same set of background characteristics and differences in initial status were controlled for in estimating the subsequent rate of change. (Fully tabulated results for each model, including covariates, are available from the author.)

Significant differences were found in the initial status (at Wave 1) of TY participants versus non-participants for several outcomes. Students who went on to take part in TY the following year reported significantly more positive attitudes towards learning outcomes, a greater affective sense of belonging at school, stronger relationships with teachers and a greater perception of support from teachers, stronger cognitive engagement in learning, greater satisfaction with school, more satisfaction with themselves, and higher global life satisfaction before making the choice to participate.

The more important question addressed by these data is the extent to which participation in TY was differentially associated with students' trajectories of development over the full three waves of the study. Significant differences between TY participants and non-participants in the slope – the rate of change over time – were found for only two measures: subjective age (Table 5) and self-reliance (Table 6).

Participation in TY was associated with significant increases in students' subjective age ($b = .11$, $\beta = .62$, $p < .05$), while non-significant declines in subjective age were observed among non-participants over the same period ($b = -.18$, $\beta = -1.02$, ns) (see Figure 2).

An interaction between TY participation and gender was observed in relation to the extent of changes in students' sense of self-reliance over the course of the study (Table 6). Boys who took part in TY reported significant growth in self-reliance over the three waves ($b = .11$, $\beta = .65$, $p < .001$), while boys who did not take part in TY reported significant decreases in self-reliance over the same period ($b = -.08$, $\beta = -.46$, $p < .01$; see

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Table 3. Descriptive statistics for participating Grade 9 students (N = 1,563), by TY participation

	TY participants (N = 1,200)	Non-participants (N = 363)
Gender (%)		
Male	54.3	50.7
Female	45.7	49.3
Age: years		
Mean (*SD*)	15.4 (.43)	**15.6 (.52)**
Homework: hours per week		
Mean (*SD*)	**9.4 (6.45)**	6.8 (6.57)
Educational aspirations (%)		
Junior Cert.	1.7	2.3
Leaving Cert.	11.6	**24.4**
PLC/apprenticeship	2.5	**6.6**
Cert./diploma	15.4	13.5
Degree	**61.9**	45.7
Don't know	6.9	7.5
Mother's education (%)		
Did not complete primary	0.1	0.6
Primary	1.9	**6.2**
Lower secondary	11.8	**18.3**
Upper secondary	27.4	26.0
Cert/diploma	**19.0**	12.7
Degree/postgrad	**29.6**	17.2
Don't know	10.2	**18.9**
Home language (%)		
English or Irish	**96.8**	88.2
Another language	3.2	**11.8**
Know what job would like when older (%)		
Yes, I am sure	23.3	**37.3**
Maybe, I think so	27.0	24.1
Maybe, I have some idea but am not sure	**31.1**	23.0
No, I don't know	14.5	11.8
No, I haven't thought about it	4.1	3.9

Note. Where significant differences ($p < .05$) exist, the higher value is marked in bold.

Figure 3). In contrast, TY participation was not associated with changes in self-reliance among girls.

No differences were found between TY participants and non-participants – either in initial status or slope – for four measures (social self-efficacy, perceived competence, autonomous motivation, and work orientation). The lack of significant differences between the two groups for these outcomes was unexpected, considering the strong qualitative evidence suggesting potential benefits in these respects arising from TY participation.

All of the growth models showed significant residual variance around the initial status coefficients shown in Tables 5 and 6, indicating a substantial degree of variation around these estimated means (i.e., many individual students' initial status lay above or below these estimates). There was less widespread residual variance around the slope coefficients. Significant residual variance in the slope was found for attitudes towards

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Table 4. Fit statistics for latent growth curve models

	χ^2 (df)	CFI	TLI	RMSEA (90% CI)
School belonging	14.41 (14)	.999	.998	.005 (.000, .028)
Student–teacher relationships	7.50 (14)	1.000	1.031	.000 (.000, .011)
Engagement in learning	**28.99 (14)***	.982	.945	.030 (.014, .045)
Attitudes towards learning outcomes	**28.45 (14)***	.970	.911	.029 (.013, .044)
Experience of teacher support	11.28 (14)	1.000	1.013	.000 (.000, .023)
Perceived competence	**24.12 (14)***	.983	.949	.024 (.004, .040)
Autonomous motivation	16.31 (14)	.997	.990	.012 (.000, .031)
Self-reliance	26.25 (16)	.988	.967	.023 (.000, .038)
Work orientation	8.76 (14)	1.000	1.018	.000 (.000, .016)
Social self-efficacy	12.42 (14)	1.000	1.008	.000 (.000, .025)
Subjective age	6.34 (14)	1.000	1.034	.000 (.000, .000)
Global life satisfaction	17.47 (14)	.995	.985	.014 (.000, .033)
Self satisfaction	10.26 (14)	1.000	1.014	.000 (.000, .020)
School satisfaction	9.54 (14)	1.000	1.017	.000 (.000, .018)

Notes. All models control for background and attitudinal characteristics related to selection into TY and (for slope) initial status.
*The bold values indicate statistical significance ($p \leq .05$).

learning outcomes, school belonging, school satisfaction, autonomous motivation, work orientation, and self-reliance. This suggests substantial variation in the rate of change in these outcomes over time that was not accounted for by the covariates included in these models.

Discussion

The latent growth models showed an unexpected pattern of results. When background and attitudinal variables and students' initial status were controlled for, TY participation was associated with greater growth relative to non-participation for only two of the outcome measures: subjective age and (for boys) self-reliance. Subjective age is an inherently relative concept, which means that it is useful to interpret changes in subjective age among TY participants and non-participants with reference to each other. Although the average subjective age for both groups was not significantly different at the end of Grade 9, students who took part in TY grew to feel relatively older over the following 2 years. Students who skipped TY to move directly to senior examination classes felt less mature 2 years later (see Figure 2) than their former classmates who were, at that point, a grade level behind them following TY. As well as reflecting chronological differences in age arising from the mixing of two cohorts (Grade 11 students who spend the extra year in TY are generally slightly older than their classmates who skipped TY), the contrasting perceptions reflect students' perceptions of their own maturity compared to their peers. Qualitative feedback from TY students, and from older students who had previously taken part in TY, often includes references to becoming more mature during TY, of achieving a sense of adulthood, of being less childish than they were, and similar variations. Although not all students have a positive experience of TY, such enhanced feelings of maturity are typical among the majority who do enjoy TY and find it to be a useful year (Clerkin, 2019; Jeffers, 2007; Smyth *et al.*, 2004). The measurements of

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Table 5. Associations between TY participation (vs. non-participation) and socioemotional characteristics

	Initial status (b)				Rate of change (slope) (b)			
	Intercept	TY participation	Residual variance	R^2	Intercept	TY participation	Residual variance	R^2
School belonging	**3.55 (.09)*****	**.15 (.06)****	**.23 (.03)*****	***.10******	.21 (.19)	.04 (.03)	**.04 (.02)***	***.11*****
Student–teacher relationships	**3.49 (.13)*****	**.22 (.07)****	**.48 (.05)*****	***.12******	.41 (.28)	.02 (.03)	.02 (.03)	*.36*
Engagement in learning	**3.40 (.09)*****	**.20 (.07)****	**.25 (.03)*****	***.25******	.25 (.20)	−.01 (.03)	.02 (.01)	***.22****
Attitudes towards learning outcomes	**3.62 (.13)*****	**.34 (.08)*****	**.42 (.06)*****	***.12******	**.54 (.19)****	.06 (.05)	**.06 (.02)****	***.20*****
Experience of teacher support	**3.75 (.11)*****	**.21 (.07)****	**.39 (.04)*****	***.11******	.35 (.25)	.05 (.05)	.04 (.02)	***.18****
Perceived competence	**5.08 (.12)*****	.07 (.08)	**.20 (.05)*****	***.18*****	−.36 (.65)	.06 (.05)	.02 (.03)	*.13*
Autonomous motivation	**2.73 (.12)*****	−.02 (.08)	**.40 (.05)*****	***.12******	**.37 (.14)****	−.06 (.05)	**.06 (.01)*****	***.13******
Work orientation	**2.86 (.08)*****	−.08 (.07)	**.39 (.03)*****	***.21******	.27 (.16)	.00 (.03)	**.05 (.02)****	*.09*
Social self-efficacy	**5.12 (.11)*****	.05 (.09)	**.50 (.06)*****	***.04******	.13 (.38)	.02 (.04)	.03 (.03)	*.17*
Subjective age	**4.38 (.08)*****	−.09 (.06)	**.42 (.05)*****	***.08******	−.18 (.36)	**.11 (.04)***	.03 (.03)	*.12*
Global life satisfaction	**4.20 (.13)*****	**.18 (.07)****	**.55 (.08)*****	***.06*****	.13 (.32)	−.02 (.04)	.04 (.03)	*.08*
Self satisfaction	**4.37 (.10)*****	**.16 (.08)***	**.40 (.04)*****	***.10******	.10 (.24)	−.01 (.03)	.03 (.02)	***.11****
School satisfaction	**3.75 (.17)*****	**.27 (.09)****	**.63 (.08)*****	***.21******	.21 (.24)	.09 (.06)	**.11 (.03)*****	***.11******

Note. All models control for background and attitudinal characteristics related to selection into TY and (for slope) initial status. Unstandardized coefficients are shown with standard errors in parentheses.
Results for self-reliance are shown in Table 6 due to significant interaction with gender.
The bold values indicate statistical significance (*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$). R^2 values are italicised.

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Table 6. Associations between TY participation, gender, and self-reliance

	Initial status	Rate of change (slope)
Intercept	**3.53 (.07)*****	.07 (.22)
TY participant	−.01 (.04)	.01 (.03)
Male	−.05 (.05)	**−.08 (.03)****
Male * TY participant	–	**.11 (.03)*****
Residual variance	**.21 (.02)*****	**.03 (.01)***
R^2	***.13******	***.08****

Note. Model controls for background and attitudinal characteristics related to selection into TY and (for slope) initial status. Unstandardized coefficients are shown with standard errors in parentheses.
The bold values indicate statistical significance (*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$). R^2 values are italicised.

subjective age reported here support the view that the varied experiences of TY can generate, or accelerate, a real sense of adulthood in participants.

As noted, an interaction with gender was observed for self-reliance. Although no significant changes were observed over the course of the study among girls, male TY participants reported significant *increases* in self-reliance over the three waves, while male non-participants reported significant *decreases* in self-reliance. International and Irish research suggests that male students can be less engaged than their female peers by very structured classes of the type that were typical at lower secondary level in Ireland at the time of this study (Martin, 2004, 2007; Smyth, Dunne, McCoy, & Darmody, 2006; van Houtte, 2004).[7] It is possible, in this light, that the more participative, student-led, and hands-on nature of TY classes provided boys with more opportunities to (positively) express agency and influence events in the classroom in a manner of their choosing, thereby enhancing their capacity and willingness to take constructive action again in the future. Students' accompanying self-generated written perspectives on TY (Clerkin, 2019) point to several aspects of this change. For example, a heightened sense of self-reliance is echoed in comments from students who described the practical and organizational, or self-management, skills learned through the range of experiences in TY. Such skills gave students greater ability to look after themselves, particularly by comparison to their non-TY classmates, who were sometimes perceived as being less mature or more childish. This is supported by teachers' reports of student participation in upper secondary classes (Smyth *et al.*, 2004). In addition, comments to the effect that 'you get out of TY what you put into it' serve to emphasize the fact that, with relatively little external pressure to study or take part in activities, TY students who become adept at doing things for themselves tend to have a more positive TY experience. References to 'taking the initiative' and 'being proactive' reflect the importance of intrinsic motivation and a willingness to take action.

For the other psychosocial characteristics, patterns of change were similar for TY participants and non-participants. For example, significant growth over time was observed for autonomous motivation and attitudes towards learning outcomes, but to a similar degree whether or not a student took part in TY. Stronger associations with

[7] *The data presented here were gathered from 2011 to 2013. More recently, reforms have been introduced that are aimed, in part, at providing a more holistic and interactive experience of lower secondary education (Department of Education and Skills (DES), 2015).*

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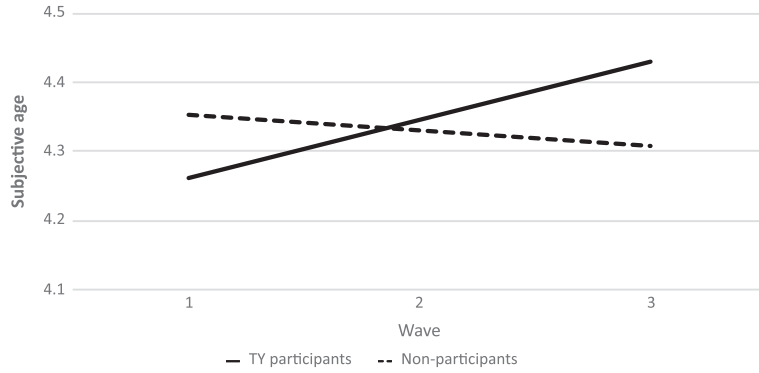

Figure 2. Latent growth curves for subjective age over three waves, by TY participation (Above 4, higher values represent a stronger subjective feeling of being older than one's chronological age).

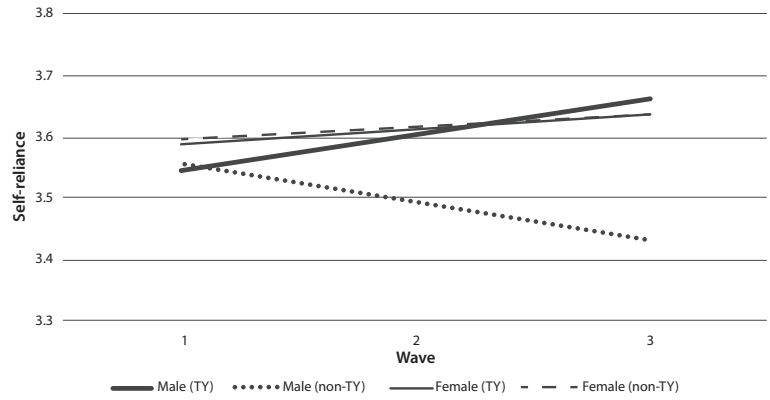

Figure 3. Changes in reported self-reliance over three waves, by TY participation and gender (Higher values represent a stronger sense of self-reliance).

TY participation would have been expected for more of these outcomes, based on the suggestions of previous research and the self-generated reports of the students who took part in this study (see examples in the introduction and in Clerkin, 2019). As an example, there is recurring evidence that TY participants often report feeling more socially skilled and better able to interact with classmates and adults (employers or teachers) as a result of TY (ISSU, 2014; Jeffers, 2007; Smyth *et al.*, 2004), but no corresponding changes were captured in the growth model of social self-efficacy used here. Considering the parallels between TY and more traditional gap years following completion of secondary education (Clerkin, 2018a), it is of interest to note that a study of gap year participation in Australia and Finland similarly found weaker measurable evidence of expected outcomes (goal commitment and satisfaction with career prospects) than had been anticipated based on previous qualitative research (Parker, Thoemmes, Duineveld, & Salmela-Aro, 2015).

That only two of the selected indicators showed developmental associations with TY participation gives cause for thought. These findings, based on quantitative measurements of psychosocial outcomes, are unprecedented in the extant TY literature. The results of the growth models are also discrepant with much of the qualitative evidence on

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the programme, which reports positive outcomes for many students (Clerkin, 2019; Egan & O'Reilly, 1979; ISSU, 2014; Jeffers, 2007; Smyth *et al.*, 2004). Indeed, the qualitative data gathered contemporaneously from the same students who provided the quantitative data reported here suggest that they regarded their TY experience in much the same way as participants in previous studies. Both the current longitudinal study and previous studies have also found similar criticisms of TY, such as concerns over losing academic focus or wasting time. This provides strong corroborating evidence that the reports of the students who took part here can be considered a valid representation of their TY experience. This view is further supported by the systematic random sampling that was designed to yield a nationally representative sample of students for the study.

The primary difference between the current study and previous research is that quantitative measurements of specific psychosocial outcomes have been included here, bringing implicit tensions in the assessment of TY outcomes to the fore. This requires careful interpretation. Latent growth modelling has provided some support for the claim that TY can help to promote some aspects of psychosocial maturity (namely, subjective age and self-reliance). However, these data point to greater differences between TY participants and non-participants at the point of entry to the programme, rather than over time. Few differences were found in the trajectories of socioemotional indicators after controlling for students' baseline measurements and other characteristics. In contrast, students' self-generated qualitative descriptions of their experience are generally clear in regarding TY, overall, as a valuable developmental opportunity with positive outcomes (see Clerkin, 2018a, 2019; Jeffers, 2007; Smyth *et al.*, 2004).

Further investigation is merited in order to reconcile these perspectives. This should include replication of the non-significant findings reported here and more detailed examination of how the processes of the year (teaching approaches, student attitudes and activities, student–adult interactions, etc.) contribute to specified outcomes. The significant residual variance in the slope for some outcomes (e.g., autonomous motivation) suggests that a significant proportion of the variance in outcomes was not captured by these models. Person-centred analyses would be useful in identifying differing patterns of development within the cohort, or particular subgroups of students for whom TY may be an especially positive or negative experience. For example, Smyth (2016) has previously highlighted the complex interactions between gender, social class, attitudes towards education, positive and negative interactions with teachers, and other factors that exist within Irish schools and can play a role in differing educational pathways.

Conclusions

This study provided the first quantitative examination of changes over time in psychosocial outcomes related to students' participation in TY, a large-scale youth development programme in Irish education. These data are timely, given that a review of senior cycle education in Ireland is ongoing through 2018 and 2019. Latent growth models showed evidence of expected increases in subjective age (self-perceived maturity) among all participating students and in self-reliance among male students who took part in TY, but, unexpectedly, not for the other indicators included here. The results therefore highlight tensions between, on one hand, the broadly positive views of the programme consistently reported by students and teachers and, on the other hand, the limited quantitative support, to date, for strong developmental effects of participation. This disparity demonstrates the importance of challenging and verifying assumptions about programme outcomes, which should include a variety of methods and approaches.

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Further evidence on student outcomes in TY is needed. One limitation of this longitudinal study is that it relied on self-reported data from students over a 2-year period immediately preceding and following TY. Alternative indicators, going beyond Likert-type self-report items, would be useful. Information from other sources, such as evaluation of students' development by teachers, would also provide a complementary perspective. This could encompass the role of teachers in creating students' TY experience – for example, investigating differences in the use of autonomy-supportive teaching practices (Reeve & Jang, 2006) during TY in comparison with other grade levels (see Jeffers, 2015). From a methodological perspective, further validation of the instruments used here (mostly developed using international or American populations) in applied research with Irish adolescents would be worthwhile.

Future studies should seek to expand the evidence base, firstly, by replicating the findings reported here to confirm their robustness; secondly, by following students for a longer period, ideally into young adulthood and civic life beyond school; and thirdly, by including a broader range of indicators. For example, more information on the development of metacognitive and self-regulating behaviours during TY would be useful (see Dent & Koenka, 2016). Individual differences in personality may also play a role in how students engage with the opportunities offered by TY, and whether they access these opportunities to the fullest extent. In addition, TY students' extra-curricular activities and paid work outside school are relevant factors worth considering for their contribution to students' personal development. Importantly, given the substantial variation in the nature and perceived quality of students' TY experience between schools (Clerkin, 2019; Jeffers, 2007; Smyth *et al.*, 2004), future studies should involve a minimum of 30–50 schools so that school-level effects can be examined and stronger inferences drawn about the characteristics of more and less effective TY programmes.

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