**The impact of Covid-19 on the reading behaviours and experiences of adolescents**

**Jennifer Milne**

**Introduction**

Reading for pleasure improves educational progress and success (OECD, 2002). Young people who read for pleasure are three times more likely to achieve above their expected reading level (Clark & Teravainen-Goff, 2020). Reading is invaluable for learning and academic outcomes, and recent research has highlighted the importance of reading for health and wellbeing outcomes (Polley & Kovandzic, 2017): reading enhances self-awareness and empathy, key strands of emotional intelligence, and contributes to the development of resiliency in young people. Covid-19 has impacted learning and progress of young people in and out of school in many ways. The Scottish Government has admitted that school closures detrimentally impacted the progress and learning of all young people- but that those young people from the most deprived back grounds have been and will be the ones hardest hit (Black, 2020; The Scottish Government, 2021). The aim of this action research was to examine the changes in reading behaviours and experiences of young people due to Covid-19. This was part of a wider exploration of stories of reading and a consideration of the wider impact and/or reflection on young people’s learning, and health and wellbeing as part of their reading experiences. This research offers strategies for reading and literacy focus in Scottish education going forward into recovery from Covid-19.

In the initial period of online learning from March 2020 – June 2020, there was a national problem in lack of engagement in online learning from Scottish school pupils. It was felt that pupils learning had been disrupted and may in many cases had regressed (Scottish Government, 2021). On return to school, after the Summer holidays in August 2020, there were strict Covid-19 risk assessments and protocols in place to ensure health and safety of pupils and staff and prohibit the spread of Covid-19. This included quarantine of books for 72hrs for a time: and meant many schools had to reduce and limit their use of books. As an English teacher, passionate about the value of reading particularly fiction texts both at school and at home, I was concerned about the reduction in reading in the classroom and the lack of access to books both in and out of school. Libraries were closed. Bookshops were closed. Many children, particularly those from the lower socio-economic groups, have no access to books at home.

Access includes physical access to books themselves or digital access online. Access also includes the - vitally important- talking about books, and encouragement, direction and support to read books; this can happen in the home, school, or wider peer and community context. For many adolescents this comes only from out with the home: either teachers, other supportive adults, and/or peers. Young people had this access reduced due to Covid-19 and those children from the most deprived backgrounds would have suffered the most as aften school is their main access point to reading. All young people would have restricted in person access to peers and friends but again those with less digital access would have the most limitations in social interactions.

This study set out to examine the period from March 2020 – January 2021: a period where pupils were out of school for 3.5 months, had a 1.5 month summer break, returned to school for 2 terms with protocols in place for reduction of Covid-19 and then returned to online learning. The second part of the research develops this to include the second period of lockdown over January 2021 to March 2021 where most young people were not in school for around another 3 months. The data for the second part was collected in the subsequent return to schooling for young people in the period March 2021 – June 2021.

**Literature Review**

It has clearly been established in the literature that reading books – print or digital- increases both reading attainment and overall educational attainment (Wilkinson et al., 2020). Students themselves identify learning and academic outcomes as an important part of why they read/should read- and this includes students with additional support needs and those with recognised reading difficulties/diagnoses (Howard, 2011). Earlier research on the benefits of reading focused on amount of time spent reading as the main factor for increasing the benefits of reading: higher reading attainment, higher writing attainment, more extensive vocabularies, better comprehension skills, verbal fluency and increased general knowledge (Fielding et al., 1986; OECD, 2002; Torppa et al., 2019; Watkins & Edwards, 1992). More recent research has examined quality of reading and type of reading as factors influencing benefits (Alexander & Jarvis, 2018; Jerrim & Moss, 2019). Several studies have indicated the correlation between emotional intelligence and literacy skills or academic outcomes (Agnoli et al., 2012; Billings et al., 2014; Mayer et al., 2016; Parker et al. 2014).

Emotional intelligence (E.I.) is defined “as the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions*.”* (Salovey & Mayer, 1990, p.189). Goleman (1998) clustered the multidimensional construct of E.I. into the 5 desired behavioural groupings of self-awareness, self-regulation, motivation, empathy and social skills. Self-awareness and self-regulation are the core of this: through development of these skills there can be a following of social awareness and relationship management which are key areas of importance in the lives of adolescents. It would seem likely that emotional intelligence and reading/academic performance and achievement would have a circular relationship: with emotional intelligence improving literacy skills and high academic achievers displaying greater emotional intelligence. It has been shown through advances in neuroscience in the last decade that reading activates similar parts of the brain to those activated in social and emotional interactions (Lehne et al., 2015; Mar, 2011). A recent study (Froiland & Davison, 2020) analysed emotional intelligence with listening and reading comprehension measures for adolescents in USA. It found there was a relationship between emotional intelligence and both reading and listening comprehension. This study also concluded that it could also be that reading and listening comprehension contribute to emotional intelligence building.

Research supports the idea that any kind of reading is beneficial: teachers and parents should encourage reading of non- fiction and fiction. Children and young people themselves report reading both fiction and non-fiction for pleasure (Alexander & Jarvis, 2018). There has been some debate about whether the focus on non-fiction and reading for information, as part of the focus on skills for work and positive destinations, has marginalised fiction (Alexander & Jarvis, 2018). A recent study (Jerrim & Moss,2019) examined the influence of reading fiction and non-fiction (magazines, newspapers, comics) with 250000 teenagers and found what they describe as a “fiction effect”. Using the PISA (Programme for International Student Assessment) scores for reading they identified that reading fiction books had a greater effect than non-fiction books for almost all of the 35 countries that participated in the research. Fiction and the story require a deeper integration and holistic interpretation than non-fiction reading. This research supports the growing body of evidence that reading contributes to emotional intelligence building and health and wellbeing outcomes.

 Despite the multitude of benefits offered from reading, there is a continuing trend for a decrease in enjoyment of reading and amount of reading from childhood into and over adolescence. The transition from Primary school to Secondary school marks a significant decline and age 14 -16 is another period of particularly low engagement with reading (Clark, 2019). Less than 50% of adolescents read for pleasure and this is a year on year decrease since 2016 (Clark & Teravainen-Goff, 2020).

Self Determination Theory (SDT) is widely used in education and reading research (Schiefele et al, 2018). Reading motivation is multidimensional and can comprise both intrinsic and extrinsic motivation (Schiefele et al., 2012). Intrinsic motivation is motivation that stems from finding enjoyment and/or meaning in an activity. Extrinsic motivation is motivation when drive comes from external sources, such as praise or physical rewards, rather than the reward of the activity itself. SDT proposes that value and meaning, and intrinsic motivation, comes when 3 clear areas are fulfilled for psychological needs satisfaction: relatedness, autonomy and competence (Deci & Ryan, 2002). If autonomy is obstructed or denied, and children don’t have personal input and individual choice over their reading, they will not be motivated to pursue reading. Similarly, if they do not feel able or confident to read they won’t pursue this activity. Self-determination and choice is underpinned by “active encouragement” (Alexander & Jarvmin, 2018). A very recent study which introduced a reading measurement scale, Predictors of Leisure Reading Scale (PoLR), showed how greatest gains for verbal skills came from intrinsic motivation to read and reading purely for pleasure rather than being extrinsically motivated (Martin-Chang et al., 2021).

Prior to the pandemic literacy, and reading, were a significant focus in Scotland in policy and practice to try to reverse the trend of decreased enjoyment and engagement in reading and to try to close the attainment gap in literacy between children from the most deprived areas and those children from the most affluent areas. Getting It Right For Every Child (Education Scotland, 2012) and Curriculum for Excellence (The Scottish Government, 2008) have at their heart a drive for equity and improving the core skills and life chances of every child in Scotland. The PISA data, which can be considered a snapshot of attainment, showed that in 2015 Scotland was below average in reading-along with science and mathematics- and that the gap between the highest socio-economic groups and the lowest was stark. For the last 5 years, the Scottish Government has focused educational policy and funding on closing the attainment gap between the poorest children and their more affluent and educationally successful peers. The Scottish Attainment Challenge (2015) and The Attainment Scotland fund of £750million have sought to improve the attainment of those children from the lowest SIMD groups to close the equity gap. The most recent report “Closing The Attainment Gap” states that the gap “is closing but this remains a complex and long-term endeavour. Equally, while there are positive indications of progress, there are also variations in the pace of that progress across the country. We know that the impact of Covid-19 is likely to have placed further pressure on the gap.” (The Scottish Government, 2021)

The vocabulary gap that exists between the poorest and most affluent children from birth has been much mooted. That the most poor have 0 books in their home, average to middle earners children have 3 books while the most affluent households have on average 200 books has been cited as evidence for the importance of reading to this gap (Wolf, 2007) Children from poorer backgrounds miss out on availability and access to texts and books throughout their lives, but much more than this is the hearing of a wide range of vocabulary and a language rich environment where they are listened to and talking to develop their language articulation from birth and early stages of development (Chambers, 2011). Curriculum for Excellence states a link between low levels of literacy and poverty.

The First Minister’s Reading Challenge was initiated in 2018 to promote Reading for Pleasure in Secondary school pupils. It sought to develop teacher knowledge of teen fiction and encourage reading spaces and sharing of reading: in doing so utilised elements of SDT. After the first year, 66% of schools reported their pupils as reading more for pleasure (Scottish Book Trust, 2019). However there has been no follow up on this data and the interruption to the following academic year 2019-2020 by the pandemic seems it is likely many of these gains will have been lost. The most recent PISA data from 2018 shows a slight improvement from 2015 in reading, but not in science or mathematics, but the overall link between social deprivation and attainment remails at a concerning level*.* Recent analysis showed that “quantitative measures of the attainment gap do not yet show a consistent pattern of improvement.” (Scottish Government, 2019)

**Purpose**

The purpose of this study was to examine the impact of Covid-19 on young people’s reading behaviours and experiences. The purpose of this study was to illuminate the real experiences young people had in lockdown in terms of their reading and how this might have both reflected and/or impacted their wider learning and health and wellbeing: either negatively or positively. Underpinning the research with narrative theory allows young people’s voices to be heard. This research allows young people to tell their stories of why they read more as well as why they read less: this builds on the novel research gathering of recent research focus to include motivations and reasons for reading more (Wilkinson et al., 2020). The overarching aim of this action research is to offer potential strategies and solutions in response to the changes in adolescents reading due to Covid-19 2020 -21.

**Research Questions**

**(1) Did Covid-19 impact on adolescents reading behaviour?**

**(2) What were young people’s experiences of reading during the period of the pandemic March 2020 - June 2021?**

**(3) How did Covid-19 impact on adolescents reading experiences and behaviour?**

**Method/Research Design**

**Part 1**

A questionnaire was developed with 10 questions. The first 9 were multiple choice and included questions about demographics and were designed to gain a picture of reading behaviours and habits and ascertain whether reading behaviours and habits had been impacted by Covid-19. The final question aimed to find out more about young people’s reading experiences during the pandemic:

*“Please use the space below to provide any comments you have on how the pandemic has influenced your reading at home (e.g. why is was harder or easier to read, why you read more or less):”*

**Recruitment and Participants**

The English Department of 11 teachers posted the link to the questionnaire for pupils in their classes on the relevant Team where they were accessing English work during this period of home learning. A total of 285 pupils completed and returned the questionnaires. 62% of these pupils were female and 38% were male. The school had high engagement levels at this point for pupils accessing Teams and the link and information would have been seen by most pupils except those with no access to online learning.

The link to the parental questionnaire was published in the weekly e-bulletin along with information about the research and its value. 59 parents completed and returned the questionnaire. Of these parents, 66% read a lot at home, 24% read a little at home and 10% didn’t read at all at home. Almost all of them valued reading at home, for pleasure. The children they were completing the questionnaires about were 52% female and 48% male.

**Data Organisation, Interpretation and Categorisation**

This study utilised the qualitative approach of content analysis to organise and categorise the total data set of 204 meaning units from the final question in the questionnaires into a clear thematic framework (Côté, Salmela, Baria, & Russell, 1993; Patton, 2002). The main process utilised interpretational qualitative analysis (IQA) approach- fundamentally an inductive analysis with no pre-decided categories for the data- as has been successfully established in the research literature (Scanlan, Ravizza, & Stein, 1989, 1991). Patterns were categorised and classified, by seeking refinement of data through similarities of properties within that specific category and differences to those categories without. This created a thematic framework from which further analysis examined the relationships and patterns (Patton, 2002). This is an explicitly detailed process ensuring trustworthiness of the findings. (Lally, 2007)

The data was systematically organised. Each response to the final question had been read when it was submitted giving a feel for the data and emerging themes were noted (Lally, 2007). Then all of the questionnaires were printed off onto paper hard copy and read and re-read individually in order that the researcher was thoroughly familiar with the perceptions of the experiences of each individual participant from their perspective during the pandemic and also had a holistic sense of the entire data set (Scanlan et al.,1989). On each individual questionnaire meaning units -segments of texts- were highlighted so that every significant segment of information was separated (Cote et al., 1993). The basic unit of analysis (the raw data theme) was defined as the text unit consisting of a quote comprised of a phrase, sentence or paragraph which represents one single experience of reading (Scanlan et al.,1989). Beside each of these text units was typed in a general description describing its topic: a tag. A tag was an interpretative description of the information given in the data and involved summarising or concisely defining that information given in the data. Many tags were the same so natural divisions were immediately identified from the data. Some were similar and then condensed as further relationships and patterns emerged in the second stage of data analysis (Patton, 2002). The second stage now that the data had been examined in-depth and organised into divided tag units was the data interpretation. Part of the process of analysis was to look not only for relations and patterns but also for contraindications and “vagaries, uncertainties, and ambiguities” (Patton, 2002, p.437). The list of tagged meaning units was now printed as hard copy and each tagged meaning unit was cut out so the researcher could visually examine all the tagged meaning units and they could be moved around and analysed as part of a potential category by asking whether it was similar to the other text units within this category and dissimilar to those out with (Cote et al., 1993).

**Results and Analysis**

1. **Did Covid-19 impact on adolescents reading behaviours?**

|  |  |  |
| --- | --- | --- |
|  | **Students** | **Parents perception** |
| **Increased reading** | **33%** | **25%** |
| **Stayed the same** | **45%** | **45%** |
| **Decreased reading** | **22%** | **30%** |

33% of the students reported reading more. Parents reported that 25% of their children had read more. 22% of students reported they had read less. Parents reported 30 % had read less. With most of the parents who completed the questionnaire valuing reading and being readers themselves it seems they would be likely to want to complete the questionnaire reporting a decline in reading as this would be something concerning for them. It seems likely students who read more would be more inclined to report this themselves than those who read less. It could also be that more females read more and males read less. 1/3 of students responding were male, while parental responses were for almost ½ male. At this age there are more female readers in the general population and more male non-readers or disengaged readers (Clark, 2019). Engaged readers would more likely have intrinsic motivation to pursue reading despite any barriers encountered due to Covid-19. Both data sets show a sizeable percentage of students with increased and decreased reading. It can be concluded that more than 20% of students read more and more than 20% read less. There is around half of the young people who didn’t change their habits; many of them were non-readers and continued not to read.

1. **What were young peoples’ experiences of reading during the period of the pandemic March 2020 - June 2021?**

For the student data the total number of text units was 144. There were 94 meaning units for positive experiences: gateways. There were 50 meaning units relating to negative experiences: barriers. It should be noted that these numbers are an indication of the importance of a category, but that all categories are important: strength of comment and tone of comment signify importance of this category as much as a numerical value.

Positive Reading Experiences: Gateways

**Time**

The highest number of meaning units related to time. Many students stated that the increased time being at home and not being involved in school, or any other activities, made more time and opportunity for reading. Within this category were a substantial number of respondents who expressed the extra time as a space that needed to be filled and that the pandemic produced boredom: “books are a good way to extinguish boredom” when there is nothing else to do.

**Access and Support**

This category refers to the access to physical or online books provided in the home. It includes access to reading provided by ordering physical books online or ordering digital or audio books. This access was also psychological as parents who were role models led by example and encouraged their children to engage in reading as a valued and enjoyable activity as well as an alternative to online learning/screen time. Some students read whatever was available in the house and others re-read favorites.

**Environment**

Some young people found the home environment to be a sanctuary that encouraged reading more because it was quiet and “peaceful” with “less distractions”. Some students enjoyed reading outside in their garden in the warm summer days.

**Reading For Pleasure**

Some students, who were already readers, continued to read for pleasure and “there’s just some things you can only express within pages”. The pandemic resulted in some students reading a wider variety of books such as political and BLM texts. The highest number of meaning units in reading as a source of pleasure were the escape from the pandemic found in reading: “with so much happening in the real world it has been great to escape into fiction books again.” Some students found themselves “hooked” and developed intrinsic motivation and were somewhat surprised that reading became “A new passion.” Students read to relax, relieve stress and to get a break from online schoolwork or to relax away from screens and social media.

**Negative Reading Experiences: Barriers**

**Perception of Lack of Time**

Some students felt overwhelmed by the “high workload” and “too much schoolwork” and being “too busy online” meant “less” or “no time” In tangent to some students having more time because of the pandemic, there were students who perceived there to be less time.

**Lack of Access and Support**

This category related to the fact that many students had no access to books over the period of school closures and lockdown. Libraries were closed and these students had no books at home to read or “I finished all the books I had at home so I didn’t have any new books to read”. Lack of access included digital in that if there were internet problems there were no access to online books. Some mentioned that books were too“expensive”. This category also included lack of psychological support to encourage and support reading with some students saying they only read at school or got the support to read they needed at school. 66% of students stated they preferred a real physical book to online so this was problematic in that even if they had the finances there were no book shops to go and look at and buy books from.

**Environmental**

For a lot of young people the home environment was “too noisy” and/or “too distracting” to support reading. For many young people the impact of Covid-19 created an environment of worry and distress where they were overwhelmed by the pandemic and found they had less motivation to read along with other things. This meant they couldn’t concentrate and were “mentally drained so no motivation to read”.

**Continued Disengagement**

For those young people who already had a history of negative experiences from reading, they were even less inclined to read during the pandemic. Some students mentioned they had read less after they had left Primary and continued this trend. Many reported that they had “never liked reading”, “reading isnt fun for me” or “I find reading hard, so why bother?” and they felt this was even more so in the face of the pandemic and the loss of their usual routines and social interactions.

This research supports the body of research examining why students read and don’t read with the 4 corresponding categories for gateways and barriers including the areas identified in previous research (Howard, 2011, Wilkinson et al., 2020). Reading has been shown to increase positive processes of self-awareness and self-identity in transition across adolescence and into adulthood (Howard, 2011) and this has never been as important as it is now for our teens going through this transition amidst a global pandemic. This research emphasizes those with the least protection, who were already disengaged and not experiencing the benefits of reading, continued and deepened this trend due to the impact of Covid-19.

The parental data supports the student data with only two differences in categories. Parents omitted the influence of positive environment on their children’s reading. Students themselves who were privileged to have a spacious, comfy, relaxed environment at home -often compared to the busy and impersonal school environment- valued this at this time as supporting their reading. Parents, similarly to the young people, did voice the influence of environment in a negative capacity in terms of the environment of the pandemic itself and its disruption to routines and social interactions creating a decrease in motivation for reading along with decrease in motivation in general. Unlike students themselves, parents reported a negative experience and influence on their children’s reading of the digital and screen world. They felt that this took over their children’s lives and meant there was no room for reading books. This was not perceived as problematic for the young people themselves and not given as a reason for them reading less. Some even mentioned that because they were aware they were on screens more than usual they made more effort to escape from them into books.

****

****

**Part 2**

**Narrative Theory**

This research is underpinned by Narrative Theory and Part 2 of the study utilises narrative analysis. Narrative analysis is fundamentally the study of people’s stories (Frank, 2005). Narrative theory is based on the tenet that as human beings, we are storytelling, story creating and story relating beings: and it is through our storied lives that we actively seek meaning (Smith, 2007). We are hard wired to seek stories to make sense of ourselves and the world. The stories we tell are dependent on the stories we have access to in our cultural and psycho-social world. Stories are intrinsically connected to our identity (Josselson & Lieblich, 1993). It is in telling stories that we relate who we are, who we have been and who we are becoming (McLeod, 1997).

Narrative theory underpins narrative therapy. By utilizing a narrative approach to this part of the study it prioritizes student participants telling of their stories of reading over the time of the pandemic in their own words. This gave a space for them to process their stories and so further create possibility of new stories moving out of the pandemic.

**Recruitment and Participants**

Parental and student consent was secured before participation in the one-to-one interviews. 5 participants were purposefully sampled from responses to questionnaires so that there was a mixture of students who would describe themselves as both engaged readers (2) and disengaged readers (3) and students who increased (2), decreased (2) and didn’t change their reading (1) during lockdown. Pseudonyms are used to ensure confidentiality. Interestingly over the course of the narrative interview process and the telling of their reading stories some of the participants changed their definition of themselves in terms of reading engagement and reading experiences over the pandemic. Through expression and articulation of their stories they were able to question, clarify and define and redefine some of their feelings and thoughts around reading and themselves as readers. This is a strength of narrative enquiry.

The focus was on BGE pupils due to Senior Phase pupils being fully immersed in assessment processes for SQA qualifications over this time in the final term of academic year 2020-2021. There was one S1 pupil, two S2 pupils and two S3 pupils. One male and four females participated in the narrative interviews.

**Method**

Each pupil participated in one or two interviews, dependent on time/availability, with interviews ranging from 15 minutes to 35 minutes. Interviews were digitally recorded and transcribed verbatim. Due to the restricting circumstances, of both pupil and teacher time limitations due to pandemic and Covid-19 protocols, a short life interview approach was taken (Plummer, 2001) This is an informal participant focused approach used successfully in published research.

The interview process was initiated with the opening question, which is an edit of the Grand Tour question commonly used in Narrative Inquiry research, “Tell me about your life when you first remember reading till where you are now?” This very loosely structured invitation enabled the participant to lead the conversation as an expert on themselves and their experiences in order to give a ‘true’ or authentic account (Lieblich et al., 1998; Plummer, 2001). This true account is specific to each individual participant as their story about their reading life as told at this specific time and place to myself as Action Researcher. This life history approach gave a narrative structure to the responses as they told their stories of reading throughout their lives and situated their story of reading during the Pandemic within this.

Questions from myself, the interviewer, sought a deepening or development of understanding or a clarification of the issues raised: how did you feel/think/react to this or what did/does this mean to you? This type and style of interview returned rich descriptive data (Patton, 2002). During the interview I created a mindmap of events, themes and theoretical implications. The interview was listened to repeatedly and the mind map developed. The interview was then transcribed verbatim. Tentative links were now made to research: notes, questions and key areas for clarification and expansion were developed. The data was then coded. Interpretive codes were written in the left-hand margin (Papathomas & Lavallee, 2014). These were codes representing conceptual insights based on narrative or education theories e.g. intrinsic motivation, extrinsic motivation, flow, performance narrative, growth mindset theory. Meaning units (segments of text usually a phrase, sentence or paragraph) were highlighted. Direct codes were marked in right hand margin and represented a summary of the participant’s actual words, e.g. frustration at teachers, gratitude to mum. Key language features were highlighted and labelled such as tone, response length, imagery. The researcher asked how is this story shaped and what type of story underlies it? What wider narratives and story types does it draw on? (Lieblich et al., 1998; Reissman, 2008; Smith, 2015).The research questions were always at the forefront.

**Results and Analysis**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Clara | Naomi | Juliet | Hugo | Matilda |
| **Did Reading Change?** | Yes: Increase | No change | Yes: Decrease | No change | No change |
| **Early Reading Experiences** | Positive: Love of reading | Negative: annoyed and frustrated | Negative: frustrated, struggle | Negative: really hard | Negative: a lot of effort |
| **Current view of Reading** | Love | A chore | Enjoyment | Rather do something else | A chore |
| **Pandemic Reading Experiences and influencing factors** | More time, and relaxing supportive home environment to read for pleasureMaintaining peer social interaction around reading | Supported with reading difficulties to successfully manage home learningPositive environmentMore timeSupport and physical access to books |  Struggles with mental health during the pandemic restricted access to reading which she normally escaped to.Isolation from peers and no one to talk to  | Encouraged to read but continued lack of interest and doesn’t get fun from readingRead part of a book but not one that interested him so gave up on it- lack of choice restricting access | Overwhelmed with online learning and desire to read blocked by how hard it is for herSupport and physical access to books |
| **How did Covid Impact?** | A story of comfort and joy in reading | A story of home support enabling progress in learning and more positive attitude around school reading | A story of environmental influences and pandemic circumstances (temporarily) disrupting reading | A story of continued disengagement with reading: more of a Maths guy | A story of lack of support(school) and feeling lost with reading |
| **Reading Motivation** | Intrinsic | Extrinsic | Intrinsic | Extrinsic | Extrinsic |
| **Other theory and influencing factors** | FlowCohesionTalking about reading | Growth MindsetResiliencySDT (competency increased) | FlowResiliencyMental HealthExtrovert/Isolation/LonelinessSDT (relatedness lost) | Numbers over lettersSDT (autonomy compromised) | Possible ASNSDT (competence lacking) |
| **Diagnosed ASN** |  | Dyslexia | Dyslexia |  |  |

**(3) How did Covid-19 impact on adolescents reading experiences and behaviours?**

CLARA

**Reading was a comfort in the midst of the pandemic**

Covid-19 gave her more time for reading and in a home environment where the “family is very in to reading”. Clara’s story was one of an engaged reader with a passion and love of reading from an early age which she had sustained over the transition from primary to secondary. Clara came from a family of readers and her mum was a particularly strong role model and influence. She has many fond memories of learning to read and listening to stories in Primary school. She loved stories from her earliest memories and was both intrinsically and extrinsically – reading competitions and events- motivated as she progressed through primary school. She was supported by friendships with peers who shared her love of reading. Clara was shocked when entering Secondary to find out that many of her peers “Didn’t read for fun” like her but she has close friends who like her are intrinsically motivated. Over lockdown she read even more than usual as she had more time. Her home environment was supportive and conducive to reading. Ger parents ordered her books online. She kept in contact with her friends via social media and they shared book series recommendations and discussed content, structure and genre of books, “It is a way to escape…and when I get into a book, I really get into a book.”

NAOMI

**A story of home support enabling progress in learning and more positive attitude around school reading over the pandemic**

Naomi’s story was one of an intense dislike of reading. Her early memories of stories were not negative but when she spoke of learning to read, she was filled with emotion about how she felt “annoyed and frustrated” because she could not read. “I was never able to read what was on the page, I read what I though it said rather than what it actually said.” She has memories of been told she was wrong by teachers but not why she was wrong and despite parental concern and communication with the school from early on, she was not diagnosed as dyslexic till she was in Primary 7. For Naomi lockdown and learning was a respite from the pressure she feels from learning at school. Her parents printed off her work for her and she could highlight and use her overlay to read at her own pace so she was able to complete and progress with all her learning. “I found it quite easy actually learning from home … easier than in school…in my own time…. some classes I could do in less than an hour and other classes that had lots of reading, I could spend lots of time actually reading it and not just having to read a little bit and the teacher has already moved on.” Naomi spoke about how her dyslexia impacted her learning across the curriculum “I like Maths…word equation … try to do the wrong thing…end up getting it all wrong … Chemistry … I read the wrong chemical, cant spot the difference soon enough.” At school she feels “stressed” but she felt “good” about learning the same content in her supportive home environment during the periods of home learning over the pandemic. Naomi’s home environment was one of support and access to reading as her parents tried different types of books, specialist dyslexia books, different lengths and tried different strategies such as encouraging her just to read a few pages a day. Naomi was able to appreciate her parents’ efforts and she had a growth mindset agreeing that she would only get better if she tried. When she found out she was dyslexic it helped a bit “because there was a way to get around it now” but the bottom line for Naomi was that this doesn’t change that it is now in S3 “still hard … not really been given the right help” She has never read for pleasure, never enjoyed a book, she says that “It is kinda like a chore now… I don’t really want to do it…and its difficult and I’ve not really had the support to learn to do it with confidence almost …. I don’t really want to do it.”

JULIET

**A story of environmental influences and pandemic circumstances (temporarily) disrupting reading**

Juliet was an engaged reader, prior to Covid-19, and she said,“It was the teachers, really, who got me in to reading.” Juliet overcame difficulties in reading- diagnosed dyslexic in P.7. Her early memories of learning to read were of frustration, “I would always get frustrated at words that I didn’t understand. They kept pushing me to read words I couldn’t understand and I got really frustrated.” She has positive early memories of her mum helping her with her reading when she “used to say words super weird.” She said she struggled with reading right through Primary but when she was diagnosed dyslexic she then had the strategies to pick up reading again and her key motivation was escapism “I really enjoy reading … I really like stories … I like the fact that I could read a book and it brings my mind into this magical fairy wonderland” Juliet had a growth mindset and also read to improve her writing, she enjoys creative writing and voiced that her teachers had explained how reading helps vocabulary and punctation and she had started reading more for this reason but overtime found she loved reading, became a big reader and was intrinsically motivated.Juliet spoke about how Covid-19 and lockdown damaged her mental health She was in Primary 7 and had just moved house and to a new school in March 2020. “ I didn’t have many friends at the time and I am a very social person, I am an extrovert and I didn’t have anyone to talk to…so I just kindof sat there in my room really lonely…I used to love talking to my mum but during the first lockdown I just didn’t want to talk to anyone ...and it really worried my mum … super tired ...” Juliet completely lost all motivation and energy. She said that at times she “picked up a book” but then ”…put it down…too much effort” . Her story is of her reading behaviour mirroring her mental health deterioration during lockdown.

HUGO

**A story of continued disengagement with reading over the pandemic**

Hugo “I don’t think I read a book at all in the first lockdown!”

Hugo’s earliest memories were of reading being difficult. “When I first started to read, I found it really hard…overlooked words…got words mixed up.” He was supported, at home by his mum, and in school by all his teachers who “played a part” in helping him be as good at reading as he is now. He says “My reading wouldn’t be as good if it wasn’t for my mum” – she supported him with reading homework, reading fluency and talking about reading structure and meaning. He was always attaining at the expected level or above for reading but he saw himself as “More of a Maths Guy” He was not in the least interested in reading and said, “I have never been a big reader …I really don’t get that much amusement out of reading a book.” He had increased his reading at certain points over the years due to extrinsic motivation- reading challenges, parental or teacher encouragement- but had never sustained this and had never become intrinsically motivated. His story was one which would reflect many of the 50% non-readers who do not have intrinsic motivation and did not read before or during lockdown. He was supported by him mum who encouraged him “Maybe you should read a bit more” instead of going on the phone, “She probably told me 100 times and I would do it about 5 times.” Hugo had access to a few books in his house and did read, or start to read one of them, in lockdown but it didn’t sustain his interest and he gave up part of the way through. “I like…funnier stories rather than dramatic or sad … I read a bit of a book…I gave up half way through. He said “if I had had a funny book or one I liked more, I would probably have finished it” Hugo was an S1 pupil at this point in the research and he said “I don’t think I read a book in S1 at all.”

Matilda

**A story of lack of support(school) and feeling lost with reading over the pandemic**

Matilda’s story is one of feeling lost with reading and of falling behind during the period of home learning in the pandemic. She talked about her struggles with concentration from an early age and Matilda’s early memories of reading were almost painful for her to describe “I just really did **not** like it …it gave me a headache to read … I didn’t like it …I didn’t enjoy it all when I was younger” Macey lives with her dad who is supportive and encourages Macey with learning and healthy habits and over lockdown bought her books which she intended to, but never managed to read. Worryingly, and the same as Hugo, Matilda spoke about how, “In S1 I literally didn’t read one book.” (2019 -2020) “In first year we didn’t do reading at all.” This was prior to and leading into first lockdown. For the second home learning Maisie was in S2 and she spoke about how hard it was for her to learn or read at home. She needed the structure and support of school. She spoke about: difficulties with reading concentration and retention, difficulty with inferring meaning from books, difficulty with reading and following instructions about learning. She said she turned to the teachers for help because she couldn’t understand the instructions about her work when she was reading them digitally but the teachers didn’t understand what she didn’t understand (as they thought the instructions were self explanatory). Despite her parental support and influence (dad), she was impacted by wider concentration and learning difficulties exacerbated by lockdown. She was overwhelmed with online learning and repeated how she felt she was falling behind: “ I cant concentrate when I am at home…there are no teachers to help and I basically get off track and get nothing done…I tried to do it but I was struggling…I was worried I was falling behind … I was kinda worried because I was kinda falling behind with online learning…I was struggling…This year, with learning, I just feel I am falling behind….sometimes I just feel like I am falling behind for no reason” This is a story of lack of access to support detrimentally impacting. Matilda needs her teachers’ support to explain and scaffold work, she needs the routine and structure of school to help her focus and complete tasks. “I just cant concentrate at home … if the teacher is there it makes me much more motivated.” She emphasized, “My dad bought me a book… my dad listens to audio books…my dad…he was telling me I should read more instead of being on my phone.” But that reading is harder for her than for other people and “I have to put effort to read … I have to really try to concentrate.”. Matilda’s story is one of feeling lost: ”Why am I worse at it now than I was in Primary?” “Sitting down reading a book is not fun for me, it is a chore, it is a lot of effort..it goes in one eye and comes out the other.” Matilda when she returned to school in April 2021 enjoyed having the class novel read to her by her teacher and was able to engage and interact with this.

All 5 participants have multiple and interwoven narratives and the insights from these short life history interviews suggest that singular studies of life histories would yield a wealth of insight into the formation and development of reading stories, identity, wellbeing, learning, progress and attainment in young people.

Research has demonstrated how reading for pleasure/enjoyment results in increased benefits for young people through increased time spend in reading and sustaining reading over longer periods of time. All of the participants in Part 2 of the study were supported with reading from their early years and 4 out of 5 of the participants in this study were explicitly supported and encouraged to read at home over the pandemic. However, only one participant sustained an engaged level of reading throughout this time.

“Reading is one of the most complicated processes our brain performs.” (Chambers, A, 2011, p.63) Many children have negative early experiences of reading. 4 out of 5 of the participants in the second part of the study had negative experiences of learning to read and early reading experiences. A core category identified from part one of this study was the impact of the pandemic continuing and solidifying a disengagement with reading for many. Despite the fact that all 4 of these participants were attaining at the expected level within BGE, their negative experiences and emotions around reading were a core part of their stories of reading and were still negatively impacting their reading. For Juliet, the overwhelm of lockdown meant despite her engaged reading in “normal” circumstances, due to the pandemic and effect on her mental health, she returned to her early story of struggling to read.

Talking about books is vitally important and plays an intrinsic part “in even the most sophisticated reader’s reading life …” (Chambers, P102) For those young people from a supportive family home where talking and listening is part of the routine and day to day activity this element would have not been compromised and in some cases may have increased due to the time spent together during lockdown/Covid-19. However for those homes where there isn’t space or value given to this, where poverty and stress prevent it, the young people would have lost the opportunity for this from school life and time spent with like-minded peers. Teachers can not be underestimated in the influence they play in developing enjoyment of reading and all the successes it brings. Talking not just as part of the classroom learning but in everyday conversation are a huge influence on children and young people and their relationship with reading (Wolf, 2008).

These studies support (Howard, 2011; Wilkinson et al. 2020) the research evidence on why students read. The main motivations for reading that develop intrinsic motivation are reading as a means of escape and relaxation, reading is a connecting activity that absorbs(flow) and because reading is exciting or thrilling, reading for the social and friendship elements and reading to develop empathy, as well as reading to learn. A main reason students say they don’t read is lack of time and in this study more time was given as a reason for increased reading. However many students perceived that they had less time to read over the pandemic and cited this as a reason for reading less. These were the students who were overwhelmed by the pandemic, were overwhelmed by the change in routine, were the students most likely to be struggling with home learning and the students for whom the pandemic also had a detrimental impact on health and wellbeing.

The barriers identified for students motivation and ability to read over the pandemic through this research are significant in categorising and adding more detail to the reasons identified previously in research and should be explored further: Perception of lack of time, continued disengagement (including other interests such as social media or sports/clubs; and including as a result of transition from Primary), Lack of access and support (including expense) and environmental issues (Howard, 2011; Wilkinson et al., 2020).

One of the key NIF drivers (The Scottish Government, 2019), parental engagement, is highlighted through this research. Access to reading through parental support and provision was a gateway to reading more during the pandemic. However, despite all of the 5 participants in the second part of the research having clear parental support in their reading and learning throughout their history and over the pandemic, this was not enough to facilitate them reading for pleasure during this challenging time. Recent research has emphasized the power of negative experience learning to read and long-standing dislike of reading or history of reading failure impacting and preventing motivation (Wei, 2021).

**Conclusion**

This research supports SDT as a key theory for understanding reading habits and experiences of young people. Those students who were already disengaged from reading, at the start of the pandemic and were not intrinsically motivated, were unable read in the overwhelming environment of the pandemic and home learning. Those students who were intrinsically motivated read more if they had the access and relaxing home environment to support them with this.

This study highlights a widening of the attainment gap in literacy over the pandemic as those from the lowest socio-economic groups were most likely to experience a home environment less conducive to supporting reading and to have less physical and psychological access to books. The gap in literacy exists already in Secondary school, exists indeed from early years, and those children with a history of dislike or struggles with reading would have received less support, no interventions and a regression in reading over the pandemic. This research highlights the power of negative early reading experiences to destroy potential ability to enjoy reading: this however impacts on some of the most supported as well as the least supported children.

This research highlights the importance of enjoyment of reading and reading for pleasure as a key method and practice for increasing engagement with reading and all the long term educational and health and wellbeing benefits it brings. This action research ultimately underlines the need for a placing of literacy as the core and heart of the curriculum in response to the impact of Covid-19 on the reading behaviour and experiences of adolescents.

The data gathering for this project included pupils’ SIMD data and analysis of this would add further extension and value to this study. Narrative interviews were completed with 5 participants and yielded rich data. However more interviews with a lesser number of participants would have added further depth to the stories. Future studies should continue this narrative approach eg with one student examining their continued disengagement with reading or with one student examining their journey to reading for pleasure and intrinsic motivation.

**Key recommendations**

1. Literacy should be a focus for educational recovery from Covid-19 with an agenda of Reading for Pleasure (RfP) underpinned by Self Determination Theory. RfP can increase literacy attainment, increase overall educational attainment, narrow the gap in attainment, increase emotional intelligence and increase long term health and wellbeing outcomes. Firstly there must be raised awareness and so value in RfP, secondly funding and resources need to be allocated to provide access to wide ranging relevant engaging books for all levels of the young people in our leaning communities, thirdly there must be time allocated.
2. Lack of, or perceived, lack of time is a barrier to reading and RfP, and time itself is a gateway. Time is a key to making this work: time for teachers to read current teen fiction and young adult literature, time for teachers to talk together about reading, time to share knowledge and ideas across the curriculum, time to develop best practice, time to implement and evaluate measures of success; time for pupils to read across the school, time for pupils to find and to choose books that interest them, time to talk and share ideas about reading with their peers, time to lead reading forums and create a fun friendship orientated reading environment.
3. There must be a focus on transition from Primary to Secondary with RfP underpinning approaches to reverse the trend for continued disengagement at this critical stage and other later stages of adolescence.
4. Literacy and reading should be embedded in the curriculum with all staff being role models and responsible for creating a language and literacy rich culture. Access and support for reading is a whole school responsibility. More attention should be given to environmental influences and creating and valuing attractive reading spaces and libraries. All children should be encouraged to be part of the school library and local library.
5. The literacy agenda should value the part played by parents, teachers and all school staff, and peers to support and develop reading for pleasure. For many young people the social and interactive part of reading is of primary importance.

**References**

Agnoli, S., Mancini, G., Pozzoli, T., Baldaro, B., Russo, P. M., & Surcinelli, P. (2012). The interaction between emotional intelligence and cognitive ability in predicting scholastic performance in school-aged children. Personality and Individual Differences, 53(5), 660–665.

Alexander, J. & Jarman, R. (2018) The pleasures of reading non-fiction. *Literacy,* 52 (2), 78 -85.

Burnett, C. and Merchant, G. (2018) Affective encounters: enchantment and the possibility of reading for pleasure. *Literacy*, 52(2).

Billings, C. E., Downey, L. A., Lomas, J. E., Lloyd, J., & Stough, C. (2014). Emotional Intelligence and scholastic achievement in preadolescent children. *Personality and Individual Differences*, 65, 14–18.

Black, B. (2020). Attainment and disadvantage in Scotland’s schools: what may the impact of lockdown be? *Research and Policy Briefing*. Glasgow University.

Chambers, A. (2011). TELL ME: Children, Reading & Talk with THE READING ENVIRONMENT. The Thimble Press: UK.

Clark, C. and Teravainen-Goff, A. (2020) Children and young people’s reading in 2019 Findings from our Annual Literacy Survey. London: UK. National Literacy Trust.

Clark, C. (2019). Children and young people’s reading in 2017/18: Findings from our Annual Literacy Survey. London, UK: National Literacy Trust.

Conradi, K., Jang, B., & McKenna, M. (2014). Motivation Terminology in Reading Research: A Conceptual Review. *Educational Psychology Review*, *26*(1), 127–164.

Coté, J., Salmela, J. H., Baria, A., & Russell, S. J. (1993). Organizing and interpreting unstructured qualitative data. *The Sport Psychologist*, 2, 127-137.

Edmunds, K. M., & Bauserman, K. L. (2006). What teachers can learn about reading motivation through conversations with children. *Reading Teacher*, *59*(5), 414–424.

Education Scotland. (2012).*Getting It Right for Every Child: Where Are We Now? A Report on the Readiness of the Education System to Fully Implement Getting It Right for Every Child*. United Kingdom: Livingston.

Fielding, L.G., Wilson, P.T., & Anderson, R.C. (1986). A new focus on free reading: The role of trade books in reading instruction. In: Raphael, TE (ed.) *Contexts of School-Based Literacy.* New York: Random House.

Frank, A. W. (2005). What is dialogical research, and why should we do it? *Qualitative Research,* *15(7), 964-974.*

Froiland, J.M. and Davison, M.L. (2020). Emotional Intelligence, Listening Comprehension, and Reading Comprehension among Diverse Adolescents. *Journal of child and family studies,* 29, 1385-1390.

Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.

Greaney, V and Hegarty, M (1987) Corrrelates of leisure-time reading. Jo*urnal of Research in Reading*,10(1): 3–20.

Howard, V. (2011). The importance of pleasure reading in the lives of young teens: Self-identification, self-construction and self-awareness. *Journal of Librarianship and Information Science, 43(1),46-55.*

Jerrim, J., & Moss, G. (2019). The link between fiction and teenagers’ reading skills: International evidence from the OECD PISA study. *British Educational Research Journal*, *45*(1), 181–200.

Josselson, R. & Lieblich, A. (1993). *The narrative study of lives.* London: Sage.

Kim, J. S., Hemphill, L., Troyer, M., Thomson, J. M., Jones, S. M., LaRusso, M. D., & Donovan, S. (2017). Engaging Struggling Adolescent Readers to Improve Reading Skills. *Reading Research Quarterly*, *52*(3), 357–382.

Lee, A. (2019). Digitally-Wired and Mobile Device-Driven: Are Singapore Teenagers Still Reading? *Journal of Library Administration*, *59*(2), 223–239.

Lehne, M., Engel, P., Rohrmeier, M., Menninghaus, W., Jacobs, A. M., & Koelsch, S. (2015). Reading a suspenseful literary text activates brain areas related to social cognition and predictive inference. *PLoS ONE*, 10(5).

Lieblich, A., Tuval-Mashiach, R., & Zilber, T. (1998). *Narrative research: reading, analysis and interpretation*. London: Sage.

Mar, R. A. (2011). The neural bases of social cognition and story comprehension. *Annual Review of Psychology*, 62, 103–134.

Martin-Chang, S., Kozak, S., Levesque, K.C., Calarco, N. and Mar, R.A. 2021.What’s your pleasure? exploring the predictors of leisure reading for fiction and nonfiction. *Reading and Writing,* 34**,**1387–1414.

Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: principles and updates. *Emotion Review*, 8, 290–300.

McGeown, S., Duncan, L., Griffiths, Y., & Stothard, S. (2015). Exploring the relationship between adolescent’s reading skills, reading motivation and reading habits. *Reading & Writing*, *28*(4), 545–569.

McLeod, J. (1997). *Narrative and psychotherapy*. London: Sage.

Naeghel, J., Valcke, M., Meyer, I., Warlop, N., Braak, J., & Keer, H. (2014). The role of teacher behavior in adolescents’ intrinsic reading motivation. *Reading & Writing*, *27*(9), 1547–1565.

OECD. (2002). Reading for change: Performance and engagement across countries. Results from PISA 2000.

Parker, J. D., Creque, Sr, R. E., Barnhart, D. L., Harris, J. I., Majeski, S. A., Wood, L. M., Hogan, M. (2004). Academic achievement in high school: does emotional intelligence matter? *Personality and Individual Differences,* 37, 1321–1330.

Patton, M.Q. (2002). *Qualitative research and education methods* (3rd ed.). Newbury Park, CA: Sage.

Pitcher, S.M., Martinez, G., Dicembre, E.A., Fewster, D., & McCormick, M.K. (2010). The literacy needs of adolescents in their own words. *Journal of Adolescent & Adult Literacy*, 53(8), 636–645.

Plummer, K. (2001). Documents of Life 2: An Invitation to a Critical Humanism. London: Sage.

Polley, M.J. and Kovandzic, M. (2017). *Evaluation of the Reading Well Books on Prescription Shelf Help scheme for young people.* University of Westminister.

Ryan, R.M., & Deci, E.L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67.

[Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.](http://www.unh.edu/emotional_intelligence/EI%20Assets/Reprints...EI%20Proper/EI1990%20Emotional%20Intelligence.pdf)

Scanlan, T. K. , Ravizza, K., & Stein, G.L. (1989). An in-depth study of former elite figure skaters: Introduction to the project. *Journal of Sport and Exercise Psychology*, 11(1), 54-*65.*

Scanlan, T. K. , Ravizza, K., & Stein, G.L. (1991). An in-depth study of former elite figure skaters: III. Sources of stress. *Journal of Sport and Exercise Psychology, 13, 103-120.*

Scheifele, U., & Löweke, S. (2018). The nature, development, and effects of elementary students’ reading motivation profiles. *Reading Research Quarterly*, 53(4), 405–421.

Schiefele, U., Schaffner, E., Möller, J., & Wigfield, A. (2012). Dimensions of reading motivation and their relation to reading behavior and competence. *Reading Research Quarterly*, 47(4), 427–463.

Scottish Book Trust. (2019). Evaluation of First Minister’s Reading Challenge 2018/19. Glasgow: Research Scotland.

Scottish Government. (2021). Scottish Budget 2021-2022: Equality and Fairer Scotland Budget statement. UK: Edinburgh.

Scottish Government. (2020). Attainment Scotland Fund evaluation: third interim report - year 4. UK: Edinburgh.

Scottish Government. (2019). National Improvement Framework (NIF). UK: Edinburgh.

Scottish Government. (2018) Student Assessment (PISA): Highlights from Scotland’s

Results. UK; Edinburgh.

Scottish Government. (2009). Curriculum For Excellence, building the curriculum 4 skills for learning, skills for life and skills for work. UK : Edinburgh.

Smith, B. (2007). The state of art in narrative inquiry. Some reflections. *Narrative Inquiry*, 17(2), *291-398.*

Smith, B., & Sparkes, A. C. (2005). Analyzing talk in qualitative inquiry: exploring possibilities, problems, and tensions. *Quest*, 57*, 213–242.*

Smith, B., & Sparkes, A. C. (2006). Narrative inquiry in psychology: exploring the tensions within. *Qualitative Research in Psychology*, 3, 169–192.

Torppa, M., Niemi, P., Vasalampi, K., Lerkkanen, M.-K., Tolvanen, A., & Poikkeus, A.-M. (2019). Leisure reading (but not any kind) and reading comprehension support each other: A longitudinal study across grades 1 and 9. *Child Development.* 91(3), 876 -900.

Troyer, M. (2017). A mixed-methods study of adolescents’ motivation to read. *Teachers College Record*, 119(5).

Turner, K.H., Hicks, T., & Zucker, L. (2019). Connected reading: A framework for understanding how adolescents encounter, evaluate, and engage with texts in the digital age. *Reading Research Quarterly*, 55(2), 291–309.

Troyer, M., Kim, J. S., Hale, E., Wantchekon, K. A., & Armstrong, C. (2019). Relations among intrinsic and extrinsic reading motivation, reading amount, and comprehension: a conceptual replication. *Reading & Writing*, *32*(5), 1197–1218.

Watkins, M and Edwards, V (1992) Extracurricular reading and reading achievement: The rich stay rich and the poor don’t read. *Reading Improvement,* 52(Winter): 236–242

Wei Y, Spear-Swerling L, Mercurio M. (2021). Motivating Students With Learning Disabilities to Read. *Intervention in School and Clinic*, 56(3),155-162

Wolf, Maryanne, and C J. Stoodley.2008. *Proust and the Squid: The Story and Science of the Reading Brain*. New York, NY: HarperCollins.