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The Impact of Year 6 Parents Evening and Science Induction Days on Student Attitudes towards Science Lessons across the Transfer from Primary to Secondary School.

Stuart Norris
University of Lincoln (England)
snorris@lincoln.ac.uk

Abstract
The impact of both transfer between primary and secondary school and student negative attitudes' towards learning has been highlighted as key factors for affecting student attainment within secondary education. Specifically in relation to the subject of science this has led in recent years to a reduction in the uptake of science and a potential shortage of educated and skilled individuals for the science and engineering sectors. In relation to transition research, one of the key over encompassing ideals is that of limiting the dip seen in student attitude when they leave primary to attend secondary school. Transfer from primary to secondary schools provides students challenges in liaisons, continuity and issues of language and socialisation. This results in transitional anxiety which is a factor that has been linked with reductions in attitude and fluctuating emotional states. A measure used to market the secondary school and to ease transitional anxiety is often that of the rising year 6 evening or induction days in which students are able to get a 'taste' of what it would be like to attend. Year 6 parents' evenings and induction days are mechanisms used by secondary schools to differentiate themselves from competitors whilst also aiding in the bridging of student transfer from primary to secondary school. Although it is well known that student attitude towards subjects like science decline over this period what is less well known is the impact that year 6 open evenings and induction days have on this phenomenon. This article summarises the known literature within this area before suggesting future research within this domain.

1. Introduction
Year 6 open evenings have been an event placed on by secondary schools in England since the 1970's often advertised in the local papers within the schools catchment areas [1]. Sometimes termed *rising year 6 open events* and not to be confused with *parent evenings*, year 6 open evenings were duel purposed in that they advertised what the school could offer to both prospective parents and students whilst at the same time starting a process that was designed to ease transfer anxiety when children of usually 11 years of age changed school [2]. This was in turn supported by the school induction day. Although year 6 parents evening were primarily *showing off* events to advertise the school to *potential* parents and students the induction day was often for parents and their children who had chosen to attend the school. Held at the end of an academic year the induction day was therefore focused on more macro level processes in aid of bridging the changes that students faced when transferring school such as timetabling and rooming's, expectations of the school, uniform and informing students about the general routine of the school day [3].
This process of transition due to the transfer of school was guided by the idea that children had reached a maturity that dictated changing from a *primary* stage of general skill acquisition to a *secondary* stage of specialised subject learning [4]. Although historically parents sent their child to their local secondary school this changed when the 1993 Education Act was introduced. This educational change led to parents having more power to make choices on where they could send their child in relation to them completing their statutory period of education [5]. To differentiate themselves from rival's competing for the same specific typology of student within similar catchment areas secondary schools used marketing processes to inform parents what they could offer for their child in relation to their future development [6]. With the introduction of league tabling as an academic comparison tool and the creation of the Office for Standards in Education, Children's Services and Skills (Ofsted) the challenge that the senior leadership team had was that of balancing the promise of what the school could offer against the reality of the day to day running of the school [1]. As such year 6 open evenings became more streamlined in relation to marketing and transitional challenges such as dealing with transitional anxiety became the purview of the induction day. Although Heads of

school had misgivings about using any associative form of selling in relation to recruitment of students [1] schools that planned and advertised their open evenings more widely were seen to have more choice in gaining higher attaining students due to over subscription [5]. With the introduction of academisation within the English educational system whereby schools are more accountable for students making insufficient academic progress the use of marketization policies and public relations management can be argued to be important tools that the senior leadership team use to maintain the standards of their school [7]. However there is an associative risk of overselling the institution at events such as the year 6 open evening which could be a potential mechanism that could impact on student's attitudes towards specific subjects within school [8].

2. Transitional Research

One of the key over encompassing ideals observed in transitional research within education is that of explaining and limiting the dip seen in student attitude towards school subjects when they leave primary to attend secondary school. According to Morgan [9] transfer from primary to secondary schools provides students challenges in liaisons, continuity and issues of language and socialisation. This results in transitional anxiety [10] which is a factor that has been linked with reductions in attitude and fluctuating emotional states [11]. Commonly a small to moderate decline in emotional and motivational engagement can be measured after transfer [12] and declines in attitude have been noted after transfer as early as the end of the first half term [13].

Year 5 (9-10 year old) can be argued to be the start of the process of transition before transfer for most young children. Often primary schools use links with the secondary schools within their catchment area to share their resources in relation to specialised subjects such as science and design technology. This in turn gives the secondary schools the chance to advertise themselves to potential students before students are inundated with information regarding secondary school placement choices [2]. These specialised subject induction days are often very exciting for primary school students as they get to leave their normal classroom environment and go on a trip to 'big school' in which hand on practical lessons are often the norm [13]. It is also during this year that attitude towards learning has been noted to decline [14]. This has been observed across science, maths, and English lessons although no study is available to judge the attitude of students in relation to the humanities and language subjects within this age group [15]. Explanations within this area seem to focus on ideas of the students beginning to outgrow their primary school environment and that attitude decline could be due to perceiving that as one of the older year groups they should be given more autonomy within their learning within the classroom [16]. This continues into the student's final academic year before transfer and it is in this context that students and parents then visit on average three secondary school open evenings [17]. Although the literature indicates that students at the end of year 6 begin to perceive their leaving of primary school with optimistic apprehension, which is linked with some studies showing an increase in attitude at the end of year 6 [18], no study to date have questioned the effect of year 6 open days or induction days as an effector in this process.

3. Future research

Although as noted earlier students habitably place more focus into peer pursuits than to academic learning this does not justify the decline in attitude and engagement towards practical subjects like science being greater than in non-practical subjects [18]. An explanation for this could be the impact of year 6 open evening and induction days. With the focus of the senior leadership team on marketing themselves to parents and students during this event departments or subject-areas only present an illusion of what actually occurs within lessons with the inherent risk of oversell themselves [8]. Especially with subjects like science practical experimentation is placed on show which potentially could give students an unrealistic view of what occurs in lessons within secondary school. This results in unrealistic expectations, which contribute to a student's over-optimistic perceptions of what will occur in lessons after transfer. When the student arrives at secondary school and finds the reality of lessons disappoints their expectations, their prior perceptions are not met and this may contribute to a decline in attitude and engagement at school.

As such future research needs to focus on:

1. What are the short, medium and long term effects of rising year 6 open evenings and induction days on student's attitudes towards science across the transfer from primary to secondary school?

2. What are the short, medium and long term effects of rising year 6 open evenings and induction days on student's engagement towards science across the transfer from primary to secondary school?
3. Does the effect of open evenings and induction days on student's attitudes towards science lessons differ dependent on the level of difference between student perception of the subject and its reality within school?
4. How does the effect of rising year 6 open evenings and induction days on student's attitudes towards science differ with other non-practical subjects?

One potential idea to achieve this would be recruiting students from feeder primary schools attending year 6 classes (10-11 year old students) from a range of British secondary schools across England via contact through the headmaster/mistress of the relevant secondary school network.
Students would take part in a Likert scale questionnaire that assess their student engagement towards science lessons at set times during the transfer protocol. This includes giving the questionnaire:

- pre- rising year 6 evening and/or science induction day,
- post- rising year 6 evening and/or science induction day (short-term)
- the end of the first half term of attending secondary school in year 7 (medium-term).

Only with a more detailed analysis of the above will a more comprehensive picture of the consequences for the way in which school marketing for students during transfer between primary and secondary schools using rising year 6 open evenings and science induction days be eluded too. It is then not too big a leap that this could potentially inform researchers and institutions alike in filling in much needed detail on the phenomena of the reduction in student engagement after transfer and retention within science within further education

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