

RESEARCH ARTICLE

Scottish Maths Support Landscape: What Does It Look Like in 2024-25?

Shazia Ahmed, School of Mathematics & Statistics, University of Glasgow, Glasgow, Scotland.

Email: shazia.ahmed@glasgow.ac.uk

Jenny August, Student Learning Development, University of Glasgow, Glasgow, Scotland. Email:

jenny.august@glasgow.ac.uk

Emma Coutts, The Campbell Maths Gym, Heriot-Watt University, Edinburgh, Scotland. Email:

e.coutts@hw.ac.uk

John McDermott, Division of Mathematics and Physics, University of Dundee, Dundee, Scotland.

Email: j.z.mcdermott@dundee.ac.uk

Morgiane Richard, Student Learning Service, University of Aberdeen, Aberdeen, Scotland. Email:

m.richard@abdn.ac.uk

Abstract

The Scottish Maths Support Network (SMSN) conducted a first survey of maths and stats support provision in Scottish Higher Education Institutions in 2016. At the time, the SMSN reported the number of institutions offering maths and stats support, the staffing of such services, the type of service offered, and the groups it targeted. Since then, the Higher Education sector generally, and the maths and stats support community particularly, has gone through significant challenges and transformations. To examine how maths and stats support practice in Scotland has evolved, the SMSN ran a new survey in 2024-25, expanding our earlier study by investigating in more detail: maths and stats support posts in Scotland (requirements, types of contracts, additional duties), services' organisational structure, and specific maths and stats support activities (such as use of diagnostic tests and foundation maths courses). In this paper, we present our methodology and results, showing how Scottish maths and stats support has changed, and our recommendations for its future.

Keywords: Mathematics & Statistics Support, Higher Education, Scotland.

1. Introduction

1.1 Mathematics and Statistics Support

University wide mathematics and statistics support is typically defined as “a facility offered to students...in addition to their regular programme of teaching” (Lawson et al., 2003), meaning that it does not usually bear credit and is usually non-compulsory. This definition appears consistently across national reviews, including Perkin, Croft and Lawson’s 2012 UK survey, which notes the widespread establishment of structured learning support services across the sector (Perkin et al., 2013). Similar formulations appear in the broader international literature (e.g. Ní Fhloinn et al., 2014; Jacob and Ní Fhloinn, 2019), which emphasise support as an institutional mechanism to assist students with diverse quantitative needs. In this study we discuss mathematics and statistics support *services* (known hereafter as MSS or simply “support”) rather than *centres* in order to capture the breadth of services offered.

Support provision has grown substantially in response to changes in student preparedness, the evolving nature of the “mathematics problem”, and the broadening range of disciplines requiring

mathematical skills (Lawson, Grove and Croft, 2020). The previous SMSN survey of provision in Scotland (Ahmed et al., 2018) further shows how support has diversified locally to accommodate national policy drivers and widening participation goals. The separate investigations for Scotland are important: Scottish school-leaving exams (Highers and Advanced Highers) are typically taken at age 16–18 and allow university entry after one year fewer than A-levels in the rest of the UK. Scottish undergraduate degrees usually last four years, compared to three years in England, Wales, and Northern Ireland, reflecting the broader entry level and curriculum.

This report builds upon and updates previous work in Scotland (Ahmed et al., 2018), charting the evolution of MSS across the country. The authors felt that due to the changing landscape of student support, shifts in institutional priorities — perhaps more pertinent than ever in the current financial climate of UK Higher Education — and the lasting effects of the COVID-19 pandemic, it was time to re-evaluate the state of MSS in Scotland. This shift occurs in a context where student experience plays a crucial role in university funding; the Scottish Funding Council (SFC) considers metrics such as number of students enrolled, programme demand, and student retention. Therefore, ensuring students have high-quality teaching and support experiences can impact financial allocations via student recruitment, which is in turn influenced by the National Student Survey (NSS) and student recommendations. Excellence in teaching and support have become essential elements in delivering high-quality student experiences.

1.2 Principles of Effective Provision

Effective support is characterised by accessibility, inclusivity and alignment with the needs of diverse student groups. Evidence from institutionally written regulatory documents demonstrates that universities increasingly view support as contributing to retention, achievement, employability and widening participation (Croft, Grove and Lawson, 2022). Numerous studies highlight the need for proactive outreach, noting that many students under-utilise MSS provision unless specifically encouraged (Marr and Grove, cited in Bowers, 2013), and that support centres act as safe, low stakes spaces for those seeking help (Solomon, Croft and Lawson, 2010).

Formative, dialogic approaches dominate effective practice; MSS centres have been shown to enhance confidence, problem solving and metacognitive skills through personalised feedback (Ní Fhloinn et al., 2014; Lawson et al., 2020). Transition studies indicate that active learning pedagogies within support, such as guided problem solving and collaborative tasks, improve adjustment to university level mathematics (Gallimore and Stewart, 2014).

Collaboration remains a defining feature of the UK support landscape. Practitioners have “collaborated... almost from the outset” (Lawson, 2021) within national networks such as **sigma** (<https://www.sigma-network.ac.uk/>) and SMSN (<https://www.scottish-msn.org.uk/>), enabling shared resources, peer learning and consistency of practice across institutions. This collaboration underpins multiple good practice guides (e.g., Green 2012 on student feedback systems) that inform quality enhancement. Despite this, pockets of MSS can often exist in isolation and one of the goals of this survey was to identify as many of these pockets as possible, to obtain a complete picture of what is available to students at Scottish HEIs.

1.3 Developments in the Last Decade

Recent studies document rapid diversification of provision through digital, hybrid and extended hours models, prompted by structural changes in Higher Education, changes in student expectations and the growth of data rich curricula (Lawson et al., 2020). Sector level surveys demonstrate substantial growth in provision: the 2012 audit showed near universal adoption of some form of support (Perkin

et al., 2013) and the 2018 survey confirmed increasing uptake and widening institutional investment (Grove, Croft & Lawson, 2020).

MSS is also increasingly conceptualised as contributing to equity and belonging. Student perception studies report gains in confidence, sense of legitimacy and participation (Ní Fhloinn et al., 2014), while identity-based analyses highlight how support can mitigate feelings of marginalisation (Solomon, Lawson and Croft, 2011). The Royal Society's Mathematical Futures Programme (2024) argues more broadly that quantitative and data literacy are essential for citizenship and social inclusion and situates university-based support as part of a wider educational ecosystem addressing national quantitative needs.

It is important to note that sector wide financial pressures and constrained budgets may influence the capacity of universities to expand or sustain support provision at previous levels. Reports emphasise that staffing, space and digital infrastructure require ongoing investment, and that resource limitations risk widening inequalities in how support is accessed and delivered across institutions.

1.4 Evidence Gaps

Despite considerable expansion, research repeatedly identifies gaps in the evaluation evidence base. Reviews highlight challenges in collecting robust data, including inconsistent usage metrics, insufficient longitudinal tracking, and limited capacity to assess cost effectiveness or the impact of sustained engagement. A systematic scoping review by Mullen, Howard and Cronin (2024) identifies potential biases in existing studies and stresses the need for more rigorous study designs, diversified methodologies and cross institutional collaboration.

The Scottish context remains comparatively under-examined. Ahmed et al. (2018) show that while Scottish institutions have well developed support structures, systematic evaluation remains limited and inconsistent, particularly in relation to long term outcomes, alignment with widening participation strategies and transfer of learning into discipline modules.

1.5 Contribution of the Present Study

This survey provides a sector snapshot combined with longitudinal alignment to earlier UK wide and Scotland specific studies, including the SMSN comparative study (Ahmed et al., 2018) and *sigma's* national audits (Perkin et al., 2013, Grove et al., 2020). It addresses identified gaps in the literature by generating new evidence on staffing arrangements, delivery modes and institutional positioning within Scottish Higher Education. It extends the previous SMSN study by considering diagnostic tests and bridging courses which might previously have not been considered in a conversation about support provision. This study aims to contribute to the growing evidence base of national and international findings that show MSS has become a fundamental component of university support (Lawson et al., 2020; Croft, Grove and Lawson, 2022).

2. Methodology

2.1 Survey Design

Our survey was designed in Microsoft Forms for ease of collaborating and sharing across a cross-institutional team. Since the survey was a follow-up from the 2016 survey (Ahmed et al. 2018), it was designed to include the same themes so that we could accurately assess the changes over time,

although often including more detailed questions than the previous survey to obtain a more complete picture. We broke the survey down into several topics:

- General information (including the institution and role of the survey participant, and whether or not their institution provides MSS);
- Staffing (details of who provides MSS, including the types of contracts, training offered and additional duties);
- Types of support (identifying the range of support on offer such as classes, appointments, drop-ins, as well as diagnostic testing and bridging courses);
- Who uses the support? (including which cohorts are offered maths and/or stats support and who the largest user groups are);
- Organisation (including where maths and/or stats support sits within the university structure and how it is funded);
- Final thoughts (areas for improvement and a final question whether they knew of any other sources of MSS at their institution).

For those who answered that their institution did not provide MSS, we included a single question asking them to select why this was the case. While some questions throughout the survey were multiple choice, many were left as open text-entry boxes to allow participants to freely report any nuances at their institution. Since not all support is centralised, we further expected (and hoped) to get multiple responses from individual institutions reflecting the different pockets of MSS being offered to students. While this makes collating all the data more difficult (particularly where responses contradict each other), we felt this was important to get a complete picture of MSS at Scottish Higher Education Institutions (HEIs).

2.2 Delivery

The research was approved by the Physical Sciences & Engineering Ethics Board of the University of Aberdeen on 15 October 2024 (application ID: 3672726). Once approval was received, the survey was sent out via email to:

- Those who filled out the 2016 survey on MSS on behalf of their institution;
- Contacts within the MSS community and maths departments across Scottish HEIs;
- The SMSN mailing list;
- The ScotHELD mailing list (a network for learning developers working within HE in Scotland, whom MSS workers often work alongside).

Particular care was taken to ensure that the survey was sent to someone at each of the 19 HEIs in Scotland. We assessed the initial responses in January 2025 and contacted further individuals to fill in any gaps we could identify. The survey was also advertised at the annual SMSN meeting (which was held jointly with the Scottish Universities Physics Alliance (SUPA)), and at a meeting for those interested in starting a network in Teaching and Learning in Scottish HE Mathematical Sciences. We officially closed the survey in August 2025 and stopped accepting new responses.

2.3 Analysis

Analysis of the data was divided up amongst the project team by theme, and wherever possible, was compared to data from the previous study in 2016. In some cases where responses were contradictory, further enquiries were made to establish the correct response. Where there were multiple responses per institution, due to MSS being offered in more than one place, there were occasionally contradictions. These were usually small issues that were easily cleared up when we followed up with the respondents via email.

3. Results

The survey received 25 responses, representing 16 of the 19 Higher Education Institutions (HEIs) in Scotland. Of the 16 HEIs, 13 responded that they provide mathematics and/or statistics support (MSS) in some form, although in one of these cases the response indicated that the service exists only in name and is not running. HEIs with no provision cited a lack of perceived need (for two specialised institutions, for the Arts and for Music) or lack of funds to provide an MSS service.

3.1 MSS positioning within institutional structures

3.1.1 Structural Positioning

To determine where MSS services are positioned within each institution's structures, respondents were asked 'Where does the maths and/or stats support sit within the university structure?'. Multiple options were provided, along with a free text area for elaboration if needed. Since several institutions had more than one maths/stats support service, the total number of responses exceeds the number of institutions that offer some form of support.

Figure 1 shows the responses, which demonstrate most support is delivered by maths departments. However, in institutions with more than one support offering, the most common arrangement is a central service, in Academic Service, alongside a bespoke service in a department (maths or otherwise).

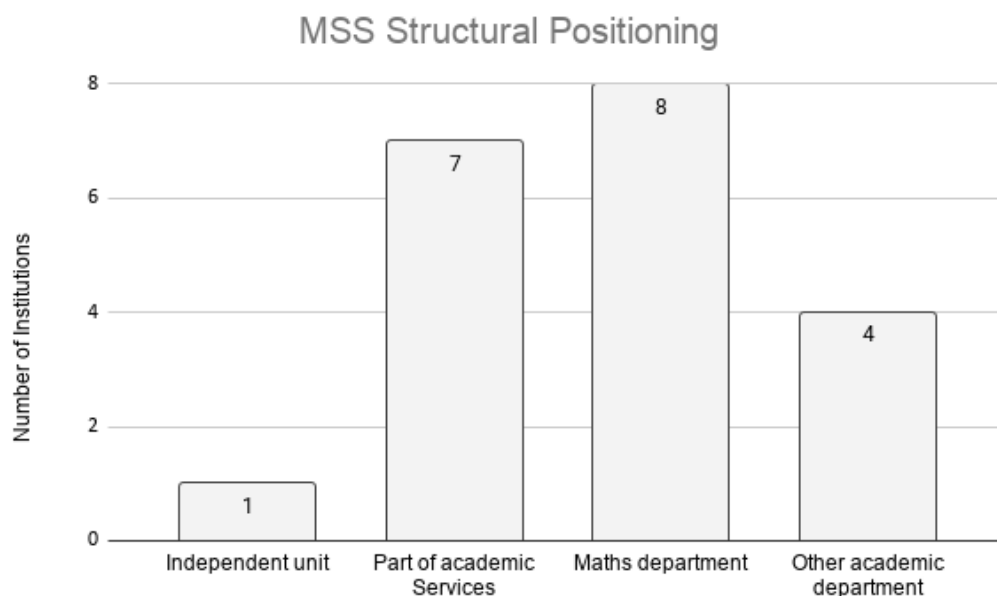


Figure 1: Structural positioning of MSS within institutions that provide the service. Note that some institutions have pockets of MSS in more than one location.

3.1.2 Physical Positioning

The survey looked to discover where, physically, MSS sessions were held and whether services had dedicated space for their student interactions. Figure 2 shows that most MSS services used multiple

spaces across campus and six institutions reported that they provide online sessions (not online self-study materials but live support sessions via virtual meeting platforms). Only five institutions had a dedicated space for delivering MSS, although one institute reported a 'mix of space' without specifying which types. Note that 6 institutions reported using online space to deliver sessions; this is consistent with work done by Gilbert et. al. 2025 showing a rise in online support post-pandemic.

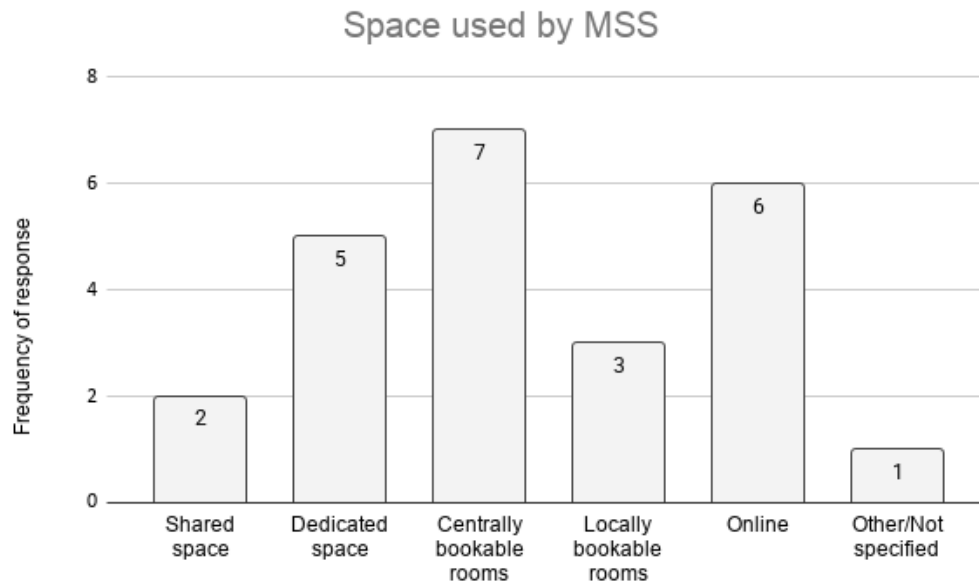


Figure 2: Mix of physical space used for running MSS activities across institutions that provide the service.

3.1.3 How are MSS services funded

Given the changing landscape of student support in HE and institutional priorities the survey looked to probe how MSS is funded by the institutions that provide this service. Four respondents indicated that there were multiple sources of funding, this is most likely due to the spread of MSS across directorates/departments as shown in the Structural Positioning section above.

As shown in Figure 3, most MSS is centrally funded or funded from a departmental budget (maths and others). Two respondents gave no answer to this question, and are recorded as such, but from the response to other questions it can be inferred that these institutions offer support funded by departmental budgets or as part of staff duties.

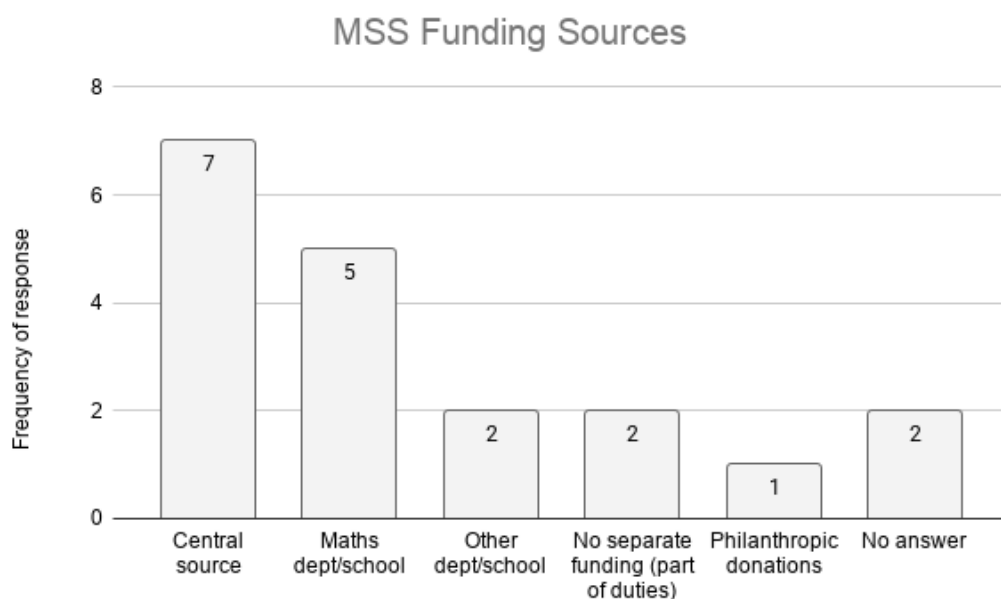


Figure 1: Variation in how institutions fund MSS services across the landscape.

3.2 Staffing Models

Mathematics and statistics support across Scottish Higher Education Institutions (HEIs) is delivered through a range of staffing models, reflecting both historical development and local institutional priorities. The data indicate that 8 out of 13 institutions offering MSS have at least one member of staff whose primary role is maths and/or stats support, and of those, half were on professional services contracts, while half were on traditional academic contracts. These differing contractual arrangements can have implications for role expectations, career progression, and integration with academic teaching activity. In all cases where the maths support was situated alongside other central learning development services, these dedicated MSS staff were on professional service contracts despite still requiring a high level of subject-specific expertise.

Even where dedicated MSS staff are present, there are often others involved in the provision of maths and/or stats support, including postgraduate students and staff members who carry out MSS as an additional duty. The number of institutions using each type of staff is shown in Figure 4.

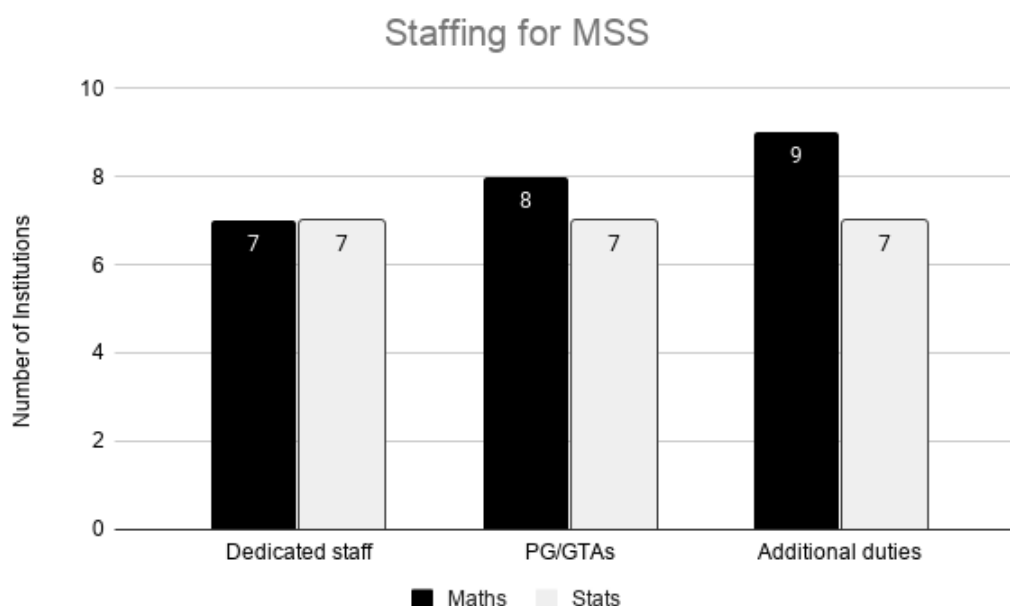


Figure 2: Graph showing how MSS is staffed in Scottish HEIs.

In terms of employment security, most institutions report that their mathematics and statistics support staff are employed on permanent contracts. This suggests a level of institutional recognition of the ongoing need for such provision. Nevertheless, a minority of services remain dependent on fixed-term contract arrangements, particularly where provision is relatively new or partially funded through short-term initiatives. This variability may affect service sustainability and long-term strategic planning.

Across the sector, institutions consistently identify strong subject knowledge as essential for MSS roles. A degree in mathematics, statistics, or a closely related quantitative discipline is almost universally required. In several cases, postgraduate qualifications are specified, particularly where staff are expected to support postgraduate students or provide advanced statistics guidance.

Teaching experience is frequently cited as either essential or desirable. This reflects the pedagogical nature of MSS, which often involves diagnosing conceptual misunderstandings, adapting explanations to different disciplinary contexts, and supporting students with varying levels of mathematical confidence. The emphasis on teaching experience also highlights the blurred boundary between formal teaching and informal academic support within these roles.

Provision for training and continuing professional development (CPD) varies across institutions but generally combines formal and informal approaches. Many support staff have access to institutional teaching and learning development programmes, such as postgraduate certificates in academic practice, even when employed on professional services contracts. Attendance at external conferences and networks, including mathematics and statistics support-focused events, is also commonly reported and plays a key role in maintaining professional currency.

As shown in Figure 5, an interesting addition to the dedicated MSS staff remit over the years has been the variety of additional duties that are carried out. These include teaching, tutoring, marking, supporting students with additional IT skills. Also included were memberships of committees, involvement in outreach activities, pedagogic research and accessibility support, often irrespective of whether staff are on academic or professional services contracts.

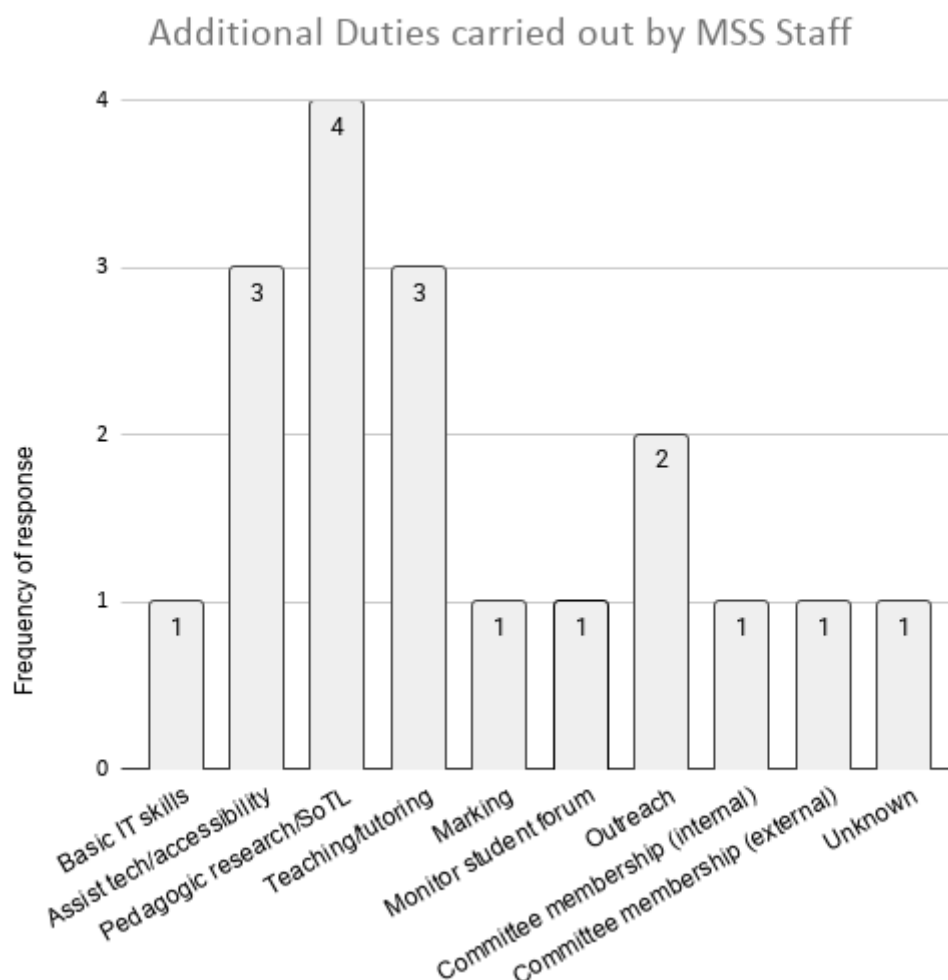


Figure 3: Graph demonstrating the additional duties carried out by dedicated MSS staff in Scottish HEIs.

Where teaching assistants or postgraduate tutors contribute to MSS training is most often delivered internally by existing support staff. However, the data suggest that the extent and formality of such training is inconsistent, ranging from structured induction programmes to more ad hoc guidance.

Overall, the data reveal a diverse professionalised landscape of MSS in Scotland. The prevalence of permanent contracts and dedicated staff suggests that such provision is now viewed as a core component of institutional student support. However, disparities remain in staffing models and the consistency of training provision.

These findings broadly align with trends reported elsewhere in the UK (Lawson, Grove and Croft, 2020), while also highlighting the influence of local context on service design. In particular, the positioning of MSS within professional services structures raises important questions about role identity, recognition, and integration with academic departments.

3.3 Methods of Support

Each institution was asked what types of support they offered, and a table of the results is shown in Table 1 of Appendix B. Almost every institution which offers MSS offers either one-to-one appointments and/or drop-in sessions, demonstrating that these activities are a core part of MSS in Scotland. The only institution which did not offer either, included offering drop-ins as their key desired improvement. Online asynchronous resources are equally common and are the activity that has seen the biggest increase since 2016 (see Figure 6). This is unsurprising in an increasingly digital world, and when students are balancing part-time work or caring responsibilities with their studies. It must be noted that in section 3.1.2, 6 responding institutions reported the use of online space which suggests that synchronous online support was also given. It is a limitation of this survey that the “Methods of Support” question did not break down 1-1 Appointments, Drop-in Sessions and Classes/Workshops into online, in-person or both in order to quantify the synchronous online MSS offered.

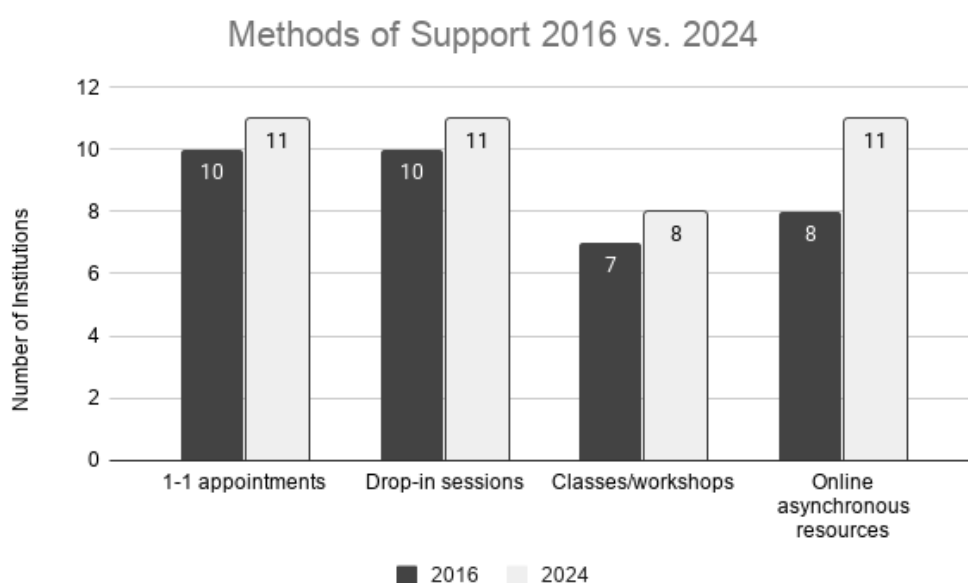


Figure 4: Graph demonstrating the number of Scottish HEIs offering different types of MSS in both 2016 and 2024. In both years, the total number of institutions offering any MSS was 13.

Other than the increase in online asynchronous support, Figure 6 shows only a slight increase in the methods of support offered between 2016 and 2024. However, this does not tell the whole story as there have been shifts between universities on what is being offered. One institution was offering MSS in 2016 but no longer is, and another institution has gone from no support to offering the full range of support we asked about to all students.

In addition, neither Figure 6 nor Table 1 reflect the fact that, within some institutions, certain methods of support are only open to certain cohorts. For example, one institution reports offering drop-in sessions only for students on courses in the School of Mathematics and Statistics, while appointments are only available for students not in that school. Another institution indicated that all of its MSS was only available locally in certain schools, and hence many students have no access to MSS at all.

In the 2024-25 survey, we distinguished between classes held by MSS for specific courses (often referred to as embedded MSS see e.g. Mehbali and Roberts (2017)), and those classes that are open to all students. We see that the embedded approach is more popular, with 8 out of the 13 MSS services offering those, compared to only 6 out of 13 offering open classes. The embedded approach can make it easier to reach more students (MSS goes to them, rather than waiting for students to reach out to MSS), which may account for why this is the case.

Another area explored in the 2024-25 survey that was not included in the 2016 survey was transitions. It is often highlighted that students are arriving at university ill-equipped for the mathematical demands of their course, and so we included questions in the survey focussed solely on the support offered at this point.

Six institutions offer a maths diagnostic test to their students. These were most commonly (4 out of 6) focussed only on students who are pursuing a maths degree, but there were also optional basic numeracy tests, and bespoke tests for economics and engineering students.

Seven institutions have also introduced at least one bridging course, aiming to mitigate the negative effects of a student starting university with a weak level of mathematics for the degree they arrive to undertake. The majority are held online, but there were differences in whether they were held before term began or alongside semester one, and differences whether they were optional or compulsory. They were also offered to a more diverse range of cohorts including those from across STEM, as well as graduate apprentices, and in one case, to any student who does not already have an SQA National 5 Mathematics Qualification (equivalent to GCSE). Perhaps this is deemed a less intimidating option for non-mathematics students than presenting them with a diagnostic test.

Overall, the core provision of MSS remains one-to-one appointments and drop-ins, with an increase in online asynchronous resources. Provision is varied from institution to institution, and even within institutions where MSS is offered locally. In some cases, the multiple responses we received from a single institution were contradictory, and this was discovered to be due to a diversity of offerings within the same institution.

3.4 Users of MSS in Scotland

In 2024-25, all MSS in Scotland worked with undergraduate (UG) students (centralised as well as departmental services), 12 MSS worked with postgraduate taught (PGT) students (all centralised MSS worked with PGT students while 5 departmental services did), 9 MSS worked with PGR students (6 central MSS and 4 departmental MSS), 5 and 6 extended support to foundation programmes and staff respectively (with 4 centralised MSS working with either categories, and 1 and 2 departmental services working with foundation programmes and staff respectively) (see Figure 7). Details of the responses from the institutions are shown in Table 2 of Appendix B.

In 2016, all Scottish MSS already worked with UG students, and this is perhaps not surprising as MSS was historically set up to work with pre-honours students (Lawson, Grove and Croft, 2020). We see that in 2024-25, MSS continues to be uniformly offered to UG, further indicating that MSS has become an established service for undergraduate studies. We also see that, in comparison to 2016, more MSS in Scotland extend their services to PGT, PGR and staff. As we had not specifically asked about Foundation levels in 2016, it is hard to conclude for this category of users.

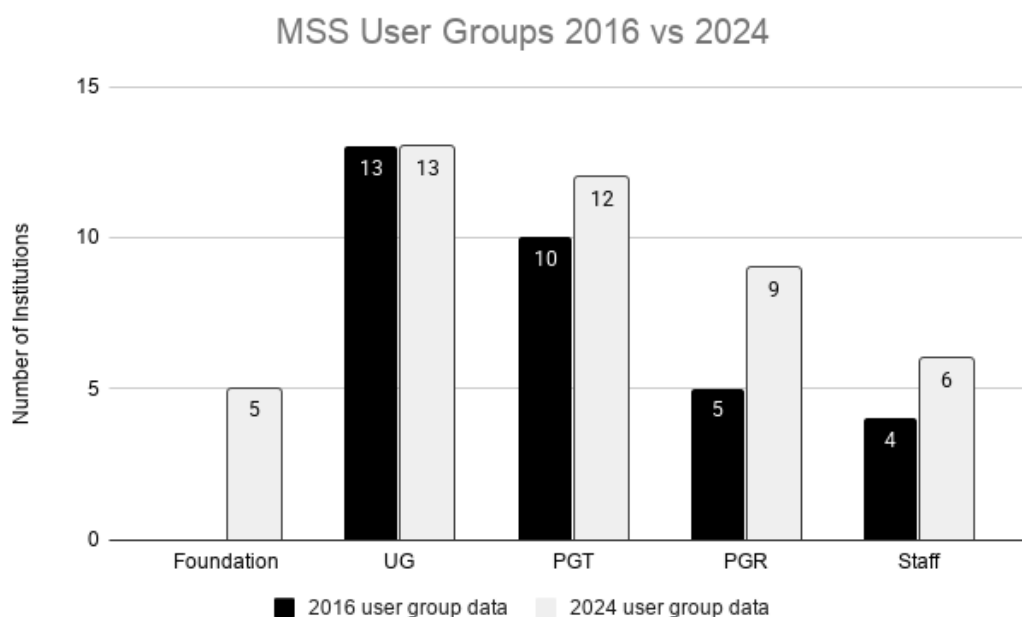


Figure 7: Number of MSS who opened their service to foundation, UG, PGT, PGR students and staff in 2016 and in 2024. In both cases, the number of institutions offering any MSS was 13. Data about foundation programmes was not collected in 2016, so only the data for 2024 is shown.

Participants were asked to explain whether MSS was open to all disciplines, or restricted to only some, in an open text question. Analysis of responses shows that 10 MSS are open to all disciplines without discrimination (all central services are non-discriminate, and 3 departmental services are non-discriminate).

Further, participants were asked to indicate, in open text questions, which were the largest user groups of MSS, when applicable, and the largest user groups of stats support, when applicable. STEM disciplines (Mathematics, Engineering and the Physical Sciences), and Business and Economics were identified as the largest user groups for MSS. Social Sciences, Psychology, Business & Economics, Life and Health Sciences, as well as STEM subjects were reported as the largest user groups of stats support. In 2016, Engineering, Health Sciences and Business Studies were found to be the largest user groups, although the survey did not differentiate between maths support and stats support users then.

These results show that MSS is increasingly offered to students from all levels of study, from foundation level to postgraduate research level, including staff in some settings, as well as a wide range of subjects. Users in Scotland now come from Social Sciences (including Psychology and Economics) and Life Sciences (including Health Sciences) disciplines, as well as the Physical Sciences disciplines, which constituted the historical user groups (Lawson, Grove and Croft, 2020). We note, however, that centralised MSS offer indiscriminate support to all levels and disciplines in greater proportion than departmental services. Offering university-wide support also means that MSS practitioners must be able to tackle very diverse pedagogic situations, to teach at very different levels and in very different contexts. It highlights, therefore, the need for well-qualified staff and a good integration with departments across institutions.

3.5 How are MSS services advertised

Given that MSS practitioners frequently encounter students who are unaware of services or do not consider them applicable, all institutions understandably employ multiple advertising strategies for their MSS services. Multiple options were given as a response to this question as well as a free text area for other methods to be highlighted. The results are shown in Figure 8.

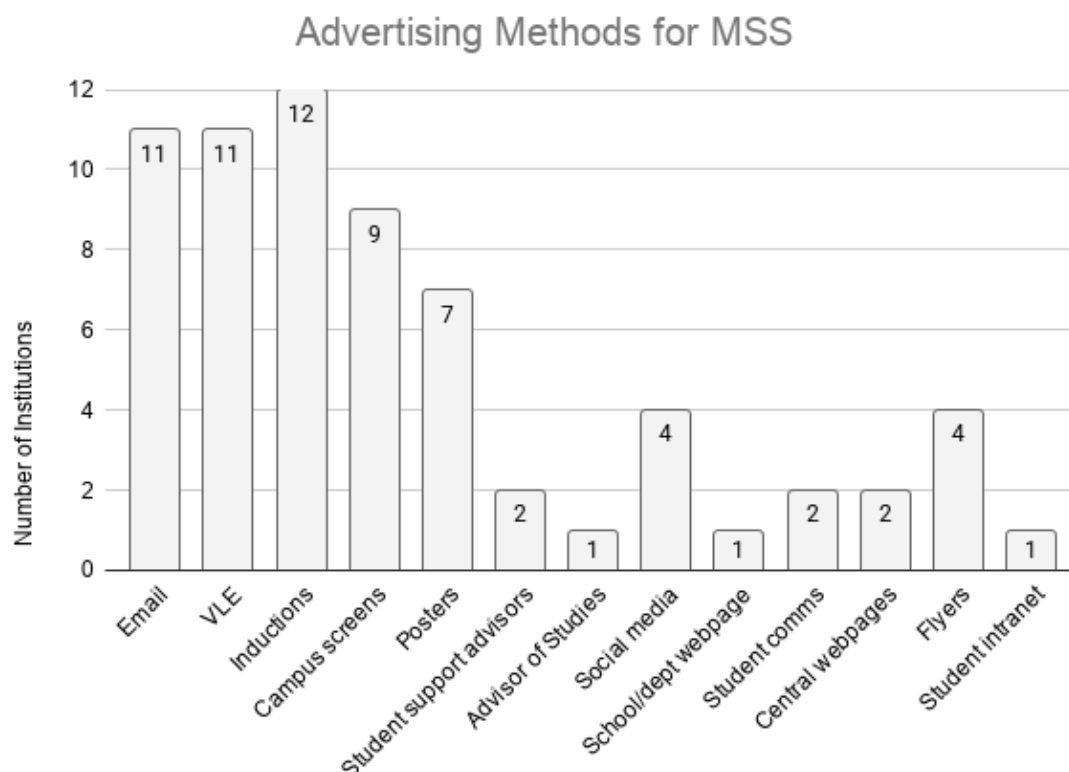


Figure 5: Variety of advertising methods used to make students aware of the availability of MSS services.

In addition to the survey question, the authors did a public search (using Google search engine) for each institution that reported that they have a MSS provision, to find out if information regarding the service was publicly available i.e. not within a password protected VLE or intranet site. The data shows that 3 institutions have no publicly available information on MSS while all others advertised MSS under a central support webpage; all but two of the webpages came under some variation of student/academic/skills support banner. The two other webpages were direct links to an MSS dedicated webpage/site. Table 3 in Appendix B below shows the results, and gives the links found (as of November 2025) – the websites are split into two categories (1) a website directly for the service and, (2) information about the service on a more central website.

3.6 MSS Wishlist

To gain insights into how practitioners felt MSS could be improved, respondents were asked 'How do you think your service could be improved? What would be on your service wish list if you have

more resources?'. A total of 16 respondents commented, and three main themes emerge from the answers: staffing, service structural and physical positioning and service delivery.

Despite many Scottish institutions having MSS staff employed on permanent contracts (see Section 3.2), staffing remains an area that practitioners would like to improve on. Five respondents wished for more staff in MSS. One respondent noted that increased staffing would allow, in particular, to open MSS outside the usual business hours, and thus cater for non-traditional students, such as students with caring responsibilities. Another respondent, however, mentioned the difficulty to recruit staff with the necessary specialised skills for an MSS role, showing that the staffing of MSS is not solely a financial issue.

As noted in Section 3.1, a significant portion of MSS in Scotland are run by departments. Three respondents called for a central MSS to be developed in their institution. These participants noted that central services would ensure that MSS can be accessed by students from all disciplines, and indeed, we show that central MSS cater for a wider range of disciplines (see Section 3.4). Beside the structural positioning of MSS, the physical space of MSS was mentioned by five participants: either the MSS in their institution did not have a dedicated MSS space, or the space allocated was too small.

Finally, expansion of service delivery, such as increased number of workshops, implementation of drop-in sessions, as well as the development of discipline-tailored sessions and resources were noted as areas of possible improvement by five respondents.

4. Discussion

The first survey of the MSS landscape in Scotland was conducted in 2016. Given the changes that the Higher Education sector has undergone in recent years, it was timely to conduct a subsequent survey to study how MSS might have evolved across the nation.

The number of institutions offering maths and/or stats support has remained the same. One institution, however, has stopped offering support while another, which offered no support in 2016, now offers a comprehensive service to all students. Some institutions also now host several support services when they had a single support in 2016. There have been some changes, therefore, but the fact that the number of Scottish universities with MSS has not decreased in the past eight years is a good indication that MSS has become an essential feature of Scottish Higher Education.

In comparison with 2016, MSS is now offered increasingly to all levels of study, as well as staff. We also know from this survey that the majority of services see visits from students from a wide range of subjects. This supports the finding that MSS practitioners are required to hold relevant subject qualifications and teaching experience, as they will need to support students and teach in many different contexts and situations. We also see that MSS practitioners now take on a variety of duties, including outreach activities, accessibility roles, and pedagogic research, often regardless of whether they are on a professional services or academic contracts. This highlights the importance of CPD and participation at practitioners and network conferences, and further, the need to maintain the strong national and international networks. In Scotland, many are able to access internal and external development opportunities. This is positive and, we hope, will continue to be the case in future.

One-to-one appointments and drop-in sessions continue to be popular modes of MSS delivery in 2025, as it was in 2016. Asynchronous online resources have experienced the largest increase, perhaps not surprisingly, following the COVID-19 pandemic, and given the rise of online education. We also identified in 2025 that embedded MSS (Mehbali and Roberts, 2017), was very popular. This

raises the question of the ability of MSS to work alongside academic disciplines, and in turn, the structural position and funding of MSS in universities. In Scotland, the majority of MSS are run by mathematics departments, and the next most common are units within academic services, with an equal number of services funded by a department or school (maths or otherwise) or funded centrally. If embedded support initiatives are identified as an efficient support approach (Lawson, Grove and Croft, 2020), it might be that a service located and funded centrally would be best able to develop these, as it would have the freedom to work across the institution, and perhaps, not be seen by disciplines as belonging to a department or School.

While we asked respondents information about where MSS sessions are taking place in their institution, six respondents specified 'online' in the 'other' category. As we have not asked further details about the online synchronous delivery of MSS in this survey, we are unable to say whether 'online' means online appointments, online or hybrid workshops, or online or hybrid drop-ins. We also cannot comment on how significant online MSS is in relation to in-person MSS, and whether this is addressed to specific cohorts (e.g. online and distance learners). In the authors' experience, on-campus students prefer in-person support, however, further examination of who, and when, is using online MSS could be the subject of future studies.

This present study examined MSS provision without discriminating between maths and stats support. While we asked participants to report the number of hours for maths and stats support separately, answers indicated that some MSS provide a total number of hours for both maths and stats support, while in other institutions, there is a specific provision for maths support, and/or a specific provision for stats support. It would be interesting to examine in more details how maths and stats support may differ in Scottish institutions in a future study, especially as more disciplines put a greater emphasis on data science and analysis.

In conclusion, the role of MSS practitioner is a multi-faceted one that requires specialised knowledge and abilities (Croft, Grove and Lawson, 2022), and recruiting staff with the right expertise can be challenging, as a participant to the survey mentioned. MSS will often work with a wide range of disciplines and pedagogic situations. The particular characteristics of the role must be recognised by managers, and should inform the model adopted for MSS.

In 2025, MSS continues to be part of the Scottish Higher Education system. Services have expanded to include more levels of study and a wide range of disciplines, particularly central MSS, and have embraced the development of online asynchronous resources following the COVID-19 pandemic. We see positive signs that many are on permanent contracts, with adequate qualifications and experience, and have access to relevant professional development. We hope that this will continue to be the case despite the financial difficulties that institutions are facing.

5. Appendices

Appendix A: A copy of the survey

General Information:

Name:

Role:

Institution:

1. Does your institution offer Mathematics and/or Statistics support?
☐ Yes (go to Staffing section)
☐ No (go to Question 2)
2. Why does your institution not offer Mathematics or Statistics Support? Please select all that apply:
☐ Maths/Stats support not required
☐ Lack of funding
☐ Lack of support from senior management
☐ Other:
END SURVEY

Staffing:

3. Do you have any staff whose primary role is to provide Maths and/or Stats support?
☐ Yes (go to Question 5)
☐ No (go to Question 4)
4. Who provides your Maths and/or Stats support? Please select all that apply:
☐ Additional duties for more general teaching staff
☐ Postgraduate students (GTAs) for Maths support
☐ Postgraduate students (GTAs) for Stats support
☐ Other:
(go to Question 14)
5. Please provide more details of how your Maths support is staffed. Please select all that apply:
☐ Dedicated staff
☐ Postgraduate students (GTAs)
☐ Additional duties for more general teaching staff
☐ Other:
6. Please provide more details of how your Stats support is staffed. Please select all that apply:
☐ Dedicated staff
☐ Postgraduate students (GTAs)
☐ Additional duties for more general teaching staff
☐ Other:
7. Please state total FTE for Maths Support:
8. Please state total FTE for Stats Support:
9. For dedicated Maths & Stats support staff, what type of contract are they on?
☐ Professional Services
☐ Academic Teaching & Research
☐ Academic Teaching & Learning/Scholarship
☐ Unknown

☐ Other:

10. For dedicated Maths & Stats support staff, what length of contract are they on?

☐ Permanent

☐ Fixed term

☐ Mixed

☐ Unknown

☐ Other:

11. Which of the following are in the essential criteria for the post of maths/stats support adviser?

☐ Maths or quantitative science degree

☐ Postgraduate degree in maths or quantitative science

☐ Teaching qualification

☐ Teaching experience

☐ Software experience (please list any essential software in the "Other" box)

☐ Other:

12. What training/professional development is available to your staff? E.g. support to become fellows of AdvanceHE, funding for conferences/travel, teaching development courses such as PGCAP.

13. What additional duties do the Maths and/or Stats support staff carry out? E.g. outreach, pedagogic research, accessibility.

14. If you employ teaching assistants, do you offer any training? And if so, who delivers it?

Types of Support:

15. What types of support are on offer? Please tick all that apply:

☐ 1-1 appointments

☐ Drop-in sessions

☐ Classes/workshops for any student

☐ Classes/workshops for specific courses

☐ Online asynchronous resources

☐ Other:

16. How many hours a week of Maths appointments are generally available?

17. How many hours a week of Stats appointments are generally available?

18. How many hours a week of drop-ins do you offer during term-time?

19. Does your institution use a diagnostic test to assess the mathematics ability of level 1 students?

☐ Yes, for maths students (go to Question 20)

☐ Yes, for other STEM students (go to Question 20)

- ☐ No (go to Question 21)
- ☐ Other: (go to Question 20)

20. Please provide details of which students receive a diagnostic test:

21. Does your institution offer a bridging course or other mitigation for students whose starting level of mathematics is weak for the degree they arrive to undertake?

- ☐ Yes (go to Question 22)
- ☐ No (go to Who uses the Support? section)

22. Please describe who this course is for and what format it takes:

Who uses the support?

23. Who can use the service? Please select all that apply:

- ☐ Foundation (pre-undergraduate)
- ☐ Undergraduate (UG)
- ☐ Postgraduate Taught (PGT)
- ☐ Postgraduate Research (PGR)
- ☐ Staff
- ☐ Other

24. Is Maths and/or Stats support open to all schools/disciplines/levels, or open to some only? Please provide details.

25. What is/are your largest user group(s) for Maths Support?

26. What is/are your largest group(s) for Stats support?

27. Do you record attendance?

- ☐ Yes
- ☐ No

Organisation:

28. Where does the maths and/or stats support sit within the university structure?

- ☐ Within the maths department
- ☐ A central unit by itself
- ☐ In a central unit with other learning development services
- ☐ Other:

29. Where do the maths/stats support sessions take place? Please select all that apply:

- ☐ Dedicated space
- ☐ Shared space
- ☐ Centrally bookable rooms
- ☐ Locally bookable rooms
- ☐ Other:

30. Can you please comment on how your maths/stats support service is funded?

31. How do you publicise the service? Please select all that apply:

- ☐ Student inductions
- ☐ Emails
- ☐ Campus screens
- ☐ Posters
- ☐ Flyers
- ☐ VLE pages for certain courses
- ☐ Social media
- ☐ Other:

Final Thoughts:

32. How do you think your service could be improved? What would be on your service wish list if you have more resources?

33. Are you aware of any other maths and/or stats support provided within your institution? And if so, who by?

END OF SURVEY

Appendix B: Tables of responses

Table 1 - Methods of Support: a table of Scottish HE institutions and their responses to which methods of maths and/or stats support they offer. Note that for institutions where there are several services (i.e. departmental and central services, or several departmental services), the answers from the different services have been collated in the table below. Moreover, 'Y' means that form of support is offered to at least one student cohort, not necessarily that it is available to all students.

Institution	1-1 Appointments	Drop-ins	Classes for specific courses	Classes for any student	Online asynchronous resources
Abertay University	Y	Y	Y	Y	Y
Edinburgh Napier University	Y	Y			
Glasgow School of Art					
Heriot-Watt University	Y	Y	Y	Y	Y
Queen Margaret University			Y	Y	Y
Robert Gordon University	Y		Y		Y
The Royal Conservatoire of Scotland					
University of Aberdeen	Y	Y	Y		Y
University of Dundee		Y			Y
University of Edinburgh	Y	Y	Y	Y	Y
University of Glasgow	Y	Y	Y	Y	Y
University of the Highlands and Islands (Inverness)	Y	Y	Y	Y	Y
University of St Andrews	Y	Y			Y
University of Stirling					
University of Strathclyde	Y	Y			Y
University of the West of Scotland	Y	Y			
Total	11	11	8	6	11

Table 2 - MSS support user groups: user groups to which maths and/or stats support is offered to, for Scottish institutions which have a maths and/or stats support service. Note that for institutions where there are several services (i.e. departmental and central services, or several departmental services), the answers from the different services have been collated in the table below.

Institution	Foundation	UG	PGT	PGR	Staff
Abertay University		Y	Y		
Edinburgh Napier University	Y	Y	Y	Y	
Heriot-Watt University	Y	Y	Y	Y	
Queen Margaret University		Y	Y	Y	
Robert Gordon University		Y	Y	Y	Y
University of Aberdeen	Y	Y	Y	Y	Y
University of Dundee		Y			
University of Edinburgh		Y	Y	Y	Y
University of Glasgow		Y	Y		
University of the Highlands and Islands (Inverness)	Y	Y	Y	Y	Y
University of St Andrews	Y	Y	Y		
University of Strathclyde		Y	Y	Y	
University of the West of Scotland		Y	Y	Y	Y
Total	5	13	12	9	5

Table 3 - Publicly available information on the provision of MSS: This table shows the availability of information on MSS services at institutions that provide such a service.

Institution	Maths support website	Central support website
Abertay University	No	No
Edinburgh Napier University	No	https://my.napier.ac.uk/library/study-and-research/study-skills#:~:text=If%20you%20need%20help%20with,(0)%20131%20455%202236
Heriot-Watt University	www.mathsgym.hw.ac.uk	https://www.hw.ac.uk/uk/services/is/skills-development/study-support.htm
Queen Margaret University	No	No
Robert Gordon University	No	https://www.rgu.ac.uk/life-at-rgu/support-advice-services/study-support-services#anchor-3
University of Aberdeen	No	https://www.abdn.ac.uk/students/academic-life/academic-skills/#panel101984
University of Dundee	https://learningspaces.dundee.ac.uk/as/c/maths-and-stats/#:~:text=Maths%20Caf%C3%A9,explore%20problems%20and%20find%20solutions	No
University of Edinburgh	No	https://maths.ed.ac.uk/studying-here/undergraduate-study/student-support
University of Glasgow	No	https://www.gla.ac.uk/myglasgow/sld/about/team/mathsandstats/maths/
University of the Highlands and Islands (Inverness)	No	https://www.inverness.uhi.ac.uk/study/student-support-services/the-bothy/
University of St Andrews	No	https://www.st-andrews.ac.uk/ceed/study-skills/mathsandstatisticssupport/
University of Strathclyde	No	https://www.strath.ac.uk/studywithus/strathlife/academicsupport/
University of the West of Scotland	No	No

References

- Ahmed, S., Davidson, P., Durkacz, K., MacDonald, C., Richard, M. and Walker, A., 2018. 'The provision of mathematics and statistics support in Scottish higher education institutions (2017) – a comparative study by the Scottish Mathematics Support Network'. *MSOR Connections*, 16(3), pp. 5–19. <https://doi.org/10.21100/msor.v16i3.798>.
- Bowers, D., 2013. 'The **sigma** Network: developing an evidence base for scholarship in mathematics and statistics support', SEDA Conference Discussion Paper. Available at: https://www.seda.ac.uk/wp-content/uploads/legacy/3_Bowers.pdf [Accessed 13 January 2026].
- Croft, T., Grove, M. and Lawson, D., 2022. 'The importance of mathematics and statistics support in English universities: an analysis of institutionally-written regulatory documents', *Journal of Higher Education Policy and Management*, 44(3), pp. 240–257. <https://doi.org/10.1080/1360080X.2021.2024639>
- Gallimore, M. and Stewart, J., 2014. 'Increasing the impact of mathematics support on aiding student transition in higher education', *Teaching Mathematics and its Applications*, 33, pp. 98–109. <https://doi.org/10.1093/teamat/hru008>
- Gilbert, H., Schürmann, M., Liebendörfer, M., Lawson, D., & Hodds, M., 2025. 'Post-pandemic online mathematics and statistics support: Practitioners' opinions in Germany and Great Britain & Ireland.' *International Journal of Mathematical Education in Science and Technology*, 56(1), 82–107. <https://doi.org/10.1080/0020739X.2023.2184282>
- Green, D., 2012. *sigma brochure: Gathering student feedback on mathematics and statistics support provision—a guide for those running mathematics support centres*. Available at: <https://www.sigma-network.ac.uk/wp-content/uploads/2012/11/Evaluation-Report-web-version.pdf> (Accessed: 8 January 2026).
- Grove, M., Croft, T. and Lawson, D., 2020. 'The extent and uptake of mathematics support in higher education: results from the 2018 survey', *Teaching Mathematics and its Applications*, 39(2), pp. 86–104. <http://doi.org.10.1093/teamat/hrz009>.
- Grove, M.(ed.), Croft, A.(ed.), Kyle, J. (ed.) and Lawson, D. (ed.), 2015. *Transitions in Undergraduate Mathematics Education*. The Higher Education Academy.
- Jacob, M. and Ní Fhloinn, E., 2019. 'A quantitative, longitudinal analysis of the impact of mathematics support in an Irish university', *Teaching Mathematics and its Applications*, 38(4), pp. 216–229. <https://doi.org/10.1093/teamat/hry012>.
- Lawson, D., 2021. 'A history of the development of the mathematics and statistics support community in the United Kingdom. Part 1: From alpha to sigma', *MSOR Connections*, 19(1), pp. 5–12. <https://doi.org/10.21100/msor.v19i1.1118>.
- Lawson D., Croft A. and Halpin, M., 2003. *Good Practice in the Provision of Mathematics Support Centres* 2nd edition. Birmingham: LTSN Maths, Stats & OR Network. Available from: <http://www.mathcentre.ac.uk/resources/guides/goodpractice2E.pdf>.

Lawson, D., Grove, M. and Croft, T., 2020. 'The evolution of mathematics support: a literature review', *International Journal of Mathematical Education in Science and Technology*, 51(8), pp. 1224–1254. <https://doi.org/10.1080/0020739X.2019.1662120>.

Matthews, J., Croft, T., Lawson, D. and Waller, D., 2012. *Evaluation of mathematics support centres: a review of the literature*. Birmingham: National HE STEM Programme. Available at: <https://www.birmingham.ac.uk/Documents/college-eps/college/stem/sigma-evaluation-mathematics-support-centres-literature-review.pdf> (Accessed: 8 January 2026).

Matthews, J., Croft, T. and Lawson, D., 2013. 'Evaluation of mathematics support centres: a review of the literature', *Teaching Mathematics and its Applications*, 32(4), pp. 173–190. <https://doi.org/10.1093/teamat/hrt013>.

Mehbali, M., & Roberts, L., 2017. 'Maths Support provision through embedded classes at LSBU'. *MSOR Connections*, 16(1), pp. 3–14. <https://doi.org/10.21100/msor.v16i1.632>.

Mullen, C., Howard, E. and Cronin, A., 2024. 'A scoping literature review of the impact and evaluation of mathematics and statistics support in higher education', *Educational Studies in Mathematics*, 117, pp. 1–22. <https://doi.org/10.1007/s10649-024-10332-6>

Ní Fhloinn, E., Fitzmaurice, O., Mac an Bhaird, C. and O'Sullivan, C., 2014 'Student perception of the impact of mathematics support in higher education', *International Journal of Mathematical Education in Science and Technology*, 45(7), pp. 953–967. <https://doi.org/10.1080/0020739X.2014.892161>.

Ní Fhloinn, E., Fitzmaurice, O., Mac an Bhaird, C. and O'Sullivan, C., 2016. 'Gender differences in the level of engagement with mathematics support in higher education in Ireland', *International Journal of Research in Undergraduate Mathematics Education*, 2, pp. 297–317. <https://doi.org/10.1007/s40753-016-0031-4>

Perkin, G., Croft, T. and Lawson, D., 2013. 'The extent of mathematics learning support in UK higher education—the 2012 survey', *Teaching Mathematics and its Applications*, 32(4), pp. 165–172. <https://doi.org/10.1093/teamat/hrt014>.

Royal Society, 2024. *A new approach to mathematical and data education*. London: Royal Society (Mathematical Futures Programme). Available at: <https://www.royalsociety.org/-/media/policy/projects/maths-futures/mathematical-and-data-education-policy-report.pdf>. (Accessed: 8 January 2026).

Solomon, Y., Croft, T. and Lawson, D. (2010). 'Safety in numbers: mathematics support centres and their derivatives as social learning spaces', *Studies in Higher Education*, 35(4), pp. 421–431. <https://doi.org/10.1080/03075070903078712>.

Solomon, Y., Lawson, D. and Croft, T., 2011. 'Dealing with “fragile identities”: resistance and refiguring in women mathematics students', *Gender and Education*, 23(5), pp. 565–583. <https://doi.org/10.1080/09540253.2010.512270>.

sigma Network, 2017. *The provision of Mathematics and Statistics Support in Scottish Higher Education Institutions*. Scottish Mathematics Support Network sector guide. Available at: <https://www.sigma-network.ac.uk/wp-content/uploads/2019/02/Provision-of-maths-support-in-Scottish-HEIs-2017.pdf>. (Accessed: 8 January 2026).