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EXECUTIVE SUMMARY

The Digitally Enabled Business Clinic (DEBC) builds on Northumbria University's Business Clinic (BC). The DEBC enables businesses to engage with university students and access free business consultancy, providing the latest knowledge from a range of disciplines and leading to positive business outcomes. We have created, tested and evaluated a proof of concept, digitally enabled model of the BC, which could enable the BC approach to be implemented by other universities. Digital marketing was tested to attract low to mid productivity SMEs and deliver free consultancy services.

Overall, 47 consultancy projects were delivered to clients via the DEBC. These were evaluated using 60 client interviews, in two stages, and 47 client quantitative surveys. Findings revealed clients valued the average consultancy project at £5,174*, moreover these projects enhanced business productivity, and stimulated technology and modern business practice adoption. DEBC projects also sparked innovation, with clients identifying a total of 8 market strategy, 3 service design and 3 business process innovations. The total value of all 47 DEBC projects, based on the survey results, is £243,178. However, the findings also reveal referrals and attending networking events may be a more cost-effective means of attracting clients than digital marketing approaches.

In summary, the DEBC model has generated £243,178 worth of consultancy for low productivity SMEs using an initial investment of just over £42,000. Areas for improvement are outlined, including greater requirements for the amount of student-client interaction and more cost-effective means of recruiting clients. Finally, important next steps are outlined so InnovateUK has a clear roadmap to test a full-trial of the DEBC.

Thanks must go to the Department for Business, Energy & Industrial Strategy, Business Basics programme and Innovate UK for which this proof of concept would not have been possible without.

^{*}Figure based on 47 client anonymous evaluation - of what they would have expected to pay for the report had it not been on a pro-bono basis



The Digitally Enabled Business Clinic (DEBC) builds on Northumbria University's Business Clinic (BC). The DEBC enables businesses to engage with university students and access free business consultancy, providing the latest knowledge from a range of disciplines and leading to positive business outcomes. This project benefits from our experience gained from the tried and tested model of Northumbria's existing BC. We have created, tested and evaluated a digitally enabled model of the business clinic, which could enable the BC approach to be implemented quickly and cost-effectively by other universities. Digital marketing was tested to attract low to mid productivity SMEs and deliver free consultancy services. Please see 'Traditional offline marketing' to understand the current approaches to client recruitment.

The DEBC collaborated with our network contacts - including the North East Local Enterprise Partnership (NELEP), North East England Chamber of Commerce and the Regional Technology Centre North. This helped us understand SMEs from struggling sectors who would benefit from digital advice. The project aimed to reach 30-40 SMEs of low to medium productivity, providing an opportunity to tap into the perspective of 'young eyes' from our motivated and innovative Business School students.

The DEBC provides a cross-functional range of advice (including digital marketing, finance, strategic management) through digital media and tools, removing the need for costly physical infrastructure. From our experience since 2013, we know that the BC model is effective. What made this project innovative is that we tested an alternative digitally-enabled model, which could be quickly scaled up. The project was used to determine whether a DEBC concept is a cost-effective way for SMEs to interact with a local university, gain pro-bono neutral advice, access state of the art knowledge and have the added value of the younger generation perspective. We monitored the reach, uptake and effect on business outcomes.

The 'how to' guide for implementing a DEBC aims to inform the formation of DEBCs in other regions. The UK Industrial Strategy aims to support universities and businesses working together to innovate. Rolling out a network of DEBCs would be an innovative mechanism enabling UK businesses to easily connect with and benefit from existing technologies, new knowledge, insights and fresh perspectives of university business schools.

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Traditional offline marketing

Along with the information held on the university webpage, the current BC takes the following offline approaches to target clients to participate in programme.

Networking events

Through an active professional LinkedIn profile, it is possible to discover and be invited to a number of business-related networking events. This is an ideal opportunity to talk to large numbers of potential clients from a range of industries and build awareness of the service that the BC provides. These types of events are important for longer-term client acquisition as it is important to build relationships with potential clients to provide a pipeline of projects for future student cohorts.

Business support networks

Through a combination of networking and university contacts, we have built healthy relationships with other business support networks across the region who help businesses find support and services required. Examples of these support networks are the NELEP, Chamber of Commerce, Scale Up Institute and Business in The Community. These networks are useful signposts for businesses looking for free consultancy advice and to engage with the university sector. These networks can also provide online opportunities to increase awareness and provide leads – showing information on BC services and contact details to get in touch.

Communal working areas

Similar to networking, local communal hot desk spaces provide an opportunity to find out about other businesses and raise awareness.

Business accelerator groups

Contacts who run accelerator and scale up groups such as Barclays Eagle Labs or NatWest Business Growth Enablers provide a ready-made network of businesses looking for contacts that can provide their business service or support in some way. The benefit of interacting with businesses at this stage is that relationships with the university are built early on in the business life cycle, therefore they provide longer-term opportunities.

University cross-selling

As with any higher education institute, it is important to make wider faculty and university staff aware of the proposition so that they can make contacts aware when appropriate. In particular, those departments which may come into contact regularly with businesses such as Business and Enterprise, and Careers and Employment. The BC presents a low-cost entry point for an SME to engage with a university. As the relationship matures there could be other mutually beneficial projects that the University and SMEs can collaborate on.



Project aims

The main aim of this project is to establish if a Digitally Enabled Business Clinic (DEBC) is an effective model to improve SME productivity. In order to test this, this proof of concept will:

- Bridge university resources and expertise to support SMEs
- Recruit 30-40 SMEs from a range of sectors using digital channels and evaluate the extent to which they will/have adopted:
 - 1.modern business practices as a result of this project (such as leadership/management capabilities or developing an innovation culture).
 - 2.modern technologies as a result of this project (e.g. CRM, HR software, cloud computing, payment systems etc).
- Create a "How to Guide" on how to set up and operate a DEBC

Approach

This innovative proof of concept tested whether the DEBC is a cost-effective, quick-to-implement, way to widely reach out to SMEs, enabling them to interact with a local university, gain pro-bono neutral advice, enhance capacity and access state of the art knowledge and a younger generation perspective, boosting their productivity. Furthermore, rolling out such a network of DEBCs would be an innovative mechanism, enabling UK businesses to easily connect with and benefit from new knowledge, insights and fresh perspectives of final year undergraduates and postgraduates, who in turn benefit from applying their knowledge to real business challenges.

We created, tested and evaluated the DEBC, reporting on the business outcomes arising from the project. We also prepared a "how to" guide on setting up and operating a DEBC.



Research design

This mixed methods research is underpinned by a pragmatic qualitative and quantitative approach.

Qualitative semi-structured interviews

Firstly, 60 qualitative semi-structured interviews were conducted, in two stages, with 32 clients of the DEBC. Whilst 47 clients actually took part in the DEBC, the team decided to omit 15 from the qualitative data collection due to time and resource constraints.

- In stage 1, at the start of the process, 32 SMEs were interviewed to determine their existing productivity level, and their desired/target for improvement from engaging with the DEBC was established.
- In stage 2, at the end of the process, 28 SMEs were again interviewed to establish how well the consultancy report/advice had met with their expectations including productivity enhancement recommendations. The interviews explored how they plan to implement productivity recommendations. Thematic analysis was used to analyse the data.

Quantitative Surveys

Secondly, quantitative surveys were distributed to 47 DEBC clients and their respective student teams. 57 surveys were collected from student teams because whilst team leaders were the focus, the researchers also allowed other team members to complete the survey if they wished. In total, 47 team leaders and 10 team members were surveyed.

- The client survey, see Appendix A, used a 7-point Likert scale to assess the current and expected effect of the DEBC project on clients' productivity and their organisation more widely. Clients were also asked to assign monetary value to the project.
- The student survey, see Appendix B, also used 7-point Likert scales to assess students' overall satisfaction with the DEBC experience, and how the DEBC has affected their growth and development and competitiveness in the job market. Students were also asked about their use of technology during the project.

Analysis

The qualitative interviews were analysed via thematic analysis (Braun & Clarke, 2006), whilst descriptive statistics were used to analyse the quantitative data. The data sample of 47 clients is not enough to draw statistically significant conclusions, however the results of this initial study can inform the design of a Business Basics 'Full Trial'. The study was conducted in accordance with Northumbria University's ethical research policies/procedures.

Digital marketing strategy & results

Aim

The aim of the digital marketing strategy was to build wider brand awareness of the BC proposition on online channels - so that there was the opportunity for further reach of client acquisition. In addition to brand awareness, there was the requirement to drive enquiry submission forms on the website which would provide a pool of digitally engaged potential clients.

Strategy

A digital marketing strategy was implemented to target users who are likely to have an interest in receiving business consultancy services within the SME target audience. The channels implemented were chosen to target these users at various stages of their 'user journey' - from awareness to consideration to conversion.

FINAL REPORT

Chosen channels

Prospecting display activity

This was used to build awareness of Northumbria University's BC proposition within the SME target audience - these users had been categorised through 3rd party data and from keyword analysis that showed intent for business consultancy services.

Prospecting display should be used primarily for brand awareness rather than a conversion tool. This was important for the BC to raise profile within the wider SME network.

RESULTS:

The display activity outperformed the forecast for both impressions and clicks. We secured a click-through rate of 0.14% - which is a strong performance against forecast. More efficient costs in terms of CPM (cost per impression) meant that we were able to serve more impressions for the same budget.

Although this activity did not directly drive enquiry form submissions, 52 users went on to view the Northumbria Contact Us page following exposure to a BC ad. This indicated they were looking for a way to contact the University to find out more.

Retargeting display activity

This activity was based on audiences built from professional business services pages of the Northumbria University website. This audience was considered as having an interest in the BC proposition, therefore we used retargeting display activity to try and encourage these users back to the website to find out more and submit an enquiry form. These users would be further on in their customer journey which should make them more likely to convert.

RESULTS:

The retargeting campaign was activated much later than planned as the retargeting audience pool took longer than anticipated to build. The performance once this activity was activated suggests this would have performed well for us had it been running for longer.

Despite limited impression delivery due to the small time frame for the campaign, the retargeting activity delivered a higher than forecast click-through rate and two submitted contact us forms.

FINAL REPORT

Third-party activity

Having a fairly specific target audience for this proof of concept, the BC also tested third-party activity through an online publisher of regional UK business news - Bdaily. This activity comprised of an email to their subscribers, a display banner on their website and a featured article.

RESULTS:

The email activity drove the majority of submitted enquiry forms.

Click-through rates for the display banner and featured article were lower than the forecast provided by Bdaily, however, we maintain this was a useful brand awareness and education exercise.

Lower bounce rates from the Bdaily activity suggests this was a more qualified audience to target for the BC proposition.

• Overall views on digital marketing activity

The activity delivered a high number of new users to the website. This shows the prospecting activity reached the new audience as required and achieved the relevant brand awareness. With more time and budget allocated, this digital marketing strategy would be reviewed and tested further.

Limitations of this proof of concept activity

Due to budget constraints within the proof of concept, paid search advertising was considered as out of scope due to expensive cost per click volumes caused by high competition on 'business consultancy' terms that would be required to achieve the required brand awareness levels needed.

Attribution for digital marketing channels was not available due to internal and external restrictions which means it is difficult to fully understand the value of the digital channels used in this test.

Performance results

Media Channel	Audience	Impressions	Clicks	CTR	Cost
Display - Prospecting	Third Party Business Audiences	2,426,510	3,039	0.14%	£3,794
Display - Retargeting	Non-Converters	11,742	22	0.19%	
Display - B Daily Third Party Emails	National E Shot - Email Marketing Subscribers	10,851 sends, 2,049 opens	502	5.62%	£2,013
	Bulletin Banner - News Subscribers	55,000	N/A	0.11%	
	Featured Article & Social Sharing	5,017	N/A	N/A	
Tracking	N/A	N/A	N/A	N/A	£227
Total	N/A	2,500,318	3,625	0.14%	£6,033

Submitted enquiry forms directly attributed to digital marketing channels

Organisation	How did you find out about the business clinic	Channel (where available)		
1	Digital Advert			
2	Digital Advert			
3	Social Media	Bdaily email		
4	Recommended by a previous client	Bdaily email		
5	Other	Bdaily email		
6	Digital Advert	Bdaily email		
7	Local publicity - newspaper, TV	Bdaily email		
8	Social Media	Bdaily email		
9	Friends or colleagues	Bdaily email		
10	Other	Bdaily email		
11	Digital Advert			
12	Digital Advert			
13	Digital Advert	Bdaily display advert		
14	Other	Bdaily email		



The following section will highlight key research findings brought to light by the analysis of the qualitative and quantitative data discussed previously. Specifically, this section will discuss how the DEBC has affected the perception of participating SMEs in relation to a number of critical areas including overall productivity, technology adoption, modern business practice adoption, and innovation, whilst also considering any potential room for improvement.

Overall productivity

The DEBC has been able to provide valuable insights to clients from a range of industrial sectors. Although still at the early stages of actioning the suggestions made, participants were asked to speculate on the potential change the consultancy provided would have on their productivity. As a broad indicator of change, the clients were asked to show their level of agreement to the following statement:

"This project will likely enhance my organisation's productivity"

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The results of which gave a mean score of 5.44 out of a possible 7, showing an overall positive position with 37 participants in agreement, 4 in disagreement, and a further 6 holding a neutral position (Figure 1). Clients were similarly asked to rate their agreement to how likely the project recommendations would affect financial performance. Whilst this was lower than productivity, there was still a notable skew towards the positive with a mean score of 4.85 out of 7.

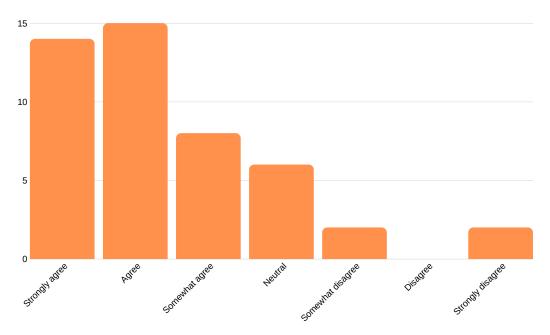


Figure 1: Likelihood of the DEBC Results Enhancing Productivity

To offer further clarity on the broad definition of productivity assigned during the survey, clients were given a chance to assign key performance indicators (KPIs) likely to be affected during their DEBC project. Invariably, the KPIs chosen by each participant were context dependent given the purpose of each project and the type of SME. For example, P, 12, considered employee engagement a critical area of productivity, where P, 1, assigned number of orders, website traffic and conversion rates. Regardless of the KPIs chosen, each client was asked to give a score out of ten during the initial interview, then speculate at the end of the DEBC project in light of the insights provided by their student team. Specifically, the clients were asked during the second round of interviews to rate their productivity at present (in light of the project insights), after six months, and again at twelve months after fully implementing the recommendations given.

The results of this qualitative enquiry support those seen within the survey data, with a total of 25 clients suggesting potential short-term improvements to some if not all of the productivity metrics set. However, it is notable that in some cases the initial change was relatively small, for instance, P, 6, suggested their turnover would move from a 5.5 to 6.5 out of 10. Although in some cases, as was seen with P, 14, the increase was larger, seeing a move from 3 to 8 out of 10 for market research:

P, 14. "I have been much more pro-active in contacting clients (828), meeting with airports, safari parks and Jet2. We are have now increased productivity to 7/10 from 5/10 and making progress. Market research moved from 3/10 to 8/10 as the report gives us a blueprint, it's independent and supports what my business is doing".

When looking further in the future, the findings once again show a positive outlook based on the DEBC interventions. When asked to predict their productivity scores after six months, a total of 17 clients expected further increases, highlighting future potential after fully implementing recommendations. A key example of this is P, 22, who has been able to implement some of the recommendations around their marketing strategy, but admit more time is required to see results. As a consequence of the changes made, they are able to target appropriate market segments more effectively, leading to a predicted two-fold increase in their turnover within 6 months, moving their score from a 4 to an 8 out of 10.

P, 22. "Turnover within the next six months, I'm very productively working to maximise that, so that will go right up to an 8"

Finally, the longer-term effect on productivity (twelve months after the end of each project) once again showed some positive predictions, with a total of 9 clients suggesting further small increases. It is worth noting that where the long-term outlook does not show any major increase in productivity within the client sample, this was mainly due to a reluctance on the part of participants to speculate so far in advance. This issue was also seen at the six-month period, although in this case, only 2 organisations were unwilling to provide a speculative productivity forecast.

One director of a multimedia agency was not convinced by the productivity gains to be generated from this project. In response to whether productivity would likely improve in the next 6 months P, 6 said:

P, 6. "Probably not going to change. This data does flip our mindset a bit, We have hard data based on clients, there's a little to play with. Some of the data may change our way of working. Not lots to implement we weren't doing already. Sample is poorly focused and quite low."

It appears the student data supported their existing strategy, but the clients with the lack of novelty in the recommendations. Perhaps more damning, the sample size was inappropriate and too small to adequately justify the recommendations. Inappropriate samples were common amongst the poorest reports. Such student groups apparently faced difficulty recruiting their clients' target demographic and eventually settled for more accessible parties.

Resources within the SME also affected the potential productivity gains reaped from the project, as P, 11 highlights:

P, 11. ""Probably a 4 but there is a lack of resources and just doing the best to manage everything."

A lack of resources often drives clients to pro-bono consultancy (usually staff, time or money). However, once these are completed and recommendations are proposed the client may still lack the resources to implement the strategies. Whilst student groups are reminded to propose recommendations that consider the resources of each organisation, clients can still get too focused on daily operations that they fail to implement more strategic activities.

Students' understanding of the client and the client's industry also emerged as an issue. For example:

P, 12. ""Students need more time to understand the business they are working with.

Students could spend time shadowing in the business."

P, 16. "Honestly, because we had to change the brief due to our business model shift this likely caused misunderstanding. Students lacked an understanding of our model. We just don't want to go the student route as the report recommends."

P,16. highlights more time spent on-site; observing staff may have helped their group understand their business. This pertains to the need for greater communication already identified in this report. There was also an occasion where the client closed down the restaurant arm of its business during the project, given this venture was central to the original brief this caused some confusion for the students. The project brief was swiftly altered, but time had already been lost. Unfortunately, such rare instances are difficult to predict and are unavoidable.

The productivity goal for each SME was a 50% increase from the baseline established in the stage 1 interview. At the end of the project, clients self-reported an average productivity improvement of 44% (Median: 23%) in the targeted domain (e.g. client conversion rate). Furthermore, after 12 months the average predicted productivity improvement was 231% (Median: 50%). Of course, these figures should be viewed with caution given the small sample size and the limitations of self-reported data.

Technology adoption

Regarding technology adoption as a result of the DEBC projects, clients were asked to anticipate the likelihood of this occurring by rating their level of agreement to the following question:

"I anticipate our organisation will adopt new technologies as a result of this consultancy"

The survey results (figure 2), show a strong proportion of clients expecting to adopt new technologies as a result of their project, with a total of 43% giving a positive response to the statement. Although this result is by no means all-inclusive, it is most certainly expected given the range of projects within this sample which in turn led to a high percentage of neutral responses.

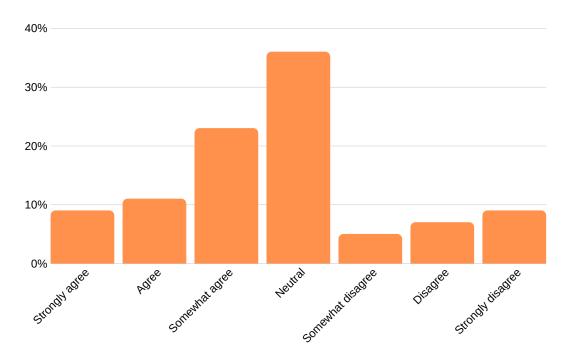


Figure 2: Likelihood of new technology adoption

Adding further context to this numerical evaluation, the qualitative interviews showed a range of recommendations skewed to technological solutions which were met favourably by clients. Namely, much of the suggested technology adoption was skewed towards online solutions and digital marketing. However, there were some examples of specific business applications. An example of this was provided by P,1, who will be adopting data analysis software to support real-time market research and analytics:

P, 1. "They suggested some really useful software that they used themselves during the project, I will be looking at this and hopefully will start using it to help analyse market

Modern business practice adoption

When assessing the future adoption of modern business practices there was once again a positive skew seen within the survey data. Clients were asked to determine the potential for business practice adoption by recording their agreement with the statement below:

"I anticipate our organisation adopted new business practices as a result of this consultancy"

As can be seen in figure 3, 47% of clients responded favourably to this statement, ranging from somewhat, to strongly agree. This is similarly unsurprising given the varied focus of DEBC projects and their intended outcomes, and demonstrates potential effects in terms of business practice adoption.

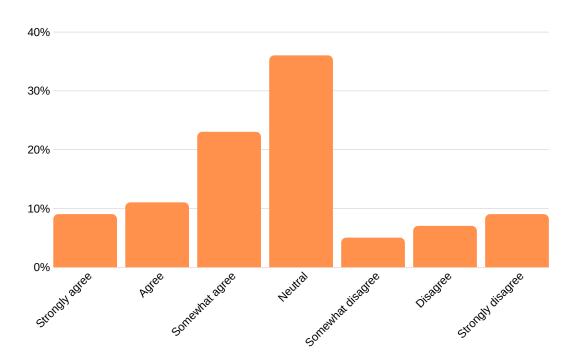


Figure 3: Likelihood of Modern Business Practice Adoption

Along with this broad appreciation, the qualitative data has shown where business practice adoption was seen or expected as a result of the DEBC projects. These centred predominantly on human resource management (HRM) and marketing practices, with 3 clients suggesting the possible implementation of the former, and 9 for the latter. For instance, P, 28, suggested they will implement marketing strategies linked to social media, enabling them to effectively target potential customers:

P, 28. "They said day one week one, just kind of go for social media, give 100 free users away, and ultimately, it's not really costing me much, so it's definitely something I will go for".

For HRM, the recommendations highlighted all fall within recruitment practices, moreover, as with marketing, the focus was in making better use of digital resources to attract appropriate candidates or source interns and volunteers. This was highlighted by P, 24, who saw the use of LinkedIn as a positive suggestion by their project team:

P, 24. "We will be changing how we recruit and using things like LinkedIn which should help in terms of the quality of people that we can bring in. It should lead to some quick wins as well, especially with Scottish and London Universities."

Innovation

The DEBCs ability to stimulate innovation within participating SMEs was highlighted by a number of clients. However, the data showed a lack of more radical innovation, rather, the innovative elements seen within client organisations would best be seen as incremental. In particular, the interview data highlighted three key areas where innovation could be seen, these were:

- Market strategy (8),
- Service design (3),
- Business processes (3).

In total, 13 clients saw the potential to innovate in one or more of these three areas, the majority of which were linked to incremental market innovations. An example of this use of market innovation is P,12, who, whilst attempting to penetrate the Chinese market has begun adapting their current marketing strategy, opening a Chinese website and building personal relationships with intermediaries. This shift was suggested by students as a necessary change in strategy which will better fit the Chinese context.

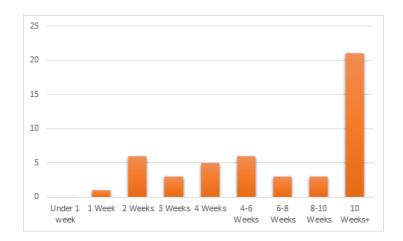
Value for money & time investment

During the quantitative survey, all 47 clients were asked to give their perspective on the following question:

"How much would you have expected to pay for this consultancy/report if you had been buying this service professionally (in £s)?"

The Digitally Enabled Business Clinic has delivered £243,178 worth of value in consultancy advice to 47 participating SMEs, averaging £5,174 per project. This represents a £5.49 return for every £1 of funding. Such value represents productivity increases and/or innovation, technology adoption and modern business practice adoption. The estimated value and overall effect of DEBC projects may increase 6-12 months after the project, once firms have the opportunity to implement the recommendations.

"How many weeks would it have taken you to complete the work internally, assuming you had the time/expertise?"



21 (44.68%) clients out of 47 said it would have taken over 10 weeks to complete the consultancy work internally. Furthermore, 31 (66%) clients felt their project would have taken 4 weeks or more. The average time taken to complete the DEBC projects internally was 6 weeks. 1 member of staff working full time on minimum wage for 6 weeks, assuming an 8 hour day, would cost £1,970. This figure is based on the total number of weeks clients claim the work would have taken, divided by the number of clients. This is a very conservative breakdown, given we limited project length to 10 weeks (despite the +) and used the UK national minimum wage. Whilst the 3 (6.38%) clients who felt the projects could be completed internally in 2 weeks or less didn't provide a rationale for their assessment, it is likely these projects failed to deliver viable recommendations or convey an adequate understanding of the client's business and wider industry.

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P, 12. "I think the points around hosting a Chinese website are really useful. I think if it was just us in the office with our lack of experience, we probably would have just extended it and maybe offered a translation of what we have at the moment. So seeing the recommendations to actually get it on a Chinese server is really useful".

An interesting case for service innovation can be seen within P, 27. The essence of their brief was to assess the viability of offering specialist safety training within different industrial contexts. As a result of student consultation, the client has made many changes to the services offered to reflect market gaps (or the lack thereof).

P, 27. "They said, you know, there are areas that aren't worth going into considering where my business is. Things like pharmaceuticals, which is very highly regulated so a sort of one-man band like myself would find it difficult, so that's changed what I'm offering to customers and who I go after".

This shift in service orientation allowed the client to focus resources on key markets and products, which was seen as a way to maximise the return on investment when considering the time taken to build relationships and secure contracts.

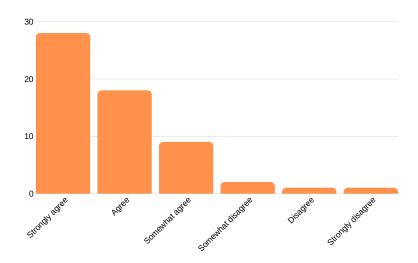
Finally, when looking at process innovation, this varied depending on project focus as one would expect, with elements of business practice and technology adoption also playing a role here. One standout example of process innovation can be seen in P, 17, where, as a result of the DEBC project, the students identified a need to improve the processes involved in intern recruitment. This once again was seen as a positive step which would ultimately lead to better process outcomes.

P, 17. "We are going to improve the systems, and the selection criteria for some of the interns coming over, so to have specific forms, and improve the systems which they've identified as weak at the moment, which of course they are, that should help us match interns to companies better in the future".

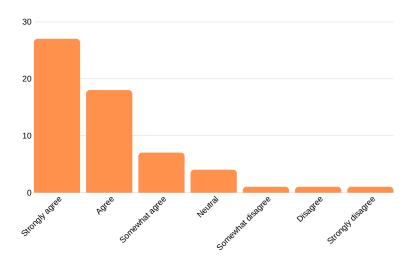
Student employability

Whilst SME productivity was the central focus of the DEBC, the project also collected students' experiences and perspectives. Of the 57 students surveyed, 93% felt the DEBC helped prepare them for the graduate job market (Q12). Moreover, 89% of respondents felt the experience was enjoyable.

Q12: We feel the Business Clinic experience has helped prepare us for the graduate job market.



Q13: We have enjoyed our Business Clinic experience.



Technology usage was also tracked throughout the project. Social media was used extensively to collaborate on DEBC projects, with 74.58% of respondents using Facebook Chat/Messenger and 42.37% using Whatsapp. As expected, email was used heavily to collaborate during projects-93.22% of respondents stated their group used it. However, video conferencing was much less popular with only 27.12% of participants stating their group used the platform. Finally, cloud storage was commonly used by student teams, with 76.27% of participants using the Google Drive suite (e.g. Google Docs, Google Sheets), followed by Pebble (69.49%) and Dropbox (11.86%).

Overall, these findings are very promising as they indicate DEBC graduates are satisfied with their experience and leave feeling better prepared for the graduate job market. Moreover, DEBC graduates understand how to incorporate modern technologies into business activities and this habit appears to have rubbed off on their clients (see Technology adoption).

Areas for improvement

Research into the DEBC has shown a positive effect on SME productivity, however, whilst the student projects were for the most part successful, it is still worth considering areas for improvement moving forward. To facilitate this, clients were asked to identify potential shortcomings within the DEBC process, notably those which may have impeded the project. Thematic analysis of responses identified two key areas where clients thought the DEBC could improve, these included communication between the organisations and students, and what can broadly be considered as "aftercare".

Looking first at communication, the main criticism brought to the fore by participants was the lack of regular contact between themselves and the project teams. This was by far the most prevalent of the two issues raised with 18 interviewees suggesting a need to have more frequent contact. This issue was highlighted by P, 5, quite concisely in the following quote:

P, 5. "We assumed by saying 'get in touch', we conveyed we were open for more meetings. I was expecting to hear more from them [i.e. meetings/communication] but didn't"

Much of the concern around this lack of communication, related to peace of mind and a need to feel involved in the project at some level, but it was also seen as a potential barrier to students gaining valuable insight which could be used to the benefit of their final recommendations. This was particularly relevant to organisations such as P, 26, who operate in a niche industry that students were likely unfamiliar with. The organisation in question provided welding services and specialist training in compressed gas safety, requiring a high degree of technical knowledge. This was invaluable for the students to understand whilst undertaking the project, however, at times the client felt communication with themselves was insufficient to properly disseminate the information required.

The second element identified by interviewees was that of aftercare, in particular, eight clients expressed a need for further support in implementing the recommendations made by students, suggesting if this were the case, any benefits would be realised within a shorter time period:

P, 24. "It would be good to have the students continue in some way to implement the project findings, I have very little spare time".

It was even suggested that the DEBC could be connected to internship opportunities, both paid and unpaid, which would enable clients to implement recommendations alongside one or some of the students who developed them.

Evaluation of Success

This section aims to evaluate the success of this project against the 'justification of success' in the proposal. Please note it was not expected that each of the SMEs will have experienced improvements in all four criteria.

1. Adoption/Implementation of consultancy report recommendations

At least 85% of SMEs will be adopting/implementing, the consultancy report recommendations concerning existing technology (e.g. CRM, HR software, cloud computing, payment systems etc) and/or modern business practices (e.g. leadership, management capabilities, or developing an innovation culture).

- The DEBC exceeded expectations in this domain. Over 91% of clients agreed that they will implement some of the recommendations outlined in their reports. With 27% citing new technology adoption, and 40% of clients claiming such technology adoption is forthcoming. Additionally, over 44% of clients claimed they have already adopted modern business practices as a result of this project, with a further 65% claiming they will adopt such practices in the future as a result of their DEBC project.
- 2. Contribution to knowledge

At least 85% of SMEs believe the consultancy has contributed positively to the knowledge and/or culture.

- Over 76% of clients agreed the project had contributed to organisational knowledge. Furthermore, over 40% believed the project will result in a cultural shift.
- 3. Improving productivity/financial targets 85% of SMEs believe the consultancy has, or is expected, to contribute to improving productivity/financial targets.

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• Over 74% of clients agreed their project would contribute to improving their productivity targets. Furthermore, over 69% of clients agreed the projects would contribute to improving their financial targets.

4. Digital Recruitment

At least 30 SMEs with low to medium productivity have successfully been recruited via digital channels to participate in the project.

• Only 14 clients were recruited via digital channels. Explanation of this under-performance discussed in 'Lesson's learned' section. The remaining SMEs were recruited via referrals, attending networking events or the existing BC database. However, this project exceeded expectations by recruiting 47 clients, over 57% of the minimum target. This represents an estimated £87,958 (17 clients x £5,174) of additional value in consultancy terms to the client.

Analysis of the DEBC results in relation to the success criteria reveal the DEBC exceeded expectations regarding the adoption of recommendations pertaining to existing technology and modern business practices. Contributions to organisational knowledge, culture, productivity targets and financial targets were respectable, but didn't quite meet the 85% threshold. The results show us that an 85% positive contribution to organisational knowledge, culture, productivity and financial targets is perhaps too ambitious from a 12 week project. However, scheduling mandatory weekly client-student updates may get subsequent DEBCs closer to the 85% target. Unfortunately, digital recruitment performed worse than expected with only half the requisite sample being recruited digitally. Furthermore, it appears client recruitment via paid digital marketing channels is much more costly than traditional methods even if the digital marketing approach could be further refined. Finally, it's worth noting the DEBC managed to run 47 consultancy projects, well above the initial target.

Lessons Learned

This section of the report will reflect upon our experiences of undertaking this project.

Student-Client Communication

The main criticism brought to the fore by clients was the lack of regular contact between themselves and the project teams. This was the most common problem raised by clients on the DEBC and suggests a need to have more frequent contact. Many clients wanted to communicate on a weekly basis, either via email, phone or face-to-face meetings, to keep abreast with the project and ensure the students were on the right track. However, after the initial client meeting and early emails many student teams only contacted the client when they needed assistance or advice. A lack of communication was common amongst the weakest DEBC reports. Furthermore, it was felt that more frequent communication would have ensured the student groups better understood their client and the client's industry. This lack of understanding can result in inappropriate sample selection and poor recommendations. In future, the DEBC should impose mandatory weekly contact, even if it's simply an email update, to ensure issues are spotted and rectified early.

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Acquiring clients

During the process of acquiring clients for student projects, there may be a small number of potential clients who will present with qualities that might not be suitable for work with students.

For example, unrealistic expectations of what the students are expected to deliver, unreliable when attending meetings or lack of communication. Although the client is not required to comply with strict terms and conditions and the time spent with students can be flexible, it is important clients are responsive and engaged with the project.

Managing clients

The BC tutors need to better prepare the students in terms of the importance of engaging effectively with their SME client; as they lack experience of this. It is important that they maintain regular contact throughout the process in order to obtain valuable insight from the client.

Movement in client expectations

Businesses tend to move at a rapid pace and because of this it is possible for clients to attempt to change the objectives of the project or ask the students to work on additional tasks. This happens on rare occasions and clients are briefed early on in the process by the academic team that the approved objectives are what the student project will be based on

Northumbria University's BC is positioned as a consultancy service for small, medium and large organisations across all sectors. Due to previous experiences, the BC does not typically service those businesses who identify as startups - the University has a dedicated service targeted specifically at startups. As this proof of concept is specifically targeted at low productivity SMEs, we maintained our best efforts to service this target market during this period. However, it is worth noting that our provision goes outside of this. The research findings presented throughout are applicable only to the organisations who fit the low productivity SME profile. Gaining access to participants and collecting primary data is one of the most challenging parts of any university project. This can lead students to panic and rush this important phase, usually by surveying their friends and family via social media platforms like Facebook. Inappropriate samples were a common theme amongst poor DEBC projects because the subsequent results and analysis are inappropriate for the clients' context. Those groups that regularly communicated with their clients understood their organisation and the wider industry, appreciated the type of participants required to inform an effective consultancy project.

Help SMEs collect hard productivity data

Whilst large organisations can have entire departments dedicated to performance monitoring and analytics, the reality is many SMEs fail to accurately monitor anything beyond obligatory financial data. Furthermore, such data is often unsuitable for attributing changes to areas such as employee engagement initiatives, brand awareness campaigns or community outreach programmes.

However, a full trial of the DEBC would benefit from encouraging clients to monitor performance more effectively. Apps like Hootsuite, Togg! and Trello may provide a quick and easy means of reliably monitoring project KPIs. Otherwise productivity improvements may be restricted to only the most directly observable activities.

Digital Marketing

There is a consensus amongst online marketers that email converts more highly than most other marketing channels. Bdaily's marketing and recommendation likely worked better because it is a trusted organisation with a qualified audience. Future DEBCs could learn from this by marketing their services via similar organisers. In contrast featured articles and social sharing does not appear to generate many clicks. It is unclear why this was, however it is likely this marketing was seen by a more casual audience and the message may have been competing with multiple other posts and links on the page.

Due to time constraints, we were unable to spend all the allocated money within the time frame of the project which we believe negatively affected results of the digital campaign. Contracting a digital marketing agency to undertake the work, constrained by university policies and procedures, led to some delays in the digital campaign part of the project.



Importance of the DEBC

Northumbria's BC has delivered over £1.6 million worth of pro-bono consultancy over 6 years. Moreover, the model has been nominated for teaching awards from the Academy of Marketing and the British Academy of Management.

In the context of reduced public spending, it appears small businesses must turn elsewhere for support. However, university and SME interests are not always fully aligned, with the former criticised for pushing costly Knowledge Transfer Partnerships or PhD scholarships that may not generate tangible business results. The BC model is mutually beneficial for all stakeholders; SMEs receive pro-bono consultancy on a real business problem they specify, students gain valuable experience that distinguishes them in the job market, and the university has a strong vehicle for industry engagement. However, these benefits have come at a substantial cost to Northumbria University, including funding dedicated administrative staff, infrastructure and marketing activities. The DEBC allows other universities to reap those same benefits for its key stakeholders without such a large financial outlay.

The results of this project indicate that the DEBC does enhance client productivity, and the only investment required from the SME is their time. Moreover, students felt their consultancy experience helped them become more competitive in the graduate job market. None of these outcomes were contingent on having infrastructure beyond what a typical university has, i.e. computers, classrooms and knowledgeable academic staff. Therefore, the DEBC represents a cost-effective means for universities to strengthen their external engagement, produce more competitive graduates and simultaneously deliver the support SMEs need.

Next steps

Now that we have demonstrated the viability of the DEBC model there is a great opportunity to roll out the approach to universities across the UK. If InnovateUK wishes to enhance SME productivity nationally it would make sense to distribute child DEBC's across the UK. There is also scope for a comparative study between the BC and the DEBC with the aim to evaluate the benefits of these binary choices versus a hybrid approach. A 'Full Trial' could be funded by the 'Business Basics' fund to finance the development of 3-4 more DEBCs in UK universities. The DEBC Scale Up could be implemented within 24 months for £200,000. The project would:

- Implement the DEBC, as outlined in the forthcoming guide, in 3-4 UK universities.
- Design and conduct a controlled experiment assessing the performance of DEBCs across different universities. This experiment will also measure and compare the performance of Northumbria's traditional BC against the DEBC.
- Design and implement a referral system that incentivises newly developed DEBCs to market and help implement the model in other UK universities.
- Create an online hub that universities and clients can visit to market consultancy projects and sign up for pro-bono consultancy, respectively.
- Explore a franchise model for DEBCs centrally managed by Northumbria. Potential benefits of such an approach include a wider network of support for improving SME productivity and a format that other universities can adopt.



Appendix A

Client Survey - https://nbsnu.co1.qualtrics.com/jfe/form/SV_OHSs6NXrpF8pAIR

Appendix B

Student Survey - https://nbsnu.co1.qualtrics.com/jfe/form/SV_eJoOF4NCurrLbpP