Sense of Competence, Autonomy and Relatedness during Primary-Secondary Transition: Children Express Their Own Experiences

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ABSTRACT

This paper contributes a greater understanding of the importance of a sense of competence, autonomy and relatedness to children experiencing the primary-secondary schooling transition, drawing on the perspectives of the young people themselves. We address how the perspectives of transitioning children can further substantiate and illuminate Ryan and Deci's Self Determination Theory (SDT; Ryan and Deci, 2019). SDT claims that satisfaction of a person's needs for competence (attainment and confidence), autonomy (self-direction and capacity to critique) and relatedness (feeling affectively bonded to others) allows them to achieve 'positive-experience and wellness outcomes' (p.219). We draw on data from two research projects, one a survey study of 288 transitioning children; and one a life-history study of 23 transitioning children. Our findings illustrated the potential benefits of policymakers giving priority to a wider range of conceptions of competence beyond attainment in mathematics/English, in order to support transitioning children's sense of competence including their self-confidence. Findings also highlighted the need to nurture children's capacity to recognise and direct their own schooling trajectories more autonomously, directing their energies into engagement with learning and relationships rather than into riling against controls or seeking to avoid humiliation and punishment. Most positively, our data manifested children's high levels of relatedness to both peers and teachers as they transitioned to new secondary schools. And above all, our data emphasised and exemplified the need for relatedness to accompany children's strong sense of competence and autonomy during transition.

THE LENS OF SELF DETERMINATION THEORY (SDT) FOR INVESTIGATING PRIMARY-SECONDARY TRANSITION

In this paper, we aim to contribute greater understanding of young people's sense of competence, autonomy *and* relatedness during the primary-secondary-schooling transition, from the perspective of the young people themselves in the English schooling-system. This perspective is vital, given the relative lack of attention given to young people's own experiences and views in educational research (Hargreaves, 2017). We draw on their perspectives to address the research question of how the words of children transitioning from primary to secondary can contribute further to Ryan and Deci's Self Determination Theory (SDT; Ryan and Deci, 2000). This theory claims that satisfaction of a person's needs for competence (attainment and confidence), autonomy (self-direction and capacity to critique) and relatedness (feeling affectively bonded to others) allows them to achieve rich learning and 'positive-experience and wellness outcomes' (Ibid., 2019, p.219), ultimately supporting their capacity for self-determination in learning and more broadly. Satisfaction of each of the three needs contributes in a particular way to positive-experience and wellness outcomes, whereas frustration of any of the three contributes in specific ways to negative experiences. In this article, we seek to explore how the perceived needs for a sense of competence, autonomy and relatedness are described by children as they experience a stage of their lives of potentially increased academic, social and psychological pressures: transition from primary to secondary-school (from Year 6 to Year 7, ages 10–12 years).

Our rationale for selecting SDT as our theoretical framework is our perception that the English schooling-system does not currently support young people's self-determination sufficiently (Fielding and Moss, 2010; Riley, 2019). Through data from the two research projects investigated in this article (Moving-Up; and Children's Life-histories In Primary/Secondary-schools (CLIPS)), we explore Ryan and Deci's claims that schooling-systems the world-over emphasise behaviour that does *not* conduce to positive-experience or wellness outcomes:

> Few nations have implemented the kind of broad scale reforms SDT would advocate to facilitate high-quality student engagement and learning (2019, p.139).

Indeed, despite recent studies reviewed below, Ryan and Deci claim that investigating how to fulfil perceived needs for competence, autonomy and relatedness has been relatively neglected in educational research (Ibid., p.137) and this applies to transition studies as well. They emphasise that SDT is not just a theory for psychologists but one that relates to sociological concerns such as schooling-systems and social justice more widely (p.142).

Here we primarily conceptualise primary-secondary-school transitions as a longitudinal adaptation by students to a new school-setting and new phase of their lives, which cannot be understood only as occurring psychologically within the individual. Particularly against the backdrop of Covid and lockdowns, we fully agree with Jindal-Snape (2022) that primary-secondary transitions are not only impacted by changes to the student's ecosystem or environment, but are also social transitions and, therefore, multidimensional due to overlapping multiple transitions within a student's life and the lives of others around them (for instance, in and out of Covid lockdowns).

SDT AND THE BASIC NEEDS FOR COMPETENCE, AUTONOMY AND RELATEDNESS

The primary-secondary transition is one educational stage at which support for basic needs may be particularly crucial to ensure what Ryan and Deci (2019) call 'positive-experience and wellness outcomes' (p.219). Young people are especially vulnerable at this time to feeling inadequate, lacking in power and isolated (Langenkamp, 2010). SDT suggests that when a child's perceived needs for competence, autonomy and relatedness are met, this will lead to the positive-experience and wellness outcomes of the child having a strong sense of self-determination including healthy self-functioning, flourishing, integrity, wellbeing or good mental health. These outcomes might be accompanied by excitement, happiness, calmness, and contentedness; foster creativity, imagination and flexible styles of thinking (Helwig, 2006); promote efficient time management; reduce distractions during learning; increase cognitive performance; and be positively related to physical health (Alivernini et al., 2019, p.100).

Below, we explore how SDT has been drawn upon in a few previous transition studies before visiting the concepts of competence, autonomy and relatedness in turn.

EXTANT LITERATURE ABOUT COMPETENCE, AUTONOMY AND RELATEDNESS IN RELATION TO PRIMARY-SECONDARY TRANSITION

A number of meta-reviews of primary-secondary transition literature have highlighted the importance of 1) the school, 2) the individual child and 3) wider contextual factors, in relation to extent of positive-experience outcomes (Evans et al., 2018; Jindal-Snape et al., 2020; Symonds and Galton, 2014). These meta-reviews and Jindal-Snape's (2021) review of theoretical frameworks highlight that SDT has been used when exploring aspects of primary-secondary transition; and we aim to contribute further to its usefulness. Gillison et al.'s (2008) survey-based study used quality of life (QoL) as a positive outcome of transition of a small cohort of transitioning pupils in rural England. They showed how QoL was positively impacted when perceived needs for autonomy and relatedness were being met, but that QoL measures appeared unrelated to sense of competence. Symonds and Hargreaves' (2016) small qualitative study, while drawing principally on the more frequently used stage-environment-fit theory (Eccles et al., 1993), uses SDT to show how important teacher-relatedness was in terms of supporting engagement at secondary, both directly by teachers making lessons enjoyable but also indirectly by supporting young people's perceptions of their own competence and autonomy. Similarly, Symonds and Galton (2014) used SDT as a complement to stage-environment-fit theory to structure part of their review of over 100 studies of primary-secondary transition, with explicit focus on psychological development. Their 'person-environment interaction framework' proposed that school transition changed the 'conditions' which contributed to children's striving towards autonomy, competence and relatedness which, in turn, led to differential positive-experience outcomes. Positive teacher- and peer-relatedness were associated with children's better mental health outcomes. However, the authors highlighted that perceived needs for autonomy varied between children and, although restrictions on autonomy were associated with declining engagement, not all students perceived a need for increased autonomy during transition. Children's perceived need for competence also varied, depending on how competence was negotiated in their new school. Symonds and Galton (2014) additionally highlighted the risk presented by teachers at the new secondary not having the same wealth of information as those in primary to assess children adequately. This could erode their capacity to relate to the child in ways that were respectful of their culture, interests and preferences.

A perceived need for competence has been interrogated the least of the three basic needs in the extant literature. However, Evans et al. (2018) showed that academic self-concept decreased over the course of transition in some studies, which they attributed to the differences in academic disciplines (e.g. mathematics versus English).

In comparison, more has been interrogated in regard to autonomy. For example, Eccles et al.'s (1993) research in USA, suggested that there can be a fundamental mismatch between transitioning students' need for autonomy and the environment they find themselves in at secondary, calling for greater adaptation of school contexts to support students' sense of autonomy. Symonds and Galton (2014) further highlighted that children lost many responsibilities on transfer to secondary and were only slowly given these again, while they were simultaneously subject to greater teacher strictness in many cases, further limiting their perceptions of autonomy. Boone and Demanet (2020) also highlighted a link between academic self-efficacy and autonomy in showing how students transitioning to non-academic tracks in Belgian secondary-schools exhibited both lower engagement and perceptions of control, which the authors linked to teachers' assessments in primary-school determining which track they enter. In the context of Covid-19 recently, Leaton Gray et al. (2021) show how periods of 'lockdown' learning at home during the pandemic led to great differences in transitioning students' perceptions of autonomy. Whereas some students enjoyed freedoms of timing and more control over the curriculum during periods of learning from home, the restrictions demanded by Covid control measures also contributed to perceptions of less autonomy, particularly once back in school. However, no empirical studies to date, as far as we know, have explored Ryan and Deci's (2019) mini-theory of Causality Orientations Theory (COT) relating to autonomy in the transition or schooling context (see below).

Relatedness to both peers and teachers has been demonstrated in myriad empirical studies to be fundamental for positive transition experiences. Symonds and Hargreaves (2016) suggested that the trend in most existing studies is for worsening relationships with teachers but improved ones with peers. Indeed, perceptions of peer acceptance, number and quality of friendships – both in primary and on starting secondary – have been associated with quicker adjustment, more resilience, better academic outcomes and better teacher relationships too (Jindal-Snape et al., 2020); although there is some indication that there is less positive projection for lower-attaining students (Langenkamp, 2010). Evidence about relationships with new Year 7 teachers is more complex: studies have highlighted that perceptions of teacher support and enjoyable lessons were linked with higher engagement in learning, better behaviour and academic achievement (Jindal-Snape et al., 2020). Symonds and Hargreaves (2016), however, found that some students held teachers responsible for aspects of secondary they found more problematic, such as difficult homework and discipline policies. Research with students transitioning during Covid-19 (Bagnall et al., 2022; Leaton Gray et al., 2021; Saville et al., 2022 in press) highlights how relational support during students' transition was reconfigured in multiple ways. Transitioning students appeared to rely on family support much more, where this was available, in the absence of meeting new teachers ahead of starting school. Protective peer relationships were also, in many cases, abruptly ended in primary-school due to lockdown restrictions (Saville et al., 2022 in press), suggesting potential loss of protective effect.

Jindal-Snape et al. (2020, p.548) noted that, despite research studies considering individually the sense of autonomy, relatedness or competence in supporting transition, 'the relative contribution of these factors and the interplay between them is less clear'. Our work aims to contribute to further clarity. Jindal-Snape and colleagues (2021) suggested that the discourse of almost all the papers which use SDT presented transition as being a negative experience. Therefore, in the present paper, we commit to being open to both negative and positive perspectives.

THE EXPERIENCES OF HAVING A SENSE OF COMPETENCE, AUTONOMY AND RELATEDNESS IN RELATION TO PRIMARY-SECONDARY TRANSITION

SENSE OF COMPETENCE

Competence in its most general sense is the degree to which people are able to effectively interact with their situation (Diaz Moore, 2005). Yu et al. (2018) describe a sense of competence as the belief that one has 'an effect on the environment' and 'attains valued outcomes within it' (p.1864). 'Competency' is the execution of the capacity to achieve a task, in action. In our immediate context, a sense of competence results when a transitioning child believes they have mastered any task effectively. The task may be an academic task such as a mathematics test (implicating academic self-concept e.g. Evans et al., 2018); may be a non-academic task such as artwork; or may be a social task such as making friends. In the last case, 'sense of competence' refers more generally to an overall sense of confidence, based on self-worth (Bandura, 1997).

Our research is concerned with primary-secondary transition in relation to children's sense of competence because of a relatively recent policy emphasis in the English schooling-system on a child's attainment scores in mathematics and English *above all else* (Fielding and Moss, 2010). Our concern is how well children's perceived competence can withstand the narrow, unnegotiable dominance of these attainment scores in what is valued in school-life. In particular, we explore implications of the lack of policy attention to children's non-academic, including social, sense of competence, which is especially relevant to the transitioning child talented at music or who makes friends easily, but who attains lower scores in mathematics/English, whose *overall* sense of competence is undermined (Francis et al., 2019). We also consider whether the child's sense of competence can be supported through teachers' valuing the child's internal frame of reference (i.e. sense-making), their interests and preferences, despite the shift from the primary system of one-teacher-all-subjects to the secondary system of individual subject teachers.

In particular, we investigate Ryan and Deci's (2019) claim that a child's sense of competence is one important – *yet insufficient* – basis for sustaining the intrinsic motivation to learn and flourish, even during a time of transition: that a sense of autonomy and relatedness is *also* required. This would mean that, even when support for all kinds of competence is available, unless it is accompanied by supports for autonomy and relatedness, it may reinforce external

(rather than internally meaningful) goals and ultimately steer the child's energies away from opportunities for rich learning and positive-experience outcomes.

SENSE OF AUTONOMY

Having a sense of autonomy means a transitioning child recognising that they are acting in ways that reflect their agency; and that they are not only controlled by others such as teachers, parents or policymakers. When a child feels controlled rather than autonomous, this can dampen their curiosity and creativity (Helwig, 2006) and limit their sense of freedom to critique their situation. This may apply particularly when children enter the more controlled environment of the secondary-school. As Anderson (2011) suggests, one is autonomous if one acts in accordance with reasons perceived to be sound: rather than by simply following externally prescribed rules; or because one is reacting to transitory desires. However, as Devine and Irwin (2005) emphasised:

> One acts or judges in accordance with a law (nomos) which she prescribes to herself (autos). It is her own self, identified with her reason, which constitutes the source of the action (p.321).

According to Ryan and Deci's (2019) Causality Orientations Theory (COT), some people are more likely than others to act according to self-initiated rules and act autonomously:

> Some people readily orient to *controls*, reward contingencies, and powerful others; others to opportunities to explore and *grow*; and still others seem to focus on *fears* of failure or perceived needs for safety (p.126; our emphases).

The Controlled Orientation, according to COT, indicates a tendency to conformity, being constantly aware of controls, living up to others' expectations and emphasising performance over learning – an orientation often encouraged by secondary-schools especially. The Autonomous Orientation 'correlates with greater focus on learning goals, and a focus on interest and challenge' and may predict 'better coping with distressing experiences' such as transition to secondary-school (Ibid.). An Impersonal Orientation (which we rename 'Avoidance Orientation' to sound less derogatory) is focused on performance anxieties and *avoiding* failure. These Orientations are helpful for exploring how a child's sense of autonomy unfolds over the process of transition and how this subsequently relates to positive-experience and wellness outcomes. The most autonomous children are those who can stand outside their situation and see its tensions, while still participating within it, whereby they are able to make a decision about whether to 'integrate, hierarchize or reflect upon the rules imposed from outside the self' (Devine and Irwin, 2005, p.322). This reflective thinking can occur when they perceive that 'there is thinking space to accept, modify, alienate or find alternatives to the prevailing paradigm', drawing on an even 'deeper, broader plateau of thinking than "rational choice"' that includes the capacity to reflect on rational choice itself (Ibid., p.328).

SENSE OF RELATEDNESS

Sense of relatedness to other children and, separately, to teachers plays the third essential role in developing positive-experience and wellness outcomes according to SDT and is perhaps a more straightforward concept. In the context of the transitioning child, sense of relatedness refers to perception of having qualitatively and quantitatively adequate social bonds, feeling cared for, valued and belonging within community – whether this be the new Year 7 classroom, their new friends or the new school (Riley, 2019). Studies indicate that feeling socially excluded leads to distress and negative affect (Alivernini et al., 2019).

Given this literature, explored above, on the importance of SDT for positive-experience and wellness outcomes among young people, further substantiation of the theory and further detail of its practice were called for to enlighten educators of its implications for transition.

RESEARCH DESIGN

THE CHILDREN'S LIFE-HISTORIES IN PRIMARY/SECONDARY-SCHOOLS PROJECT (CLIPS)

Funded by the Leverhulme Trust [no.413], the Children's Life-histories In Primary/Secondary-schools project (CLIPS) was couched within critical theory (Horkheimer, 1982). It aimed to

explore children's sense of competence and to critique current policies which foreground attainment in tests of mathematics/English *above* other goals for schooling. The project drew on interpretivism (Schwartz-Shea, 2020) in its attempts to understand and describe how individual children reacted socially and affectively to their schooling situation across ages 7–12. Our research involved construction of school life-histories to capture the 'concrete joys and suffering' (Plummer, 1983, p. 4) of unheard individuals (Goodson and Sykes, 2001). Almost no life-histories have focused on school-children; and none have used SDT as a framework. In this article, we present three mini-life-histories to give a sense of their holistic nature.

In summer 2018, we gained access to four primary-schools, two inner-city, one suburban and one rural, in SE England. Three of the schools had pupil intakes comprising above-average numbers of children eligible for free school meals (FSM) indicating economic disadvantage. All four schools had been assessed as good/outstanding by national inspections at the start of the project. Year 3 teachers selected children for the project who had been categorised, at the end of Year 3 (aged 7–8), as 'below age-expectations' for attainment in mathematics and/or English (not including children who had Education and Health Care Plans indicating impairment). In this article, we examine data collected at the period of their primary-secondary transition, which occurred between Year 6 (primary, ages 10–11) and Year 7 (secondary, ages 11–12). Of our final sample of 23 children, nine had Pupil Premium status (indicating further social disadvantage). Over half were from ethnic minority groups. By the end of the fourth year in summer 2022, the children were attending 13 different secondary-schools.

When first meeting each child, they chose a 'secret' name, which became their permanent pseudonym, used below. Across the project, we used the following data collection instruments:

- 12 (or 11) audio-recorded and transcribed activity-interviews of 40–90 minutes with each child every term for 13 terms (missing one, or in rare cases two, under Covid-19); in a few cases using dyads/triads. TOTAL = 230.

- Observations of each child in their primary class every term, where possible.

During interviews, we often substituted straight questions and answers with activities, games, role-plays, drawing, and photography. Findings presented below are accumulated from all CLIPS interviews in the 10th–13th terms (final terms of the project), in response to a range of complex activities on which we do not have space here to elaborate. Over the 13 terms, we had built up close bonds with the children which supported them to speak freely. Our data were based on the children's own ways of making sense of their schooling with little reference to parents' or teachers' perspectives. We analysed data inductively, letting themes emerge from the data (Jeong and Othman, 2016). We fed all data into NVivo11/12 and, as we coded, constructed new codes inductively, which we negotiated collaboratively as a research team of three researchers. Our presentation of children below is based on our informed, collaborative insights which emerged from the data, but we acknowledge that we could only partially understand what the children were thinking or feeling.

THE MOVING-UP PROJECT

Funded by the Wellcome Trust/UCL Office of the Vice-Provost (Advancement), Moving-Up aimed initially to provide guidance for schools and families on how to support transitioning pupils during Summer 2020, amidst the Covid-19 pandemic. However, it quickly became clear that the impact on this cohort would continue into Year 7 at secondary-school; and two more phases were planned for their first and third terms of Year 7 (2020–21). A concurrent mixed-method approach was employed, using online UCL-hosted REDCAP surveys. Teacher survey and online pupil interview data were analysed separately so are not included here (Leaton Gray et al., 2021; Saville et al., 2022, in press).

Surveys were refined with each phase, as emergent themes were analysed from previous rounds, while retaining core questions. In total 321 students were recruited through: social media; online parental groups; and UCL's extended schools networks. Answering questions was optional so the total sample varied for each question and was sometimes below 321. Parent approval was required, so usually surveys were completed at home. Flexibility in timing minimised potential distress or time burden. Personal data were only shared by the participant if they wanted ongoing contact (e.g. for online interviews, not reported here).

Participants came from at least 18 schools (and naming was optional) in London, South-East or East England, with 91% of participants in the state sector (i.e. funded by government) and 90% in urban/suburban areas. Due to uncontrollable reasons, we recruited from several all-girls' schools but no all-boys' schools, so 70% of the participants identified as female. The sample also includes lower than average percentages of pupils eligible for free school meals, indicating reduced social disadvantage in this sample (in contrast to CLIPS participants). Given that the online survey required parental permission, we acknowledge that experiences of the most vulnerable were likely under-represented. Table 1 represents participants.

	CLIPS INTERVIEWS	MOVING-UP SURVEYS
Key phases of data collection	Autumn 2021; Spring, 2022; Summer 2022	Autumn 2020; Summer 2021
Principal research methods	Life Histories – activity interviews; observations	Online student survey: open and closed responses
Number of participants	23	321
Age of participants	11–12 years old	11–12 years old
	Year 7	Year 7
Demographics	100% state school	91% state school
	75% urban/suburban locations	90% urban/suburban locations
	50% female	70% female
	>23% eligible for free school meals	10% eligible for free school meals

Table 1 Key features of the two projects as used in the present study.

INTEGRATION OF DATA-SETS

Integration of the data-sets started to be planned as the Moving-Up project secured its funding to follow the participating cohort of students into Year 7 at secondary-school in Autumn 2020. This was when the CLIPS participants were entering Year 6, so considering transition. The researchers from the two projects began to work closely together, particularly in the analysis of the second phase of Moving-Up (see Leaton Gray et al., 2021). This analysis raised insights, particularly around autonomy and relatedness, which the lead author here related to emerging findings from the CLIPS project (of which she was PI). Therefore, in planning Phase 3 of the Moving-Up survey in May 2021, we were able to ensure some similarity of questions with final CLIPS interviews (during participants' experiences of Year 7) in June 2022, in line with the research question guiding this article. The logic for this was informed by Creswell and Plano Clark's (2011) principles for mixed-method design. In particular, we wanted to ascertain whether emerging findings from Moving-Up during Covid-19, might still have resonance with the subsequent cohort who had not transitioned under Covid-19. We also wanted to explore whether detailed, descriptive findings from the smaller CLIPS sample might be reflected in a wider data-set could help us understand survey responses relating to SDT in more vivid detail.

Data for each project were analysed initially separately for other research outputs and then, on completion of both projects in June 2022, analysed collaboratively to answer the specific research question posed here. Analysis proceeded initially deductively with Moving-Up survey data; and inductively for CLIPS data; but in both cases, data were subsequently coded for sense of competence, autonomy and relatedness. Sub-themes were then abductively organised, informed by emergent themes in the data, literature on transition, SDT and the mini-theory of COT.

ETHICAL PROCEDURES

For both projects, we had full ethics approval from the UCL Research Ethics Committee (REC 1079 and 1389) and followed special protocols for data collection during the Covid-19 Pandemic. Moving-Up adhered to British Educational Research Association code of ethics, while CLIPS was guided also by British Sociological Association ethical code. For Moving-Up, consent was negotiated by students with parents after entering the survey through an information page about the project, which they were told to discuss with parents. They were then required

to provide their parents' contact details as part of the consent page which followed, before the survey questions commenced on the third page. Any subsequent contact was arranged directly with parents using these addresses. For CLIPS, consent was regularly re-confirmed by both children and their parents.

FINDINGS RELATING TO THE POSITIVE-EXPERIENCES OF TRANSITIONING

Jake recognised that positive-experience outcomes were essential for success at secondary-school:

> If you're not comfortable, you won't focus, you might make mistakes in your work most of the time. And if you're happy in school, it's good so you can reflect, so you won't have to feel alone.

For some children, primary-secondary transition was experienced as an exciting start to something new. In CLIPS, Ryan described how secondary-school was 'like an evolution of primary-school'. In Moving-Up, despite the disruption posed by Covid-19, students informed us that they were more likely to be as 'happy' (our word), or happier, in secondary as they had been at primary. Rating their happiness out of 100, where 50 indicated 'as happy as at primary' and 100 indicated 'more happy in secondary than in primary', the mean score was 61/100 in Autumn 2020 and 57 in Summer 2021, suggesting a majority of children feeling happier across their first year at secondary than at primary. When asked if secondary was turning out as expected, the scores were similar, with average scores of 64 and 61 (where 50 indicated 'same as expected' and 100 'much better' in secondary). Regarding what had been good about starting secondary, the most common response by far was 'making friends' (265/299, 89%), followed by 'learning new subjects' (214/299, 72%), although a tiny minority claimed that nothing in particular was good about transitioning (13/299, 5%). When asked if anything had surprised them about starting secondary, one third (96/288) actively typed 'no' or 'not really' and 15 pupils referred to how quickly they had adapted.

In our overall assessment of the 23 children in CLIPS, we perceived that there were seven whose trajectory into secondary-school seemed to have improved their positive-experience outcomes; seven who found school-life less positive; with nine who felt their positive-experiences in secondary remained consistent with those of primary-school. The importance and enjoyment of making new friends through transition was emphasised by all CLIPS children. The same was true for the enjoyment of 'learning new subjects' such as Design and Technology (DT), sport, dance and computing which tended to be better catered for at secondary including well-equipped labs or halls. However, as discussed below, this enjoyment did not necessarily spill over to other subjects and CLIPS children were undecided overall as to whether primary or secondary lessons were worse. Eight of the 23 CLIPS children actually looked back longingly at their primary-schools, with Jerry telling us that he would like to do all of primary again because it was 'such fun'. On the other hand, a few CLIPS children claimed to have 'hated' primary, for example Dragon and Joe, who blamed their primary-schools for not having helped them sufficiently.

FINDINGS ABOUT PERCEIVED COMPETENCE

We did not know the academic scores or attainment groupings of the respondents in Moving-Up, but we knew that all 23 CLIPS respondents had had some difficulties in mathematics/English attainment at the end of Year 3. For 22 of the 23 children, this evidence of reduced competence was also accompanied by their *perceived* lack of competence (while one child usually decided not to acknowledge this). For example, Joe explained, 'I'm not as smart as the others. I'm just like really slow'. Therefore, not surprisingly, half of the CLIPS children specifically named the difficulty of work at secondary as something they had feared beforehand, for example Chrystal fearing, 'Not knowing how good my work is … and people are going to laugh in my face'. However, it is notable that there was no agreement among the participants in either project about the difficulty of the work in secondary. For nearly all children, it seemed that homework was a negative issue related to starting secondary but not necessarily because it

was too hard. When we asked Moving-Up participants the least positive aspect of transition, the most common response was 'homework' from 57% (167/292); but only a few specified the difficulty or amount of work in general (11/288) when asked what had surprised them about secondary. Indeed, six Moving-Up students said that they found the work easier than expected in secondary. Similarly, among CLIPS children, there were warnings of, 'Don't leave your homework to the last minute but do it as fast as you can!' (Bob); and, '[Homework is] really boring, really, really, really, really, super-duper boring' (Saffa); but they also shared no consensus that it was too hard.

For some of the CLIPS children, academic attainment records at primary may have damaged their academic self-concepts, if not their overall self-confidence. They certainly mostly found themselves in lowest sets in secondary and several were withdrawn into support groups (sometimes during favourite lessons or break, which caused frustration). However, we perceived that at least five of the 23 children sustained their personal self-confidence despite having a relatively low academic self-concept in mathematics and/or English. Mohamed, for example, was confident to be perceived as 'cool' rather than smart and confidently saw detentions as contributing to his coolness. However, we did find the children with greatest self-confidence tended to be those with marginally higher attainment and therefore academic self-concept.

We judged that eight CLIPS children persisted throughout transition to lack sense of competence academically, non-academically *and* in relation to self-confidence. What differentiated them was how they dealt with the potentially painful knowledge of being categorised as less academically competent by the schooling-system. Yet 15 of the CLIPS sample articulated the desire and design to keep trying to improve their competence, including some whom we perceived to have the weakest sense of competence. Four children just carried on with 'business as usual' at their new secondary, without paying academic attainment much attention at all. But the final four appeared to feel that there was no point trying anymore and that they no longer cared about academic competence (e.g. Joe and Jeff, below). Only one child prioritised high academic grades as his main motivation in life – above, for example, 'being kind', 'looking after my family' or 'being rich'.

It is important to emphasise also CLIPS children's non-academic sense of competence. Every child had a hobby or school subject in which they felt highly competent, including, for example, nature-study, kick-boxing, football, art, dance or playing computer games. Some had suggested previously that these were unvalued by their schools, for example, Anna telling us, '[The teachers] don't know how good I am at drawing … because I don't really feel like I have to show my true drawings or identity to the school'.

FINDINGS ABOUT PERCEIVED AUTONOMY

THE INFLUENCE OF THE PANDEMIC ON TRANSITIONING CHILDREN'S SENSE OF AUTONOMY

When asked whether anything had surprised them at secondary, only a few students in Moving-Up explicitly noted any changes in sense of autonomy. However, seven students referred to being surprised by aspects related to discipline policies and 31% (90/292) said that detentions were a negative feature of starting secondary which presumably influenced their sense of autonomy. However, students in Moving-Up started Year 7 at the height of the pandemic and, therefore, faced physical restrictions, which partly appeared to threaten their sense of autonomy but, conversely, also gave opportunities to foster more self-direction in other ways. For example, well over half of students reported having proactively prepared for transition *for themselves,* examining the school website themselves or speaking to family members, friends and even older students about concerns. Lockdown and home learning were also reported by some to give more opportunities to learn according to their own interests and preferences, key aspects promoting autonomy. Back to school, students were placed in bubbles to restrict circulating Covid-19, which inevitably restricted their physical freedom to wander. Half of students (65/131) perceived being in one classroom as negative and 64% (84/131) missed being in other buildings such as Science laboratories and specialist Music, Drama and Art facilities. However, 32% (42/131) claimed that staying in one classroom was

positive, with some highlighting greater opportunities for a sense of relatedness with both peers and teachers. This in turn may have actually supported a perception of agency in that personal interests and preferences could again be better accommodated.

CAUSALITY ORIENTATIONS DURING TRANSITION IN THE CLIPS PROJECT

Lack of the relevance or inherent interest of lessons was a theme sometimes brought up by CLIPS children, which we supposed was influenced by their Causality Orientation and fed into their sense of autonomy. In accordance with Ryan and Deci's (2019) categories in COT, the CLIPS children identified their own Causality Orientations at the end of Year 7 by selecting one of the following as representing them best in Year 7:

1. *I like/hate doing what I am told. I respect/hate the teachers. I work hard to get rewards/ don't care about rewards.* **(Controlled – selected by 7/23 children)**

2. *I'm interested in exploring different and unusual things. I am also interested in thinking about how things could be changed at school.* **(Autonomy – selected by 4/23 children)**

3. *I try to make sure I don't do badly at school. I don't want to have low grades and have people laugh at me. I take care to do my best and not get into trouble or get a detention.* **(Avoidance – selected by 12/23 children)**

The 23 CLIPS children's choices suggested that avoidance of failure and punishment was dominant (n = 12); a sense of being controlled was prevalent (n = 7); but opportunities to feel autonomous and seek autonomy also existed (n = 4). It is notable that the four Autonomous Orientation children all came from the same original primary-school where categorisation by attainment was handled particularly sensitively, which may have been a predictive factor. They had four different ethnic heritages, which suggests that, on the other hand, ethnicity was not a predictive factor. The following three mini-life-histories pertain to three children with different causality orientations:

Joe	British, Moroccan-heritage	Rural school in Surrey	Controlled Orientation
Saffa	British, Somali-heritage	Inner-city school, London	Autonomy Orientation
Jeff	White British	Rural school in Surrey	Avoidance Orientation.

CONTROLLED ORIENTATION: MINI-LIFE-HISTORY OF JOE

Along with seven other CLIPS children, Joe selected the Controlled Orientation which was reflected in his persistent concern over restrictions put on him. It was perhaps no co-incidence that Joe excelled in kick-boxing. He seemed to exert considerable energy in resisting being controlled. He perceived controls to be embodied in teachers whom he blamed, commenting:

> They're annoying and I don't get my way… And they tell me what to do, and they're not in control of me – I am.

He perceived that teachers did not want children to be comfortable and happy at secondary and, like many other children CLIPS children, he often perceived their controls at secondary to be unfair. His relationship with teachers had been tense at primary-school where he was often punished; and we perceived that perhaps teachers struggled to manage his calling out in class, triggered by his ADHD. On transition to secondary, however, Joe described his form-teacher in Year 7 (whom he identified with particularly for being male), saying: 'He's always smiling at me'. This connection, validating Joe, contrasted with Joe's feelings of resistance to other (female) teachers, both at primary and secondary, whom he felt were always admonishing him. Although in primary, we did not perceive Joe as having either high sense of relatedness with peers, or high sense of academic competence or self-confidence, by Year 7 he did seem to have settled on a sense-of-self as someone different and special, which he was content with and which allowed him to feel some sense of autonomy despite his Controlled Orientation. We asked him which parts of himself he liked best and felt most confident about, and he replied, 'My personality. Being me'. This was clearly someone who spent energy on 'being me' rather than what others wanted him to be.

AUTONOMY ORIENTATION: MINI-LIFE-HISTORY OF SAFFA

Along with only three others in CLIPS, Saffa depicted herself as having an Autonomy Orientation which accompanied a consistently positive trajectory across transition. The exception to her smooth journey was her academic self-concept which was low for mathematics, but this frustrated her rather than defeating her:

> I get angry as I don't want to fail at anything.

Despite Saffa's frustrations, she seemed authentically interested in learning for its own sake and genuinely did not give up:

> It's bad thinking that you're – I think lower than another person … [so I] put my head down and try to work as hard as I can. And sometimes I will just talk to other people about the work, so I can understand it as well.

She was driven by a strong sense of power that she believed knowledge could bestow, allowing her to act with autonomy in life:

> You know that saying, 'knowledge is power'? Knowledge can be like anything you want – because you have knowledge you can do literally anything, and anything in the future.

However, she was confident socially and saw transitioning to secondary as 'the chance to make lots of new friends who you can talk about loads of topics with'. She exercised her autonomy in seeking out positive relationships both with peers and teachers (the latter whom she tended to perceive as 'nice, good, responsible').

Like Joe, she found secondary to be very strict, for example, limiting how often and how long one could leave class to go to the toilet. But she played the role of 'the autonomous person' described by Devine and Irwin (2005, p.322) as she seemed in control of her choices. She explained, 'I mean the school isn't us, so we can choose what we like and what we don't like!' Saffa managed to sustain positive-experience outcomes, therefore, by seeking and using her agency, including to initiate friendships, giving her a sense of relatedness which supported her sense of social competence, despite her continuing struggles with school attainment in mathematics.

AVOIDANCE ORIENTATION: MINI-LIFE-HISTORY OF JEFF

Jeff's transition trajectory proved limited in terms of positive-experiences; but, unlike Joe, he avoided displaying resistance and instead tried to make sure his school-life ran without friction (hence his Avoidance Orientation). To this end, he was exceptionally polite and obedient to avoid being reprimanded – a strategy that won him the affection of the teachers. However, he spent his time in school 'keeping in' his anger about negative experiences he endured, expressing this later at home:

> I mostly just play Fortnite. I mostly just take my anger out on people online … and then I'm just sort of killing people.

This suggests that Jeff was expending additional energy 'keeping in' his anger, energy which he could otherwise have channelled towards engagement with learning and new relationships. He also exhibited how fear might inhibit him from taking risks:

> My teacher would like shout, and that made me scared … I kind of got confused and didn't know what I was doing.

None-the-less, in terms of confidence, he showed determination in preserving a strong self-image despite unmet needs. Already in Year 6 at primary-school, he had savoured the idea of being responsible and independent; and on entering Year 7 in secondary, aspired to become a 'brave' person. Perhaps to avoid discomfort, Jeff downplayed his perceived lack of competence in core subjects and, on entering secondary, decided that getting high grades in academic subjects was his very least priority in life and that (like Joe) what mattered was to 'be oneself'. Jeff here indicated the energy he put into being 'himself' and to avoiding the aspects of school he found too difficult.

FINDINGS ABOUT PERCEIVED RELATEDNESS

Relatedness to peers and teachers impacted on children's experiences of lessons, firstly when being separated from friends in class; and secondly when they perceived many teachers as very strict rather than caring and responsive to their interests and preferences (which would also have supported their autonomy). Several of the CLIPS children explained that sitting away from friends and without emotional connection to the teacher led to many lessons being perceived as boring or irrelevant in secondary-school; while in contrast, at primary-school lessons might have been boring because they were sitting with the *same* teachers and peers all the time. Britney was indignant when a teacher said, 'I don't care about your name, I just care about learning'. CLIPS children also listed many prohibitions imposed by their new secondary-school teachers, some of which they perceived as pointless or unfair and which potentially distanced them from teachers and/or each other and undermined their sense of autonomy *and* relatedness. Outlawed behaviour included laughing in class, chewing gum, (hair) highlights, earrings, slumping on your desk, using your phone, and touching each other. By the end of Year 7, two CLIPS children had been excluded from two different schools for breaking school rules, presumably having very negative effects on their sense of competence, autonomy *and* relatedness.

However, although 59% (162/274) of the Moving-Up sample indicated that they missed their primary teachers, comments from some CLIPS children indicated that there were students who were surprised by how kind or approachable their secondary teachers were, more than by how strict they were. For example, despite his multiple detentions, Mohamed explained: 'It's nice: the teachers like me and I like the teachers'. Zack advised that, 'The teachers are usually nice and very understanding' and he singled out his form-teacher who spoke Bangla as he did. Similarly, Chrystal explained how she became close to the one teacher who had the same colour skin as she did. Britney reported that if you were upset, '[Teachers] will ask you how you're doing, and then if you say like you're not fine, they will just tell you 'What's wrong?'

However, relatedness with peers was the best part of transition for many. There were 100% of the students in Moving-Up who told us they had made friends since starting secondary, with 89% agreeing that this was a positive transition outcome and 14 of them explicitly naming this as surprising. There were just 8% (24/288) who had not found this positive; and 9% (27/288) reported having been bullied. Despite some CLIPS children having worried about making friends before transition (for example, Anna feared 'nobody liking me and getting laughed at and failing the tests'), Britney reassured next year's transitioning cohort by revealing:

> I feel very confident now because like now I have my friends, I've made friends, so I can – like – be myself.

However, Jake described feeling 'ashamed and anxious' without his primary-school friends in Year 7, explaining 'I feel totally different without them'. Similarly, 62% (170/274) in Moving-Up missed their primary friends with 31% (85/274) missing their primary playtimes.

We became interested in how physical lockdown restrictions that continued (to some extent) in secondaries were affecting students' opportunities for relatedness at breaktimes. Two-thirds of survey-respondents (88/128) indicated that breaktimes had changed since primary, with only 24% (31/128) saying they now actually *played* regularly and 31% (39/128) that they never played at breaktimes. However, open-ended Moving-Up responses showed that time was still spent with friends, but 'chatting' or 'hanging out' instead of more active play, in which case, relatedness may have been enhanced in different ways. Some of the CLIPS children described that they still played football or ping-pong at playtime while others just liked to 'hang out', but they lacked equipment for traditional playtime activities that had been popular in Year 6, such as the climbing frame or swings. The reduced length of playtimes that some CLIPS children perceived might also have limited their opportunities.

DISCUSSION: HOW CHILDREN'S WORDS CONTRIBUTE TO SDT AND IMPLICATIONS

Findings from our two projects, Moving-Up and CLIPS, have contributed to addressing the gap in educational research referred to by Ryan and Deci (2019), by substantiating – with vivid detail from children's own words about their experiences – Ryan and Deci's early claims that

schooling-systems emphasise behaviours that may *not* conduce to positive-experience and wellness outcomes (2019, p.137; see also Jindal-Snape et al., 2021). Our findings support previous studies relating to the disruptive time of the primary-secondary transition, by illustrating the potential benefits of giving policy priority to:

1. nurturing children's capacity to recognise and direct their own schooling trajectories more autonomously;

2. children's quality relatedness with both peers and teachers; and, simultaneously,

3. a wider range of conceptions of competence.

Our findings have provided greater understanding and insight into Ryan and Deci's Causality Orientation Theory (COT) in the context of transition, indicating that more could fruitfully be practised to develop an Autonomous Orientation among transitioning children (as previously highlighted by Eccles et al., 1993; Gillison et al., 2008). Our CLIPS findings illustrated that those children – the majority – who developed Controlled or Avoidance Orientations, may have done so because their perceived needs for a sense of competence and/or relatedness were not being met. They thereby used up valuable energies in riling against being controlled or avoiding failure and punishment – rather than into learning engagement and positive relationships. This may have put them at an immediate disadvantage as they set out on their secondary-school journeys; and it highlighted the inseparability of the three needs for a sense of competence, autonomy and relatedness (addressing the research gap expressed by Jindal-Snape et al., 2020).

Our combined data-sets also reaffirmed SDT's emphasis on the fundamental need for a sense of relatedness during the transition process (Jindal-Snape et al., 2020; Symonds and Galton, 2014; Symonds and Hargreaves, 2016). It is encouraging that social bonding had helped most participants enjoy transition whereby 'making friends' was reported as the most positive aspect of transitioning. However, to increase young people's positive-experience and wellness outcomes, those who direct the schooling-system would do well to put in place practices and structures that explicitly support and encourage free and equal relationships among peers. Our data suggested that changes may need to be made, for example, to school social-sites such as playgrounds and eating areas, with more varied equipment for recreational activities and games; and more time allocated to break and lunchtimes.

We revealed more good news about transition – which highlights the inclusive scope of SDT's 'sense of relatedness' – that relationships with teachers were shown to be both crucial and surprisingly good, with many children having experienced caring and considerate teachers. Some CLIPS children also described how just one special teacher could be important in boosting their sense of relatedness and belonging and thereby facilitating the start to secondary-school. However, there were other data suggesting that teachers could be experienced as unnecessarily restrictive which, in keeping with SDT, did not conduce to positive-experience outcomes. This finding may illustrate that teachers themselves also need to feel competent, autonomous and related, and the schooling-system must provide teachers with quality space and time to enable them to support children more fully at a time when they are particularly vulnerable. This could mean Year 7 having a separate building (see Saville et al., 2022 in press); or dividing big schools down into smaller schools on the same site (see Fielding and Moss, 2010); and would certainly mean increased systemic support for teachers' own positive-experience and wellness outcomes.

Our findings have also addressed a research gap by emphasising the wide scope of SDT's 'sense of competence'. Our data have highlighted the negative effects of secondary-schooling focusing too exclusively on the child's grades in mathematics and/or English and not intensively enough on nurturing the self-confidence aspect of competence and its non-academic aspects. By schooling focusing on the full range of the 'sense of competence', more children stand to feel valued and thereby engaged at secondary-school. Several policy strategies suggest themselves in this regard.

• Firstly, as emphasised by many researchers already (e.g. Francis et al., 2019; Evans et al., 2018), a sense of inadequacy in academic competence can be imported from primary to secondary and may fuel Controlled and Avoidance Orientations. How evidence of test-

attainment is dealt with at the transition stage may have long-lasting negative effects on children's sense of competence throughout their remaining school-lives. Starting a new secondary-school could become a chance for a child to have a fresh start, unshackled by competence labels from primary-school, and there was some evidence of this occurring when participants started engaging with new secondary-school subjects such as DT. However, a secondary-schooling-system where individuals have some autonomy over subjects they specialise in might ameliorate this problem, allowing children to feel competent in areas they enjoy.

- Secondly and relatedly, tunnel-vision focus on examinations, especially GCSEs which have lost their exit-examination status, needs to be reduced and children shown the reality of future life prospects which are *not* only dependent on mathematics and English but also on the arts and sports, and one's capacities for relatedness and autonomy in the wider world.

- Thirdly, a careful balance needs to be restored between discipline in schools which is supposed to protect academic competence; and the nurturing of children's self-confidence and belonging. Where the latter are compromised by restrictive rules and punishments, often seen as unfair by children, neither academic achievement nor other positive-experience outcomes are likely to materialise.

- Fourthly and finally, pedagogy needs to tap into the life-worlds of all students in class and be orchestrated so that all children feel that they have been competent in attaining something valuable in every lesson. This would suggest less regimented curricula and lesson-design and financial support for schools to experiment perhaps with more flexible and creative teaching and learning in secondary.

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The authors have no competing interests to declare.

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