

Homework in Secondary Schools: Helpful or a Hindrance?

Madeleine Dickson

Te Rāngai Ako me te Hauora - College of Education, Health and Human Development, University of Canterbury, New Zealand

Abstract

Homework is a key element of secondary schooling across many contemporary education systems worldwide. However, debate about the value and efficacy of homework at the secondary school level is ongoing. Proponents of homework promote its numerous benefits for learning and achievement, while critics challenge the merit of homework, and highlight the potentially detrimental impacts it can have on student learning. Overall, the evidence from current research and literature shows that homework at the secondary school level generally has a positive impact on student academic achievement and learning. However, many factors and variables can influence this link in both a positive and negative fashion. These variables include: parental income and socio-economic status, parental support vs. control, quantity of homework completed, and overall time spent on completing homework. The research also suggests that homework is most useful and effective when it is used to expand upon concepts already taught in class, and when students have intrinsic motivation to engage with and complete homework.

Keywords: *Homework, Secondary School, Academic Achievement, Detrimental Effects, Parental Involvement, Intrinsic Motivation, Homework Quality, Student Anxiety*



Journal of Initial Teacher Inquiry by [University of Canterbury](#) is licensed under a [Creative Commons Attribution 4.0 International License](#).

Permanent Link: <http://hdl.handle.net/10092/12846>

Introduction

According to [Cooper, Robinson and Patall \(2006\)](#), homework is “any task assigned by school teachers intended for students to carry out in non-school hours” (p.1). Homework is a complex, contentious and heavily debated aspect of education systems worldwide. In the United States especially, the homework debate has been somewhat cyclical in nature. In the late 19th and early 20th centuries, there was a strong “anti-homework” movement, where homework was viewed as being possibly detrimental to learning, especially for younger students. However, from the 1950’s onwards, the cold war and desire to compete with other countries internationally, saw a rise in focus on homework as a means to increase academic standards and achievement ([Eren & Henderson, 2011](#)). Proponents of homework have promoted numerous benefits for learning and achievement while, paradoxically, critics have “challenged the role and merit of homework in educating students” ([Maltese, Tai & Fan, 2012, p. 53](#)). A plethora of historical and contemporary research has focussed on the impacts of homework on academic achievement, and the many variables which influence homework completion, quality, quantity, and overall effectiveness. This research has produced inconsistent results and studies that have examined different factors and variables which influence homework outcomes used a variety of methods. This review intends to examine a selection of contemporary literature in order to ascertain whether homework at the secondary level has positive or negative effects on learning and academic

achievement. Both sides of the homework debate will be reviewed and implications of findings will be discussed.

Variables and Academic Benefits

There has been a multitude of research studies investigating the impact homework has on achievement across all school levels. [Cooper et al. \(2006\)](#) conducted a meta-analysis of research undertaken in the United States pertaining to homework and achievement between 1987 and 2003. This meta-analysis looked at 73 different studies, and found that overall, there was “generally consistent evidence for a positive influence of homework on achievement” ([Cooper et al., 2006, p. 1](#)). Stronger and more frequent positive correlations were found for secondary school students as opposed to primary school students ([Cooper et al., 2006](#)). Similarly, John Hattie (2009) in his synthesis of over 800 meta-analyses relating to achievement found that homework had an effect size of 0.29, making it a significant contributor to academic achievement. This evidence is useful in providing an indication of the trends in the links between homework and achievement at the secondary school level. However, the meta-analysis conducted by [Cooper et al. \(2006\)](#) used only data from the United States in a singular, unique educational and socio-cultural context. Therefore, these results may not necessarily be directly applicable to students globally. Hattie’s (2009) synthesis on the other hand included analyses from numerous countries, which may provide a more universal understanding.

There is further evidence that supports the notion that homework at the secondary school level improves academic achievement. In a study investigating the association between homework and achievement in high school science and mathematics, [Maltese, Tai and Fan \(2012\)](#) found that time spent on homework was moderately associated with achievement gains in these subjects, when measured against standardised test scores. Similarly, [Núñez et al., \(2015\)](#) in a Spanish study investigated the relationships between perceived parental involvement in homework, student homework behaviours, and academic achievement across all school age students, found that the amount of homework completed was positively associated with academic achievement for all school levels, including secondary school. Furthermore [Núñez et al. \(2015\)](#) also found a positive association between time spent on homework and academic achievement at the secondary school level.

Parental involvement in homework was also a key factor in the homework-academic achievement link in the study by [Núñez et al. \(2015\)](#). The study found that parental control, whereby parents enforced strict rules, or punishments around homework, had a negative association with academic achievement at all schooling levels. Therefore, higher levels of parental control was linked to lower academic achievement. This finding was paralleled in a study looking at New Zealand secondary students' perceptions of parental involvement in learning and schooling by [Clinton and Hattie \(2013\)](#). This study found that parental surveillance of secondary students' homework was negatively related with achievement, with an effect size of -0.19 ([Clinton & Hattie, 2013, p.327](#)). Conversely, [Núñez et al. \(2015\)](#) found that parental support, whereby parents gave encouragement, support and clear guidelines about homework, was positively associated with academic achievement at all schooling levels. Thus, higher levels of parental support was linked to higher student academic achievement ([Núñez et al., 2015](#)). This contemporary study provided an interesting insight into the effect parental involvement in homework can have on academic achievement. Data was collected in part through student self-reporting in this study however, so there is the potential for bias, especially if students did not wish to criticise their parents' approach to involvement in their homework. Further controlled variable or control group research in this area is needed, in order to further understand the impacts parental involvement in homework has on student achievement.

Another important variable in homework achievement is parental income and socio-economic status. In a study assessing the effect parental income had on variability in homework efficacy in secondary school [Jonathan Daw \(2012\)](#) found that higher income students gained more knowledge from homework, and thus had higher academic achievement. This was the case for all grades, and all subjects, except history, with greater disparity observed in mathematics than for science and reading. This finding aligns with concerns raised in both [Cooper et al. \(2006\)](#) and [Sallee and Rigler \(2008\)](#) that homework could increase inequality in academic achievement, between students of low and high income families. However, reasons for this increase in disparity in academic achievement between different socio-economic groups are varied and more research is needed in this area ([Daw, 2012](#)). In their research, [Sallee and Rigler \(2008\)](#) hypothesised that differential access to resources such as technology and parental help and differential time pressures, due

to the need for some students to work or to look after younger siblings, may "contribute to the widening of the gap" (p. 49).

As indicated in the broad meta-analysis of [Cooper et al. \(2006\)](#), homework at the secondary school level had a positive impact on learning and academic achievement. However, within this link lies a multitude of variables, which can impact homework completion. Therefore, it is important to investigate the factors which influence student completion of homework, as this could have a tangible impact on their learning and achievement. In a multilevel analysis of homework completion at Secondary School level, [Xu \(2011\)](#) found multiple factors that had a positive influence on homework completion. These included gender; females were found to have higher homework completion rates than males, a finding also corroborated in [Cooper et al., \(2006\)](#), parent education, student attitude, teacher feedback, student interest, perceived task utility, and homework management strategies ([Xu, 2011](#)). Although this study was conducted in the United States, and relied in part on self-reported data which could be susceptible to bias, it provides an insight into factors which prevent students completing homework. This is an area which requires further study, in order to enable teachers and schools to maximise homework efficacy for students, in terms of its academic benefits.

Ineffective and detrimental effects of Homework

Alongside the literature which supports a positive link between homework and academic achievement in secondary school, there is also some research which suggests it can be ineffective. In a study examining the effects additional homework had on academic achievement for 12 and 13 year old students in the United States, [Eren and Henderson \(2011\)](#) found that additional homework in science, history and English had little or no impact on test scores. However the study did find that additional mathematics homework did have a statistically significant large effect, and led to improved mathematics test scores. This study demonstrates a potential gap in the literature, where the differential effects of homework across subject areas need to be more comprehensively investigated.

Another issue with effectiveness of homework lies in its delivery, in that it is often not differentiated for students in mainstream classrooms. [Bryan, Burstein and Bryan \(2001\)](#) found that students with disabilities in mainstream classrooms reported significantly more issues with homework difficulty and completion, compared with their non-disabled peers. These issues included: not understanding homework, inability to maintain focus, distraction, difficulty organising materials and time, and forgetting to bring homework to school ([Bryan et al., 2001](#)). Although this research was completed 15 years ago, it raises the salient issue over the lack of homework differentiation, and the lack of provision for the diverse needs of students in inclusive classrooms. If students with disabilities struggle to complete set homework, they may miss out on the potential academic benefits homework can provide.

[Cooper et al. \(2006\)](#) in their meta-analysis of homework and achievement research noted that potential negative effects of homework, especially excessive amounts of homework, included: satiation (where students become weary and repulsed by homework), loss of interest in academic material, physical and

emotional fatigue, increased stress and pressure on students, denial of leisure time (activities that may enhance academic and life skills), increased confusion relating to material, negative attitude towards school and cheating and copying from other students. These negative effects of homework could negate the positive effects of homework, and in fact be detrimental to learning and academic achievement. Indeed, different homework assignments may garner positive, or negative effects, or a mix of both, thus “complex patterns of effects ought to be expected” from the array of ways homework can be constructed, construed and completed (Cooper et al., 2006, p. 8).

Studies have shown homework can be time-consuming, intrusive and stressful for students who may already be stretched for time due to other commitments. Coutts (2004) argued that “many students are explicit that homework is an activity that prevents or disrupts other more desirable leisure activities” (p. 186). This notion is echoed by Sallee and Rigler (2008), who in a survey of more than 180 American high school students found 49% of students were committed to two to three hours of extra-curricular activities per day, while 62% devoted themselves to at least four hours of extra-curricular activities per week (Sallee & Rigler, 2008, p. 48). These students may feel the need to sacrifice important extra-curricular activities, in order to focus on homework. Alternatively, they may sacrifice homework, and its potential academic benefits, in order to pursue other extra-curricular or leisure activities (Coutts, 2004).

For students who are committed to other activities outside of school, homework is an additional activity and stressor in their lives. Indeed, Sallee and Rigler (2008) noted that students are actively encouraged to “be involved in multiple activities” in order to “compete in a competitive marketplace of college applications” (p. 48). Students who are involved in multiple activities may feel somewhat overburdened, which could lead to undesirable and excessive levels of stress. Indeed, in a study of the relationships between homework, stress and mood disturbance on Australian senior high school students, by Kouzma and Kennedy (2002), they found that homework was a key source of stress in high school students’ lives. This study also found that increased amounts of homework led to increased student stress levels (Kouzma & Kennedy, 2002). High stress levels are ultimately unlikely to be helpful or beneficial for students’ overall health, and thus it is a factor that should be considered in delegation of homework given by schools and teachers.

Implications

The New Zealand Curriculum supports student development of the key competencies of thinking, relating to others, using language, symbols and texts, managing self and participating and contributing, in partnership with students’ whanau and communities. This learning partnership also extends to home learning and homework (Ministry of Education, 2007). Indeed Alton-Lee (2003) in the ‘best evidence synthesis’ report for the New Zealand Ministry of Education, noted that research shows that home-school partnerships which nurture student learning lead to “strong and sustained gains in student achievement” (p.38). Homework is one important dimension of this home-school partnership, and an avenue for parental engagement in their children’s learning and schooling (Clinton & Hattie, 2013).

It is therefore important for teachers to ensure that homework is developed and delivered in a manner which is conducive to promoting student achievement, and developing the key competencies in a home-school partnership.

Despite homework being recognised as a tangible way to foster student achievement, one American survey of teachers indicated that teachers “very often or often assigned homework because they ran out of time in class” (Markow, Kim & Liebman, 2007 as cited in Fisher, Lapp & Frey, 2011, p.71). Although this survey was conducted in America, teachers in New Zealand also face time and workload pressures in covering the curriculum and preparing students for assessments, and beginning teachers often feel that there is “not enough hours in the day to get everything done” (Fraser & Hill, 2016, p.288). This could lead teachers to assigning students homework as an “afterthought”, as opposed to a “well integrated dimension of their instruction” and this could negatively affect the utility and quality of the homework and learning (Fisher, Lapp & Frey, 2011, p.74). Fisher, Lapp and Frey (2011) suggested that in order for homework to be most effective, it should be explicitly linked with concepts students have already been taught by the teacher, and it should not rely on parental or financial support in order to be completed. If homework is assigned on concepts yet to be adequately covered, students can be left “bewildered” and “confused”, leading to poor quality learning, or a lack of task completion. Under these circumstances, students are at risk of missing out on the potential academic benefits of homework altogether (Fisher, Lapp & Frey, 2011).

Coutts (2004) further expanded upon this notion, stating that students need to have more intrinsic motivations to complete homework, as opposed to extrinsic motivations such as punishment for non-completion, as this will encourage better quality learning. She argued that students too often see the immediate associated ‘costs’ of homework (in lost leisure and social time) as more important than the longer-term learning benefits of homework, and thus they may choose not to complete it. However, if students viewed the homework as interesting, engaging, relevant and useful, they may have more intrinsic motivation to complete it, and reap the academic rewards as a result (Coutts, 2004). In sum, the challenge for teachers is perhaps to only allocate homework that is well considered, engaging and useful to students, and builds upon previously taught concepts. This approach will encourage student understanding, and intrinsic motivation for homework completion. In this way, students will be better supported to capitalise on the academic benefits quality homework can provide.

Conclusion

The overall trend in the examined literature for homework at the secondary school level showed that homework generally has a positive impact on academic achievement. However, many factors and variables can influence this link in both a positive and negative direction. These variables need to be researched more thoroughly in order to understand and foster maximum homework efficacy. Moreover, homework can also be less effective, ineffective, or detrimental when: it is not differentiated to account for student differences and diversity, it is given in increasingly high amounts, it interferes with extra-curricular activities and leisure time, or when it causes excessive stress. In

order to maximise the potential academic benefits of homework for students, teachers need to make sure homework is relevant and engaging for all students, and built upon concepts taught in class. Although there is an abundance of literature investigating the impacts of homework on student achievement, many of these studies have been conducted overseas or in the United States. More New Zealand based research is required, in order to inform best practice in the unique New Zealand context.

- [29] Xu, J. (2011). Homework Completion at the Secondary School Level: A Multilevel Analysis. *The Journal of Educational Research*, 104 (3), 171-182. doi: <http://dx.doi.org/10.1080/00220671003636752>

References

- [14] Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis June 2003*. Wellington, New Zealand: Ministry of Education. Retrieved from https://www.educationcounts.govt.nz/_data/assets/pdf_file/0019/7705/BES-quality-teaching-diverse-students.pdf
- [15] Bryan, T., Burstein, K., & Bryan, J. (2001). Students with learning disabilities: homework problems and promising practices. *Educational Psychologist*, 36(3), 167-180. doi: http://dx.doi.org/10.1207/S15326985EP3603_3
- [16] Clinton, J., & Hattie, J. (2013). New Zealand students' perceptions of parental involvement in learning and schooling. *Asia Pacific Journal of Education*, 33(3), 324-337. Retrieved from <http://www.jstor.org/stable/3700582>
- [17] Cooper, H., Robinson J.C., & Patall, E.A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research*, 76(1),1-62. doi: <http://dx.doi.org/10.3102/00346543076001001>
- [18] Coutts, P.M. (2004). Meanings of homework and implications for practice. *Theory Into Practice*, 43(3),182-188. doi: http://dx.doi.org/10.1207/s15430421tip4303_3
- [19] Daw, J. (2012). Parental income and the fruits of labor: Variability in homework efficacy in secondary school. *Research in Social Stratification and Mobility*, 30(3), 246-264. doi: <http://dx.doi.org/10.1016/j.rssm.2012.01.004>
- [20] Eren, O., & Henderson, D.J. (2011). Are we wasting our children's time by giving them more homework? *Economics of Education Review*, 30(5), 950-961. doi: <http://dx.doi.org/10.1016/j.econedurev.2011.03.011>
- [21] Fisher, D., Lapp, D., & Frey, N. (2011). Homework in secondary classrooms: making it relevant and respectful. *Journal of Adolescent & Adult Literacy*, 55 (1), 71-74. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1598/JAAL.55.1.8/full>
- [22] Fraser, D. & Hill, M. (2016). *The Professional Practice of Teaching in New Zealand*. Australia: Cengage learning.
- [23] Hattie, J. (2009). *Visible Learning A Synthesis of over 800 Meta-Analyses Relating to Achievement*. Oxfordshire: Routledge
- [24] Kouzma, N.M., & Kennedy, G.A. (2002). Homework, stress and mood disturbance in senior high school students'. *Psychological Reports*, 91(1), 193-198. doi: <http://dx.doi.org/10.2466/pr0.2002.91.1.193>
- [25] Maltese, A.V., Tai, R.H. & Fan, X. (2012). When is homework worth the time? Evaluating the association between homework and achievement in high school science and math. *The High School Journal*, 96(1), 52-72. doi: <http://dx.doi.org/10.1353/hsj.2012.0015>
- [26] Ministry of Education (2007). *The New Zealand Curriculum* Wellington : Learning Media .
- [27] Núñez, J.C., Suárez, N., Rosário,P.,Vallejo,G.,Valle,A., & Epstein, J.L. (2015). Relationships between perceived parental involvement in homework, student homework behaviours, and academic achievement: differences among elementary, junior high, and high school students. *Metacognition and Learning*, 10(3), 375-406. doi: <http://dx.doi.org/10.1007/s11409-015-9135-5>
- [28] Saltee, B., & Rigler, N. (2008). Doing our homework on homework: how does homework help? *The English Journal*, 98 (2), 46-51. Retrieved from <http://www.jstor.org/stable/40503382>