Analysis of responses to our consultation on revised assessment arrangements for GCSE computer science

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Executive summary

We have consulted on our proposal to revise the assessment arrangements for GCSE computer science. The consultation ran between 27 November and 22 December 2017. The consultation questions were available to complete online or download. A copy of the consultation is available at: https://www.gov.uk/government/consultations/consultation-assessment-arrangements-for-gcse-computer-science

We received 2,556 responses to the consultation. We are grateful to everyone who participated.

We summarise the responses in this report.

Introduction

The consultation on revised assessment arrangements in GCSE computer science

This report is a summary of the views expressed by those who responded to our consultation which took place between 27 November and 22 December 2017. We sought views on our proposals to change the assessment arrangements for GCSE computer science. We proposed the changes because of evidence of shortcomings with the current assessment arrangements, including that the rules for the assessment were being breached by students who, outside of the controlled environment of the assessment, were able to access prohibited support for their non-exam assessment tasks. These actions represent malpractice. We proposed that changes should be made immediately, so the grades of students taking their exams in summer 2018 would be based on their performance in their exams alone. We also sought input on possible changes to be made to the qualification in the longer term, both to remove or reduce the opportunities for malpractice and to make the assessment of programming skills a more authentic experience.

Who responded?

We received 2556 responses to our consultation. 353 of these were from organisations and 2203 were personal responses. We thank everyone who responded.

Individual responses:

Students: 723

Teachers: 1271

Parents: 126

Other: 83

Organisational responses:

Schools: 299

Awarding organisations: 4

Unions: 5

University/higher education provider: 2

Local authority: 5

Academy chain: 26

School, college, teacher representative group: 3

Subject association: 2

Private Training Provider: 4

Employer: 3

A list of the organisations that responded to the consultation is included in Appendix A: List of organisational consultation respondents.

Approach to analysis

The consultation was published on our website. Respondents could choose to respond using an online form, by email or by posting their answers to the consultation questions to us. The consultation included 12 questions relating to the assessment of GCSE computer science.

This was a public consultation on the views of those who wished to participate. We were pleased to receive a large number of responses, including many from students. We recognise that the responses are not necessarily representative of the general public or any specific group.

We present the responses to the consultation questions in the order in which they were asked. Respondents could choose to answer all or just some of the questions. This means the total number responding to each question varies.

Some respondents chose to express their views without specifically answering the questions asked. These responses were considered but were not included in the total numbers of responses to each question.

We read all responses in full and summarise in this report the range of views that were expressed. While we structure the report by question asked, many of the comments made inevitably straddled two or more of the questions. As a result we recognise not all views expressed or the extracts we have included fit neatly under individual questions.

We have sometimes edited comments for brevity and to preserve anonymity but have been careful not to change their meaning.

We sought views on the changes we proposed to make to the assessment arrangements for GCSE computer science in the short term – with effect from January 2018. The changes focussed on the role of non-exam assessment (NEA). We also sought ideas on possible changes that could be made to the qualification in the longer term – from 2020 onwards. Teachers and students are understandably most keen to know our decisions about the short-term approach. While we have included a summary of the ideas proposed for the longer term, we are not proposing to take decisions on the longer term approach at this point in time to allow a focus on the short-term arrangements. We will consult again on our proposals for the longer term approach and will ensure that all the suggestions we received in response to this consultation are included.

Views expressed – consultation response outcomes

In this section we report the views, in broad terms, of those who responded to the consultation document.

Responses from those who responded to this question were as follows:

Question 1: Do you disagree with our view that there are shortcomings with the non-exam assessment for GCSE computer science?

Yes	760 (30%)
No	1770 (70%)

Most respondents agreed there were shortcomings with the current approach to non-exam assessment in GCSE computer science. This view was consistent across all stakeholder groups.

Many respondents observed that the rules were not in all cases being followed; they expressed frustration that while they had observed the rules they were aware others had not. This raised concerns that confidence in the qualification is being compromised and that the outcomes would not be fair for all.

Teachers' views:

The following extracts are typical of the comments made by teachers:

Example 1   *"I have long been aware of other schools and professionals in education discussing and sharing solutions, with a strong suggestion that these will be used to influence or steer students' responses and approach to working. I have long been fed up of having to enforce restrictions and rules for my students knowing only too well that other schools are violating these rules, providing their students with an unfair advantage. It is a system which either places blatant unfairness at the heart of the process, or encourages all students to cheat at the same equal level, making a farce out of the whole procedure."*

2   *"There is a strong possibility that pupils may be using resources from completed NEA tasks which would not accurately reflect their programming ability, making their final GCSE grade an inaccurate representation of their ability and achievement."*

3   *"I am aware from discussion with other teachers that…some stretch what is acceptable. It is unfair that my students may be marked against the same criteria when we have, instead of cheating, made lengthy attempts to prepare [them] to code!"*

4   *"I've heard there's been a lot of cheating across the country and I'm worried my students will not receive the grades they deserve due to the inflated boundaries."*

5   *"It is obvious that some schools/students cheat in the NEA. This isn't fair on my own candidates who would be disadvantaged by achieving much lower scores than others across the country."*

6   *"I have seen students download work and try to submit it as their own. I see students go home struggling with an answer and come back confident in how to answer it. I see students searching for answers online during their controlled assessment time. I cannot say anything other than... It's not secure as a method of assessment."*

7   *"I have several students whose parents are professional programmers - they could do a solution offline and print it out - then you'd really never know (unless I picked it up with my professional judgement but even then it's very difficult to prove). I can stop them bringing the print out into the room with them but I can't stop them reading Dad's solution on the bus on the way to school."*

Some teachers felt the tasks were too demanding and this had contributed to breaches of the rules:

Example 1   *"The level of complexity that has been included on the NEA has caused teachers and students alike to seek solutions as it is way beyond the skill set that is outlined in the curriculum."*

2   *"The tasks are too challenging for GCSE students to complete in the conditions set. As a relatively experienced programmer I have spent a considerable amount of time solving the solution myself… "*

Others suggested that the non-exam assessment tasks did not reflect real life:

"The reality is that when solving a practical programming task anybody will use all resources available to them; e.g. online, other students, teachers, colleagues. Even in the programming world there will be collaboration to solve the problem. To expect students and teachers to deliver this unit without mimicking real life problem solving conditions is unrealistic and has been extremely frustrating to maintain the conditions, knowing that other centres/teachers/students are not!"

Some teachers raised concerns about the logistical challenges and stress created by the non-exam assessment, observing the requirements placed significant

resource demands on schools, for example, ensuring computers were fit for purpose and students did not have access to restricted materials:

Example 1   *"Delivering the NEA is a logistical nightmare."*

2   *"Single person departments are disproportionately hit."*

3   *"As a teacher I am caught between trying to maximise the results of my pupils without breaching the strict rules the NEA needs to be conducted under. The amount of stress and anxiety this NEA has caused are out of all proportion to the 20% of the marks it represents."*

Others felt that the current format was too narrow and the marking scheme restricted a student's problem solving skills development.

Although the majority of teachers who responded agreed there were shortcomings, there was some limited teacher support for the current non-exam assessment arrangements:

Example 1   *"I like the NEA brief and the way it challenges students …. If it is set up correctly, with controlled accounts."*

2   *"If students have the common sense to practise and ask for help outside the guided hours, why is this a problem? They aren't allowed to bring in any resources so still need to be able to understand and produce the code from memory."*

<u>Students' views:</u>

Many students also agreed there are shortcomings with the current arrangements, for example:

Example 1   *"There is no possible way to change people from gaining help on their controlled assessment. The only true way is to test them on a two hour paper."*

2   *"The problem with this NEA was that the task was identical for every student and very specific, so this enabled students to copy from each other. However if students had to devise their own programming tasks (perhaps within guidelines outlined by the exam board) it would prevent students being able to copy each other."*

3   *"It is simply not fair to those that have been working without using leaked resources, and I strongly believe that the 20% coursework should either be cancelled or not count towards the final GCSE mark."*

However, some students thought any problems were not sufficiently widespread to justify change, for example:

> *"Don't do anything and stay with what we are doing at the moment. I have not heard any rumours from other schools about children cheating and having direct access to the answers, so it is not as major a problem as is made out, and should just be overlooked. The only students who will be at a disadvantage in this scenario are those who have not worked hard enough."*

Groups representing teachers and head teachers' views:

Voice stated that:

> *"Whilst agreeing with Ofqual's view, we wish to point out that our concerns relate primarily to the inappropriate nature of the NEA task (which we do not believe provides an entirely authentic experience in terms of software developing or real-world approaches to programming)."*

ASCL agreed that there were shortcomings and emphasised the need to find a fair solution:

> *"In this case ASCL accepts that the integrity of the non-examined assessment task within the computer science GCSE has been compromised by the widespread availability of solutions online. There is a need to find a solution which is fair to all candidates: - those who have completed the whole task, those in the middle of it and those yet to start."*

Exam Boards' views:

The four exam boards that offer GCSE computer science are AQA, OCR, Pearson and WJEC. All agreed that there are shortcomings with the current non-exam assessment arrangements for GCSE computer science and recognised the need to find an outcome that was as fair as possible for all students.

They noted that that they had worked collaboratively, through JCQ, to introduce an enhanced range of controls for the qualification, relative to those used in the legacy qualification, including: centre visits; enhanced training for moderators on the detection of malpractice; a signed declaration form, from the Head of Centre, confirming that all the rules have been followed; and enhanced moderation sampling with additional, statistically targeted checks.

Their views varied on the extent to which they believed these controls were enabling them to detect and address breaches of the rules.

Pearson noted:

> *"Despite the efforts of the exam boards and of the vast majority of centres, it is clear that there remains an issue with malpractice in GCSE (9-1) Computer Science. The pressures on centres coupled with the nature of the NEA task in GCSE Computer Science has led to a perverse incentive for malpractice among a minority of centres and candidates. As such, we are committed to working with Ofqual and centres to determine the fairest outcome for candidates in the short and longer terms. We are also determined to act in the best interests of the integrity and validity of the NEA."*

AQA and WJEC argued in favour of continuing to apply the controls, evaluating their effectiveness, and of leaving the assessment arrangements unchanged for 2018. AQA stated:

> *"We recognise that some of the evidence presented in the consultation demonstrates a risk of malpractice in some instances, but do not believe the validity or reliability of the assessment is sufficiently compromised to warrant the proposed course of action within the current academic year. The availability of (part) solutions on-line represents a clear risk to confidence and may be seen to undermine the qualification outcome, but we believe that the measures currently in place, as agreed with Ofqual and the other AOs during the development and accreditation process, will help identification and handling of malpractice issues should it occur this summer. We believe time should be given to see the effectiveness, or otherwise, of these procedures before taking action."*

OCR, who had the greatest market share of entries in the legacy qualification, offered no comments on this question other than to agree with our view that there are shortcomings.

Question 2: If you agree that there are shortcomings, to what extent do you agree or disagree that changes should be made to address these shortcomings for students who will be taking their exams in summer 2018 and 2019?

Responses were as follows:

Strongly agree	905 (51%)
Agree	421 (24%)
Neither agree nor disagree	95 (5%)

Disagree	149 (8%)	
Strongly disagree	216 (12%)	

As this breakdown of responses shows, there was strong support for something to be done to address the shortcomings with the current arrangements. However, the comments made in response to this and to later questions revealed a range of views as to the preferred actions and, in particular, differences of view on whether changes should apply for students who will be taking their exams in summer 2018 as well as to those taking their exams in 2019.

Teachers' views:

Many of the teacher respondents suggested the changes should be made immediately:

Example 1   *"The NEA is unfit for purpose, there should be an activity like the NEA but it should be geared towards helping pupils answer their test papers. There is no way that exam boards can monitor or control the entire internet, therefore such weight should not be given to the NEA as afforded by the examination boards. Stop it immediately, it's destined to fail. "*

2   *"Given the widespread cheating, it seems like a very bad idea to allow the NEA to influence marks. After all, if it was found that an exam had leaked online and been seen by thousands of people weeks before the exam took place, something would be done."*

3   *"Doing nothing is not an option. The NEA arrangements for 2018 are already unravelling and something needs to change NOW."*

4   *"The NEA is not fit for purpose. The point should be to measure the ability of a student's ability to problem solve and document the necessary stages that a computer scientist would follow. However, under no circumstances would a programmer work in such controlled conditions. I am now very concerned that I have fully followed JCQ guidelines and that no student has broken classroom conduct rules. However, no teacher can say with any certainty what their students are doing at home, whether this is browsing the internet for solutions, asking for support and then returning to lesson with this new knowledge, or even posting solutions themselves. Therefore, the credibility and integrity of the NEA component has failed and my students are now at a disadvantage if they have not accessed materials outside of lessons. No qualification should have such a serious handicap for their students. Therefore, I believe that the only*

fair way to award grades for this series is to grade based on exam entry alone."

However, a smaller number of teachers, including heads of department, suggested that, given the fact that some students taking their exams in 2018 had started or even finished the non-exam assessment task, no change should be made until the academic year 2018/2019.

Example 1   *"It's too late for the proposal to work, we've already started our assessment and the year below us will have spent about 10 hours programming practice. "*

2   *"I feel that this year's work should be put towards students' final grade given the significant time already invested. In our school around 15 hours of the 20 had been completed as well as significant preparation time invested which includes (a shorter) practice NEA project in year 10."*

Many of those who argued that the non-exam assessment should continue to contribute to the 9 to 1 grades for students taking their exams in 2018 were concerned that students who had already completed the task should feel their efforts were valued. If their performance in the non-exam assessment did not contribute to their grade for the qualification their confidence in the qualification would be undermined. Some argued that if students were required to complete the task knowing their performance would not count towards their grade, they would lack the motivation to engage. The following extracts illustrate this position:

Example 1   *"My students are at hour 12 of the NEA task, which they are taking seriously as part of their qualification. To ask me to assess this less formally and for their work to be excluded from the marks at the end of the day, would take the credibility of the qualification away, and especially the programming task part."*

2   *"This is a completely unfair option, as it punishes those who have already started or finished the task, and rewards those who have not. Students will not engage with the task if they receive no reward for their hard work, and those students who have worked hard and within the rules are being ignored."*

3   *"You are penalising the thousands who have undertaken the CA in good faith."*

4   *"It is not the fault of teachers or students that the arrangements for assessment of this course are not fit for purpose. Therefore why should teachers and students be penalised by sudden changes to the arrangements half-way through the final year of study. Make your minds up and stick to it. It wasn't fit for purpose in the first place and now you're asking us to change the plans in our year 11's final year of study after 2 years of preparation for it. It is ridiculous. It will demoralise students and teachers even further than they already are."*

Students' views:

Some students expressed support for these changes in the interests of fairness.

Example 1   *"As a student who has newly has taken the … computer science gcse, I was very disheartened that other students were able to access mark schemes or get outside sources to do the work. This will not give a fair representation of students' ability. The subject is new to most of us and having people taking these shortcuts has made many of us rather upset".*

2   *"Personally I don't code very well but my knowledge in the theory is strongest so removing the NEA controlled assessment works for me. I also don't want to go up against people who have cheated so therefore may get a really high mark."*

Others, primarily those that were part-way through or had completed their non-exam assessment task, felt strongly that their work should continue to count towards their grade.

"Because we, as students taking your exam, have spent well over 10 hours working extremely hard to get this and it can't be allowed to change just like that after weeks of hard work".

Groups representing teachers and head teachers' views:

Voice agreed that changes needed to be made to retain confidence in the qualification:

"Whilst we have the greatest sympathy for candidates who have abided by the rules, it is clear that the integrity of the current arrangements has been severely compromised and that a rapid response is required to uphold public confidence and safeguard the validity of assessment."

Likewise, the National Education Union (NEU) stated:

"Given the context of what has happened here, with the malpractice that is evident, it is unavoidable and correct that changes should be made so that students who did not commit malpractice do not lose out."

The National Association of Schoolmasters and Union of Women Teachers (NASUWT) felt that it "…*is clear that the issues Ofqual has identified in this respect warrant intervention to maintain the integrity of the qualification"*. The Union also shared concerns expressed by the Royal Society. NASUWT noted that "*the requirements of awarding bodies in respect of these assessments are often disproportionately burdensome and constrain teaching time to an excessive extent*".

In respect of the validity of the non-exam assessment the NASUWT "*recognises observations that real-world programming is highly collaborative and that the*

individualised nature of NEA tasks does not reflect contexts within which the skills and understanding associated with computer science are used".

Subject associations' views:

Computing at School (CAS) confirmed:

> *"We agree that there are shortcomings and that changes should be made to address these shortcomings for students who will be taking their exams in summer 2018 and 2019."*

They also felt that it was important to consider the situation for students in 2018 and 2019 separately, recognising that the timing and context of the change had different implications for these cohorts of students. They go on to say:

> "*The reputational risk in the short-term arising from the consultation is very great. Thus, time already spent by students on the NEA should be acknowledged and count towards the final award in some way. This might simply be a confirmation by the examination centre that the students have completed the 20 hours of NEA work."*

Exam Boards' views:

Pearson and OCR, commented on the challenges in ensuring that the curriculum requirements were met by all centres, whatever stage they were at in the conduct of the non-exam assessment, but felt that they could take action to support teachers, if Ofqual's preferred approach was implemented. Pearson stated:

> *"The exam boards have been working together to agree a series of reasonable measures which will incentivise centres and candidates to continue with the NEA so as to ensure, as far as is possible, a level playing field for candidates taking the NEA. Should the endorsement option be decided upon, there will no longer be any need for moderation as centres will not mark the work. Exam boards will instead collect the work of every candidate and review a sample to determine whether the work plausibly represents 20 hours of work at this level. The exam board visits will also continue and will focus on ensuring that centres are giving candidates the opportunity to complete the NEA in 20 hours. Finally, the Head of Centre will still be required to sign a declaration which, in the case that an endorsement option is decided upon, will state that their centre has given their candidates the opportunity to complete 20 hours of NEA in computer science*."

OCR also commented that if the proposed approach was introduced it would be:

> *"….important to make schools and colleges aware of their responsibilities in ensuring all candidates have access to and undertake the NEA requirements, that teachers are aware that we are monitoring this and that we will take action where there is evidence that this is not taking place. However, we believe this can be done in a*

> *proportionate way which does not impose a large burden on either the schools or the exam boards'. "*

AQA and WJEC argued that changes should not be made to the assessment arrangements as they would affect students taking their exams in 2018. Instead, the effectiveness of the controls as applied in 2018 should be evaluated to inform a decision about assessment arrangements for students who will take their exams in 2019. (A relevant quote is included under question 1 above.)

Question 3: To what extent do you agree or disagree with our proposed short-term approach (option 2) to addressing the issues in GCSE computer science, i.e. to require that all students complete the non-exam assessment task but that it is not formally marked[1] and it does not contribute to their grade?

Responses from those who responded to this question were as follows:

Strongly agree	586 (23%)
Agree	404 (16%)
Neither agree nor disagree	174 (7%)
Disagree	357 (14%)
Strongly disagree	1010 (40%)

The responses to this question were mixed. The comments made to support the answers given frequently qualified the level of agreement and/or disagreement with the question. For example, while many respondents agreed with our short-term

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[1] Formal marking of students' work involves the application of the published mark scheme available in each exam board's current specification. Teachers may choose to continue to use these mark schemes, but may also wish to employ a different approach to assessing students' work to support the feedback they give.

approach they felt that it should be introduced in 2019 with the expectation of all cases of malpractice being identified and dealt with in 2018 or with no comment on how the issues should be dealt with in 2018. Other respondents agreed that the non-exam assessment should not contribute to students' grades in 2018 and 2019, but then argued students who had not already completed the task should not be required to do so – i.e. that element of their programme of study should be abandoned immediately. Others favoured the proposed approach whereby all students would complete a task with schools being required to confirm dedicated time had been provided in the timetable to allow for this.

Although the majority of those who responded to this question appeared to disagree with our proposed short-term approach there was no single alternative approach that was proposed and for which there was unequivocal support.

Some who opposed the proposed approach did so on the basis of the on-going uncertainty created by the consultation. They objected to Ofqual's delay in taking a decision and criticised Ofqual for consulting on the proposed approach rather than simply taking the decision to remove the non-exam assessment immediately from the grade. It was clear that some respondents who disagreed with the proposed approach did so because of the delay in making any decision. Importantly, they would have agreed with an immediate decision (without consultation) to introduce the proposed model.

Teachers' views:

Many who supported the proposed approach believed it would be fairer and address concerns about confidence in the qualification, for example:

Example 1   *"It is simply not fair to those that have been working without using leaked resources, and I strongly believe that the 20% coursework should either be cancelled or not count towards the final GCSE mark."*

2   *"All stakeholders with interest in GCSE computer science students are very likely to require confidence in the students' grade. As cases of malpractice have been reported, changes to assess those shortcomings are essential to avoid employers and higher education establishments having to conduct their own assessments of student ability."*

3   *"We have followed the strict guidelines as have each of our students. Both staff and students have invested a lot of time into this NEA and this whole process is hugely disappointing however the results that our students achieve must be fair. If they are 'competing' with others who have an unfair advantage then this must not be allowed to happen."*

The following extract from a teacher's response illustrates the views of many who responded:

"I feel there is no other option; if the tasks have been compromised, it would be unfair to include the NEA element in the assessment. The

> *NEA skills are covered in both examinations and so students would not be disadvantaged overall."*

Other teachers positively welcomed the proposed approach, especially if, as suggested in the consultation, the exam boards relaxed some of the restrictions in how the task is undertaken. Some suggested that completing the task would develop students' understanding of the subject and add value even if it did not contribute to the grade.

Example 1 *"Great for teacher workload. Also keeps practical work in the timetable - removing requirement for NEA would turn the subject into a very dull and dry two years of exam prep."*

2 *"Please do not give in to the community of teachers who oppose your proposal. If they conducted the task according to the rules, they will not have lost out! The completion of the task will have taught necessary skills for Paper 1. They will do very well in the programming element and only gained from completing NEA, because this paper will now be 50%, not 40%!"*

3 *"Yes - please go ahead with it. I have pretty much completed this but can see how the reliability and robustness of the qualification will be affected. Better to act now than to have a "you must have cheated" cloud hanging over the qualification next year. Better to act now rather than leave it - May be unpopular with some centres but the knowledge and skills covered will be generic to the exam."*

4 *"Please do it, that will provide me with the fab opportunity on building a collaborative approach and engage students."*

5 *"Remove the restrictive working arrangements to better reflect real world working practices, e.g. collaboration, internet access as the work will be formative rather than summatively assessed."*

6 *"The benefits of undertaking the CA are clear; but the CA conditions are restrictive and onerous. A more interactive approach by which students are fully supported through the task will be of greater benefit to the learning experience."*

7 *"If the NEA can become a "guided" learning experience, making full and complete use of 20 hours between now and the exams, I would be greatly in favour of that. If I was allowed to give good quality feedback, I would not have pupils who are giving up on the whole subject because of an NEA that is deeply flawed."*

For some teachers, their key concern was that all students should be required to complete the task. They were concerned about the potential extra availability of time to prepare for the exams for those who had delayed starting the task:

Example 1 *"My school has invested a LOT of time preparing students for the NEA so I feel that ALL schools should have to do it even if it doesn't count*

towards the overall mark otherwise centres who haven't yet done NEA will in effect have had more teaching time."

2   *"We need to ensure that all students have been given 20 hours to complete the NEA as there are students like mine who have now done 15 hours that could have been spent revising for the exam. Those schools who have waited until now to start the NEA and have been concentrating on exam preparation are at an advantage."*

However, other teachers suggested students who had already completed the task – and had therefore diverted time towards its completion that could otherwise have been directed to preparing for the exams in the subject - should be compensated through the special consideration process. A small number of respondents suggested the current cohort of students should be compensated for changes being made to the qualification by the use of lower grade boundaries and more lenient mark schemes.

Many who responded agreed that the non-exam assessment should not contribute to the 9 to 1 grade, including for students taking their exams in 2018. However, they argued that students who had not already completed the task should not be required to do so as this would be a waste of time that could otherwise be used to prepare students for the exams. Some argued students would lack motivation and so would gain little from the experience. For example:

Example 1   *"We have completed the majority of the NEA and the students are well on the way to programming their solutions. They have developed flow charts and pseudo code and I personally think that the time would be better spent preparing them for the examinations and mock exams using examples of pseudo code and flow charts to help with this. They have been preparing for this for the past 12 weeks and have developed enough skills during this time to help. I just think that completing the module will waste valuable time."*

2   *"Pull the NEA if it cannot contribute to the grades. They should be taught programming through component 2 and this should be the move going forward. Students already know about the NEA leaks via news sources and their effort levels have decreased as they know it will likely no longer count towards their results. Pull it now and allow them to focus on their exams."*

3   *"I would welcome the relaxation of the controls if the NEA is not formally assessed as I believe the pupils would benefit from teacher input/feedback during this task to develop and refine programming theory. Our pupils have spent quite a bit of time on programming theory and practice so I would like to see the requirement to formally spend 20 hours on this activity dropped (or at least taking into account other programming opportunities the pupils have had). They would still have had exposure to programming."*

Others suggested that the task should become an optional teacher-led learning tool, for example:

> *"Let schools decide what to do. Any school worth its salt will give practical tasks to its students… If it is to be discarded (which I support), let schools decide how to use the remainder of this year to prepare students for the 9-1 exams."*

Some respondents who argued against changing the arrangements in the short term felt that it was important to retain the non-exam assessment because it was the only aspect of the qualification that rewarded the essential programming skills.

> *"..the NEA is the main test of assessment objective 3(AO3); component 2 only tests a subset of the skills tested in the NEA"*

Some referred to the impact of students' successful progression to the A level in the subject if any changes resulted in a lower understanding of programming, for example:

> *"I also teach A Level Computer Science and take students from a wide range of schools. My main problem is that student have been taught how to pass a test and have no in-depth understanding of programming. Removing the focus on the 20 hour NEA will compound this problem and make the Computer Science graduate problem worse."*

Some who did not favour the proposed approach commented on the cost/burden on schools. They suggested that to require schools to continue teaching the skills that would have been assessed in the non-exam assessment, and requiring them to continue to administer and supervise students completing a task that would not contribute to their grade, would be pointless and not remove the current burden. However, this was often contradicted by those who supported the proposed approach and who suggested that the burden was marking the non-exam assessment. If teachers did not formally have to mark the non-exam assessment, the burden on them would be reduced significantly.

> *"Teacher workload will be less and less time worrying about every condition always being met, spotting malpractice etc. Teachers will then be actually able to teach instead of supervising 20 hours of what is technically an exam."*

Some suggested greater efforts should be made by the exam boards to spot and deal with malpractice, for example:

> *"Let the GCSE run as planned for the 2017/18 Cohort and ask centres to submit their timetable for the 20 hours NEA. Representatives from the exam boards then know when they are doing the NEA and can turn up unannounced to properly gain an insight into the amount of centres, if any, who are taking part in malpractice."*

Students' views:

Some students expressed support for our short-term approach as they were most concerned about the fairness to the whole cohort for the qualification:

> *"It is unfair how some students are able to cheat and achieve a higher grade than students that have actually spent time learning and practising coding in and out of lessons. You would be making a smart decision not to grade these controlled assessments because our gcse results would not show an accurate reflection of where we are at as some people have cheated to achieve these grades."*

Some students felt that completing the non-exam assessment task would be beneficial even if it did not contribute to their grade:

Example 1   *"…allows the students which take their studies seriously to still complete their NEA and get good practice, but in a more relaxed environment, while those who don't focus on their studies would've failed anyway."*

2   *"…..from what I have done so far, I have learnt more time management skills, ways to cope with time pressure, how to think outside the box, how to follow guidelines and to think computationally whenever possible."*

3   *"I strongly feel that this is the best solution to the problems of malpractice in the controlled assessment. I will still get valuable programming practice yet I will not be disadvantaged by peers possibly getting a higher grade than me because they cheated and I did not."*

Many students who were part-way through or had yet to start their non-exam assessment task felt they should not be required to complete it:

Example 1   *"Maybe I've misread the question but why would we continue with the nea if the progress does not count toward any grades?*

2   *"Doesn't make any sense - why would we spend all of this time doing this for no reward? Programming in real life and what is needed for the exam is completely different and students would not learn anything from this exercise while using teaching time."*

Some students commented that the non-exam assessment and the uncertainty generated by the consultation were adding to the inevitable stress of their GCSE year:

Example 1   *"I believe that is adding extra stress and anxiety into this already extremely overwhelming year. This issue needs to be addressed as soon as possible to be beneficial to us students sitting the forthcoming exams".*

2   *"This is causing lots of stress and anxiety for students who are doing GCSE Computer Science and their parents. I think that the NEA should be cancelled and students should focus on their GCSEs in summer 2018 and their computer science written exam."*

Groups representing teachers and head teachers' views:

Some who favoured the proposed approach suggested this was the 'least bad option' available. This sentiment was reflected in the response from the National Association of Head Teachers (NAHT):

> *"In light of the evidence of malpractice, and potential undiscovered malpractice, presented by Ofqual it is clear that timely action is necessary in these circumstances. However, this situation is regrettable and could have been avoided had the GCSE reform programme been implemented at a more realistic pace; there should be no need to make this kind of change to qualifications mid-course. Such changes are disruptive for schools, teachers and students. Although taking action in this case should maximise fairness and integrity of grades in the system as a whole, there will be individuals and schools who will be, or feel, disadvantaged and this must be recognised."*

And in that from the Association of School and College Leaders (ASCL):

> *"It is clear that the integrity of the computer science assessment task has been compromised by the widespread availability of solutions online. It is an enormously frustrating situation for all concerned but we recognise that Ofqual has no option other than to consult on alternative arrangements.*
>
> *We agree that this assessment cannot and should not now contribute to final GCSE grades, not least because it would be extremely unfair to students who undertake the task in a proper manner without recourse to online forums."*

ASCL went on to note the importance of continuing to require students to demonstrate programming skills in the course of study:

> "*Some students choose to study computer science in part due to the programming task and we support Ofqual's proposal within option 2 that all students will still complete the programming task. It is right that exam boards will, through their monitoring visits, verify that this programming task has taken place. Completing the task in this way ensures students can develop and apply their programming skills and that the whole of the subject content is covered."*

The argument that students should not be required to complete a non-exam assessment task was reflected in the response from the National Association of Schoolmasters Union of Women Teachers (NASUWT):

> *"…the NASUWT did not object in principle to Ofqual's proposal, in the short term, to exclude NEA from the calculation of candidates' final grades. However, in light of the concerns raised about the validity of this assessment, the Union does not believe that it is necessary to continue to mandate completion of the task as Ofqual proposes. It is*

entirely possible for schools to ensure coverage of the skills and understandings associated with the elements of subject content included in the NEA through other means."

Voice expressed a different view supporting the retention of the non-exam assessment tasks under less restrictive assessment conditions:

"We support option 1B. We believe that a NEA element is essential to the assessment of computer science, and that, given its importance, it should count towards the final grade. However, the task needs to be redesigned to afford a more authentic and motivating experience for students, and the rules governing malpractice may need to be revised to as to align the NEA with real-world practice."

Subject associations' views:

The response from Computing at School (CAS) noted their concerns about the different context for students who have completed the non-exam assessment, may be part way through it or might not yet have started:

"….. time already spent by students on the NEA should be acknowledged and count towards the final award in some way. This might simply be a confirmation by the examination centre that the students have completed the 20 hours of NEA work."

In addition, CAS's own survey of its members highlighted the differences of opinion with the sector. They offered respondents the opportunity to identify which option for change they most supported and which least. The CAS response to our consultation makes clear that, from their own survey, "support for option 2 is the strongest". (Option 2 in the CAS survey was our proposed short-term approach.)

Exam Boards' views:

The four exam boards were evenly divided on whether changes should be made to address these shortcomings for students taking their exams in summer 2018. Two, Pearson and OCR, supported our proposed approach. They believe the majority of students and centres are completing the non-exam assessment tasks in the prescribed manner and to the prescribed rules. However, the difficulty facing the exam boards is how to identify those that are not abiding by the rules. They acknowledge that evidence of malpractice exists but believe identifying such cases with confidence will be difficult as acknowledged in the quote from Pearson included under question 1.

The other two exam boards, AQA and WJEC, oppose the proposal to change the arrangements for 2018. They believe that the enhanced arrangements in place for moderation in 2018 represent a significant change in emphasis on detecting and dealing with malpractice in comparison to those used for the legacy qualification (see the comments under question 1). They propose that the current arrangements should apply to the 2018 examinations. Following the first award of the qualifications in summer 2018, and an evaluation of the effectiveness of the

controls in place to detect malpractice, a decision should be made on whether to change the assessment model for students taking their exams in 2019.

Pearson and WJEC identified advantages in a model whereby students' performance in the non-exam assessment was reported separately as pass, merit or distinction alongside their 9 to 1 grade would in some ways be preferable. However, they recognised the difficulties of introducing such an approach for 2018. Pearson stated:

> *"….the time available to exam boards to re-write and harmonise their board specific assessment criteria for the pass, merit, distinction grade scale is limited and could affect centre assessment of candidate work. This option would be disruptive to centres as it could require work to be reassessed if it had been marked already. Finally, the changes needed to exam board systems in such a short time span would create risks. While we believe that option 3b would allow a fairer recognition of candidate achievement, the risks involved for centres and exam boards are too great and could, ultimately, undermine confidence in the examinations. For these reasons, we support option 2."*

Question 4: Are there any other short-term options we should consider?

Responses from those who responded to this question were as follows:

Yes   1362
             (56%)

No   1069
             (44%)

The most frequent suggestion from all stakeholder groups who responded to this question was that the non-exam assessment should be retained and contribute to students' grades for students taking their exams in 2018, subject to the exam boards making greater efforts to detect and address malpractice. Some argued that all tasks should be completed without access to the internet (approaches to internet access when the task is being undertaken vary by exam board, as permitted by Ofqual's rules).

Teachers' views:

Some teachers advocated reducing the weighting attached to the non-exam assessment from 20% to 10%. They believed that this would address, in part, concerns about students' lack of motivation to engage with the task if it contributed nothing to the final grade. Other suggestions included altering the marking structure to move toward analysis of the work (design, evaluation, etc.) rather than the 'end product', or to require all students to complete the non-exam assessment and give all students full marks for it. The main concerns were that students should be motivated to complete the non-exam assessment task and, for those who had already completed the task, to feel their work was valued.

One respondent suggested that the marking criteria should be amended to place less emphasis on the written report from the student, and include a requirement for a student interview during which the student would be required to explain and justify their code:

> *"This is how programming coursework is judged at undergraduate level. Failure to explain parts of the code immediately highlights outside assistance."*

A number of responses suggested introducing an additional examination, focussed on programming, for 2018 and 2019. Others (including some who responded to the survey run by CAS) suggested making changes to individual questions in the examinations that would draw upon the programming experience of students having completed the non-exam assessment task.

Example 1   *"Many programming techniques can be demonstrated in paper 2 as well as a series of smaller classroom based programming challenges. The exam could be further developed to encompass additional elements of programming to test understanding".*

2   *"Controlled assessment tasks/skills to be added to final exam content."*

Exam Boards' views:

Three of the exam boards, AQA, OCR and Pearson, had no further options to offer. Pearson noted:

> *"Pearson Edexcel has been cooperating extensively with the other exam boards to agree the best way to manage the NEA and to mitigate the potential for malpractice. In the time that the exam boards have been cooperating, no other potential option has been considered which could be made to work in such a short time frame."*

The response from WJEC re-emphasised their view that the NEA arrangements, as currently devised, should be retained for 2018 with a review following the summer examinations and further decisions for the 2019 examinations:

> *"We recognise that it is not possible to prevent a GCSE Computer Science student posting a message regarding this qualification on an Internet website/social media, just as it is not possible to prevent face-to-face discussions outside of the controlled environment of the 20 hours' NEA task. However, recent communications with centres (under the aegis of JCQ) have reinforced the actions that will be taken by an exam board where there is a suspected breach of NEA controls, and the sanctions that may be applied to the centre, teacher and candidate(s).*
>
> *"We believe that the additional measures exam boards have put in place for the reformed qualification will mitigate the likelihood of malpractice, and assist us in the detection of malpractice should it occur. Furthermore, we believe that ongoing reinforcement of centres',*

teachers' and candidates' responsibilities, by Ofqual and the exam boards, (and the potential impact of the sanctions which may be applied should any party be found guilty of breaching NEA conditions), has the potential to have a positive impact ahead of the 2018 award."

Question 5: Do you have any other comments on our proposed short-term approach?

Responses from those who responded to this question were as follows:

Yes   1072
       (45%)

No   1315
       (55%)

The majority of respondents to this question took the opportunity to re-emphasise points that they had made in response to previous questions.

Teachers' views:

The impact of any change on students' teaching and learning experience was commented on by some teachers, for example:

> *"By removing the formal practical element, some centres may end up delivering a course that is pure theory and teach students how to pass exams rather than actually learn skills and apply knowledge. As a result, there will be a decline is students picking the subject."*

One respondent, who suggested that cheating is widespread under the current arrangements, warned that:

> *"If you go with your proposal that the nea work should be done but not marked then hardly any teachers will do it, they will all concentrate on other aspects of the course and just tick that the child wrote a program."*

This respondent argued the answer was to focus on better detection of malpractice:

> *"More inspectors visiting schools, especially people like myself who have been programming for decades and who are against cheating."*

Groups representing teachers and head teachers' views:

The NEU wished to emphasise the basis on which it was supporting our proposals:

> *"To be clear, the National Education Union does not generally support Ofqual's intention to minimise the non-exam assessment. Its*

agreement to the proposed approach outlined in the consultation is specific to the context of this situation."

Exam Boards' views:

Two of the exam boards noted that consideration needs to be given to the rules relating to the conduct of the non-exam assessment tasks if the proposed short-term approach were to be adopted. Pearson stated:

> *"There remains a question, should the decision be taken to implement option 2 (grade based on exam performance), about the extent to which the rules for taking the NEA should be relaxed. We are of the view that at the very least, the requirement for the work to be the candidate's own, and for it to be completed over 20 hours, should remain. This could allow an element of teacher feedback but would preclude candidate collaboration. We believe that these rules, at least, must remain in place to ensure a parity of experience by candidates who take the NEA prior to and after a decision is made to calculate the grade based on exam performance alone.*
>
> *We also believe that the NEA submission deadline should be extended to be in line with other NEA deadline dates (May). This will help incentivise centres to complete the NEA and will make up for any confusion in centres during the consultation window. There is also risk that despite the exam boards' efforts to stress to centres the need to continue with the NEA, some may have postponed their timetabled NEA sessions until after the expected date of Ofqual's decision."*

OCR commented:

> *"We can see no reason why the requirements for GCSE Computer Science should not align with the approach taken for GCSE Science. That would mean specifying the types of experience that must be gained during the course with advice that, for Computer Science, these would be expected to represent 20 hours of work. 20 hours should not be seen as the overriding metric here; rather, the focus should be on clearly documented skills that need to be acquired. We see no reason to impose any further requirements. Such arrangements would give teachers the opportunity to ensure that students have the opportunity to engage in a genuinely authentic programming experience. We would also recommend that the deadline for work to be completed is moved to 15th May to align with GCSE Sciences."*

AQA and WJEC offered no other comments.

Question 6: Are there particular options we should consider for the longer-term approach to assessing students' programming skills?

Yes   1891
                (78%)

No   539
                (22%)

<u>Teachers and students' views:</u>

Most school respondents suggested that computing should be assessed either as two equally weighted exam papers, or with the addition of a third paper dealing with programming. There were different views on whether one of the papers should be computer based/on-line. While this was attractive for some, many highlighted concerns over the cost and practicality of assessing students on computers at the same time. Concerns were also raised about the security of any computer-based assessment. The following illustrate the range of suggestions put forward:

Example 1   *"An online programming examination approach that may be considered for the programming skills, perhaps in the form of exam questions that require the student to fix code, write algorithms or even edit code to gain marks."*

2   *"Get students to debug code or identify errors. This can be incorporated into paper 2 and require a written response."*

3   *"….students complete a certain number of tasks within the school year, and then get examined on these (i.e., a 3rd paper) - this would be my preferred option for fairness of the students. However, the number and complexity of the tasks would need to be considered as it would need to fit within the current GLH, in order for schools to get through the content."*

4   *"A mini programming project designed to be completed in a 5 hour window that should, if correctly analysed and designed, allow a student to display computational thinking and a wide range of programming techniques."*

5   *"I think the best way forward would be to have a practical exam that is on a specific date and time through a portal and then submitted online for the board to mark."*

Some, including a number of students, argued that any longer-term approach should be more reflective of coding in the real world whereby a coder would source sample code from on-line sites:

Example 1   *"Let students have a genuine experience similar to the real world of coding. For example; write a program using help from the internet (similar to what professionals do anyway) or organise a group project*

> *to create a website where each group member has a different profession e.g. Designer, Coder, Advertiser, Manager."*

2   *"We should be taught how to use coding, instead of being put in a controlled assessment without any advanced knowledge on the needed level on programming for this course work. We are expected to know how to make a program without being taught any useful skills."*

3   *"A more life-like programming task should be used where access to the internet and collaborating with peers should be permitted."*

4   *"If someone was required to do coding for a job they wouldn't have to sit in silence and they could get advice off others."*

Others suggested an approach similar to that used for A level computer science. However some who suggested this approach acknowledged the larger GCSE cohort could make it difficult to manage. An approach based on the GCSE science model was also suggested, where students would be required to demonstrate their familiarity with particular codes in responding to targeted questions in the examinations. GCSE art was also suggested as a possible model:

> *"Online programming exam taken over the course of 4-5 hours similar to GCSE Art, Photography etc. Marks still equate to 20% of GCSE grade."*

Some stressed a need to make sure any longer term approach was suitable for less able students as well as being suitably challenging for the more able. Such responses tended to come from those who had found the current non-exam assessment tasks inaccessible to the full ability range of students.

Exam Boards' views:

WJEC suggest a replication of the arrangements at A level for an individual project from each student. (Ofqual's conditions permit this approach for GCSE computer science but none of the exam boards chose to make this available when they developed their specification.)

AQA proposed the use of pre-release materials (in addition to the non-exam assessments) that could be worked on in the classroom and provide the basis for a timed, on-screen, programming examination.

This approach (an on-screen exam based on pre-release materials) was also suggested by a number of respondents and particularly from teachers who offer the A level examination with this arrangement. However, AQA noted that its own market research indicated that:

> *"….it would be too difficult to implement with students needing access to computers simultaneously and many schools not having either the resource to deliver to large cohorts or the on-site technical support should an issue occur during the assessment. If the logistics can be*

> *dealt with then this provides the best combination of assessing the skills and maintaining the integrity of the assessment."*

AQA also suggested that there could be an 'extended programming exam' (half day). The focus would be more on coding and less on doing formal analysis, design and testing than the current approach, with students given a half day unseen programming assessment. This would be completed by all schools on the same day, much like an exam, however, consideration of the logistical and resource implications would need to be factored in so as not to force schools to remove the subject from their curriculum.

Pearson suggested that the most valid way to assess the required skills is through "…a 'live' programming task on a (locked down) computer under examination conditions". They suggested two different ways by which this could be managed.

OCR suggested a model along the lines of that introduced for GCSE science:

> *"The most likely way forward is a model which includes questions in the exam which are designed to reward candidates who have significant experience of programming in a practical context (a model used in some other GCSE subjects with practical components). However, detailed work would be needed to determine the design of such questions, the percentage of marks they would represent, and how the assessment objective weightings may need to be altered as a result."*

All exam boards emphasised that time is needed to develop an appropriate and valid approach to assessing programming skills at GCSE and that teachers in schools and colleges will need sufficient advanced notice and support to introduce any new and, potentially, novel approach. None of the models suggested for the longer term could be introduced for students taking their exams in 2018.

Question 7: We have identified some ways in which our proposals could impact on persons who share a protected characteristic. Are there any potential impacts (positive or negative) we have not identified?

Views were mixed on the extent to which the proposed changes would have an impact on students who share particular protected characteristics.

Some were concerned that students with autistic spectrum disorder might perform particularly well in the current non-exam assessment and would be distressed if the qualification is changed so they are not rewarded for their efforts. Similarly, adapting to a change in approach mid-way through their qualification might be particularly distressing for students who had mental health issues or who otherwise find exams stressful; their motivation to succeed in their exams could be undermined.

Some argued that dyslexic students, or those with a range of learning disabilities, who find exams challenging might find programming easy or generally favour non-

exam assessment. Similar arguments were made in respect of students whose first language is not English.

Some respondents suggested that girls who take GCSE computer science tend to be good programmers and, if the changes are made, they will not be rewarded for these skills. One respondent referred to research on the differences in the way male and female programmers naturally work, with the current arrangements favouring male students, and argued this should be taken into account when a longer term approach is being developed.

Others argued that assessment by exam only could disadvantage students who were fasting for religious reasons during the exam period.

One respondent observed that coding is highly sensitive to spelling. Candidates who are dyslexic or suffer from visual stress or similar disabilities can therefore be disadvantaged if assessed in their coding skills in a written exam. However, in a non-exam assessment, candidates have access to syntax checkers and can repeatedly compile their code until all the errors have been eliminated.

One teacher noted:

> *"I teach a partially sighted student who has 100% extra time. Currently she is 15 hours into her NEA and if her NEA report will not count towards her final grade I think it would be unfair to expect her to use her extra time on this. She finds exams very hard and exceptionally tiring and her NEA report will be a truer reflection of her skills than her exams."*

Others, however, argued that removing the non-exam assessment from the grade would make the qualification more accessible for some students and would be less stressful for students and teachers alike:

Example 1　　*"I teach several autistic children for whom scenario based work such as the NEA tasks is very difficult."*

2　　　　　*"I have some students with Dyslexia. They can find a massive project very hard to break down into discrete modules."*

3　　　　　*"I have come across issues for pupils with visual impairment as they often need magnification software and the software is often not suited to scrolling the programming environment."*

Some teachers suggested that for students who are out of school for medical reasons it can be difficult to accommodate the 20 hours set aside for the non-exam assessment. More generally, if the non-exam assessment did not contribute to the 9 to 1 grade, completing the task would be less stressful for students.

A number of respondents commented on the difficulty of attracting experienced computer science teachers. This might be accentuated in more deprived areas.

Relieving teachers of the demands of the non-exam assessment and its marking would allow them better to prepare for teaching the rest of the qualification.

Question 8: Are there any additional steps we could take to mitigate any negative impact resulting from these proposals on persons who share a protected characteristic?

The great majority of respondents made no suggestions in response to this question. Those who did respond typically suggested one or more of the following:

- there should be no change made to the current requirements;
- specific students who would be disadvantaged by the removal of the non-exam assessment should have their non-exam assessment performance credited towards their qualification grade;
- any decision to change the current requirements should be made quickly and communicated clearly;
- grade boundaries should be lowered and/or the exams made easier, either for all students or for students most likely to be affected negatively by any change;
- the exams should be delayed until July;
- the normal reasonable adjustments provisions should be adequate;

the introduction of a short-course GCSE in the subject for students who will be disadvantaged by the changes.

Question 9: Do you have any other comments on the impacts of the proposals on persons who share a protected characteristic?

Again, the great majority of respondents made no comment in response to this question.

Of those who did comment, a small number suggested that the proposals would have the same impact on all students, regardless of their particular protected characteristics.

One teacher observed that pupil premium students do particularly well in their non-exam assessment in this subject - as they will not necessarily perform as well in their exams they could be disadvantaged if the proposed change is made.

A couple of respondents said that students with autistic spectrum and anxiety disorders might respond negatively to the change – because it was unexpected. On the other hand it was noted, such students can also find the non-exam assessment particularly challenging.

More radical suggestions were made by some individuals, including to allow a different assessment model for students who had mental health issues or were on the autistic spectrum and to introduce an alternative ICT qualification that might better suit the interests and career aspirations of some students.

One respondent cautioned against making the qualification inaccessible to blind or visually impaired students, for whom careers in computer programming can be particularly attractive.

Question 10: We think our proposals will result in a net reduction in burden on schools, colleges and exam boards. To what extent do you agree or disagree with this assessment?

Strongly agree	689 (28%)	
Agree	586 (24%)	Many teachers commented positively on the reduction in the burden on them that would follow if they did not formally have to mark the non-exam assessment task:
Neither agree nor disagree	432 (18%)	
Disagree	340 (14%)	*Example 1 "The impact of marking assessments contributes to a massive, unpaid, overhead to teachers. With the need to allow for appeals, no ability to discuss outside of the school (I am a one*
Strongly disagree	407 (16%)	*man department), the stress this is causing is out of all proportion to the end result., both for the teacher (me, so being selfish) and the pupils."*

2 	*"The removal of the weighting will undoubtedly reduce the burden on schools as the feedback becomes part of an iterative process whereby students can have small issues resolved instantly, therefore allowing them to learn from mistakes without impacting on their grade rather than working 'blindly' to only find out a small initial error has cost them heavily throughout the project."*

However, the proposal that exam boards would still monitor centres to make sure they were giving students the opportunity to complete the non-exam assessment task was seen by some teachers as an unnecessary continuing burden.

The NEU suggested that there was an additional burden placed on teachers if they were expected to provide feedback to students.

> *"On the point that teachers would now be "free to provide feedback on students' performance" in the programming task: by its nature, formative feedback is a more time consuming process than summative marking. To provide useful feedback to help develop students' strengths and build upon knowledge, skills and understanding means not just assessing to what extent a student has demonstrated a skill, but also detailing where they have gone wrong and how they could improve. As such, the shift from a summative marking of the programming task to a formative one would result in an increase in workload for teachers."*

Students who answered the question about the reduction in burden on schools, colleges and exam boards noted how stressful the GCSE exam period was and commented that the uncertainty created by the consultation had added to their stress.

Another respondent suggested that the proposal to change the approach had of itself introduced a new burden on teachers as they evaluated the options and responded to the consultation and worked out how the proposed option might apply to their own school's circumstances. Teachers would have already prepared for the marking they expected to have to complete:

> *"Removal of NEA marking is welcome; however, many teachers will already have invested the time to assess and evaluate the mark scheme and begun preparation for, if not delivery of, marking."*

There was also concern about the need for teachers to adapt to longer term changes, too.

Question 11: Are there any additional steps we could take to reduce the regulatory impact of our proposals?

Many respondents said they could not suggest any steps we could take to reduce the regulatory impact on the proposals. Of those who commented, the most frequently made suggestions were either not to make any changes at all in the short-term or to abandon the non-exam assessment requirement altogether (or to make its completion optional).

Several respondents suggested the need for clear communications, especially for parents and students, with which Ofqual should assist. Others suggested that, if completion of a non-exam assessment task remained a requirement, exam boards should trust that this will be undertaken without the need for exam board visits, and/or without requiring statements from centres that all students have been given the opportunity to complete a task and that 20 hours has been set aside for this. On the other hand, some respondents suggested exam boards should make unannounced visits to ensure the requirements were being met.

There were calls for an earlier decision (an announcement during the week beginning 8 January 2018 was considered by some to be too late). However, others cautioned against a hasty decision and encouraged face to face consultation with teachers before a decision was taken.

Some suggested that if all students taking their exams in 2018 were to be required to undertake a non-exam assessment task, the period during which the task had to be completed should be extended. A couple of respondents suggested also the exam date should be put back.

Question 12: Are there any costs or benefits associated with our proposals which we have not identified?

Most of those who commented focused on the costs already incurred in preparing to deliver the current model of assessment, rather than additional costs that would be incurred if the proposed changes were made. For example, the efforts teachers had made to prepare themselves to support students to undertake the non-exam assessment and then to mark it – including the costs of attending events run by the exam boards (and providing classroom cover while they were at the events). Some teachers asked whether their schools might be refunded for the costs of attending such events. The direct costs of producing (buying and photocopying) materials for students were also noted, as was the environmental impact of the large volume of paper materials produced.

The time schools had devoted to preparing students to undertake the non-exam assessment task, and to do it, were noted by some. These were costs some suggested would not be incurred by schools that had chosen to delay the start of the non-exam assessment – at least not if their students were not required to undertake the task.

A few respondents suggested that removing the non-exam assessment from the grade would reduce the uptake of the subject at GCSE level and, in turn, progression to A level, which would negatively impact on the exam boards financially and more widely on the economic success of the country.

The costs of communicating to parents any decision to change the requirements was noted by some.

On the other hand, it was noted that the proposals would remove the need for exam boards to moderate teachers' marking, removing the associated costs of moderation. The costs to schools of maintaining the current controls on the non-exam assessment, such as restricting computer access while the task is being undertaken, could be removed or reduced as a result of the changes.

Some teachers suggested that if the approach to the non-exam assessment task was changed, so some of the current exam board restrictions were lifted, the experience could become more authentic and a more valuable and positive learning experience created for students.

Some teachers commented that if they did not have to mark the assessments in a formal way the qualification would be less stressful to deliver. The quality of their delivery of the qualifications could improve as a result with longer term benefits in the way of increased up-take.

Appendix A: List of organisational consultation respondents

When completing the questionnaire, we asked respondents to indicate whether they were responding as an individual or on behalf of an organisation.

Below we list those organisations that submitted a response to the consultation. We have not included a list of those responding as an individual.

11plus.eu

Abbot's Hill School

Acland Burghley School

Alcester Grammar School

Alton School

Altrincham Grammar School for Girls

Ampleforth College

AQA

Archway School

Ark John Keats Academy

ASCL

Barnsley College

Beechen Cliff School

Beverly Grammar School

Blackheath High School

Bluecoat Aspley Academy

Bournemouth School for Girls

Bradley Stoke Community School

Bramhall High School

Brentside High School

British School Jakarta

Brookfield School

Broughton High School, Preston

Burford School

Bury St Edmunds County Upper School

Cardinal Hume Catholic School

Cardinal Newman Catholic School

Chelmsford County High School for Girls

Chilton Trinity School Bridgwater

Chipping Camden School

Churcher's College

Churchill Academy

Churchmead School

Claremont High School Academy

Colston's School

Computing At School

Cranford House

Cromwell Community College

Culcheth High School

Dartford Grammar School

Denbigh School

Dixons Kings Academy

Dorothy Stringer School

Down High School

Dr Challoners Grammar School

Dubai College

Dunraven School

East Sussex Computer Science Subject Leaders' Hub

Erith School

Ermysted's Grammar School

Fakenham Academy

Farlingaye High School

Farmors School

Finborough School

Forest Hall

Framlingham College

Fulford School

Fullbrook School

GeeksUpNorth Ltd

Godalming School

Guiseley School

Harrop Fold School

Hayes School

Hazelwick School

Health Futures UTC

Hilbre High School

Holbrook Academy

Holyhead Academy

Homewood School

Honywood School

Hounsdown School

Hurstpierpoint College

Hutton C of E Grammar School

Isca Academy

Jerudong International School

John Ferneley College

John Masefield High School

John Taylor High School

Kepier School

Kettering Buccleuch Academy

King Edward VI Aston

King Edward VI Grammar School

King Edward VI Handsworth School for Girls

King Edward VI School, Stratford-upon-Avon

King James's School

Kings College, The British School of Alicante

Kings Norton Girls School

Lady Eleanor Holles School

Lady Manners School

Langtree School

Leeds West Academy

Logic Studio School

London Academy of Excellence Tottenham

London East Computer Science Support Hub

Longdean School

Lydiard Park Academy

Maidstone Grammar School for Girls

Manor High School

Merchiston Castle School

Monks Walk School

NAHT

NASUWT

NEU

Newcastle ICT and Computer Science Teachers Web

Newland School for Girls

Newport Girls High School

Nonsuch High School for Girls

Northern Education Trust

Norton Hill School

Notre Dame High School

Oakbank Free School

Oathall Community College

OCR

Oldfield School

Our Lady & St Patrick's College

Outwood Academy Newbold

Outwood Grange Academies Trust

Paignton Academy

Pearson

Penair School

Pendle Vale College

Pheonix Collegiate

Plume School

Poole Grammar School

Portslade Aldridge Community Academy

Prince Henry's High School

Queen Elizabeth's Girl's School

Queen Mary's Grammar School

Rainford High School

Ringwood School

Royal Grammar School

Royal Wootton Bassett Academy

Rugby High School

Ruthin School

Saint Aaidan's CE High School

Sale Grammar School

Salford City Academy

Sandback School

Sarah Campbell Loreto High School

Shenley Brook End School

Sherborne School Qatar

Shiplake College

Shirley High School

Shrewsbury School

Sir Christopher Hatton Academy

Sir Frederic Osborn

Sir James Smith's Community School

Sir Thomas Boughey Academy

Soar Valley College

Somercotes Academy

Southend High School for Boys

St Catherine's School, Bramley

St Edmunds College

St James School

St John Fisher Catholic Voluntary Academy

St Mary Magdalene Academy

St Mary's School Calne

St Peter's Catholic School

St Peter's RC High School and Sixth Form Centre

St Philip Howard Catholic School

St Thomas a Becket Catholic School, Wakefield

St Thomas More Catholic School, Blaydon

Stockport School

Stoke College

Stratford Girls' Grammar School

Stretford High School

Sutton Grammar School

The Alice Smith School

The Burgate School and Sixth Form

The Castle School, Taunton

The Cedars Academy

The Costello School

The Crestwood School

The George Eliot School

The Gilberd School

The Godolphin and Latymer School

The Kibworth School

The Manchester Creative and Media Academy

The Oldham Academy North

The Priory School, Shrewsbury

The Queen Katherine School

The Regis School

The Roundhill Academy

The Student Room Group

The Tiffin Girls' School

Thomas Estley Community College

Thornden School

Thurston Community School

Tonbridge Grammar School

UCL Academy

Villiers High School

Voice The Union

Wakefield Girls High School

Wellington School

West Buckland School

West Hill School

Weydon School

Whitecross School

Wildern School

Willingdon Community School

WJEC

Woldingham School

Wolstanton High School

Woodbrook Vale School

Woodford County High Girls Grammar School

Wren Academy

Wychwood School

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