IT-FAKULTETEN

GÖTEBORGS UNIVERSITET

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PM

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Utbildningsutvärdering med extern bedömning av utbildning av masterprogrammet Digital Leadership, 120 hp – externa bedömargruppens rapport

I enlighet med Göteborgs universitets *Policy för kvalitetssäkring och kvalitetsutveckling av utbildning vid Göteborgs universitet* ska IT-fakulteten genomföra utbildningsutvärdering med extern bedömning. Utbildningsutvärderingar med extern bedömning bidrar till att utveckla universitetets utbildningar och den externa bedömningen utvärderar hur det interna kvalitetsarbetet fungerar och om de motsvarar de kriterier som finns i universitetets policy.

IT-fakultetsstyrelsen beslutade 2017 att programmet Digital Leadership masterprogram, 120 hp skulle utvärderas läsåret 2021/2022.

Utbildningsutvärdering med extern bedömning av Digital Leadership masterprogram, 120 hp

Under hösten 2021 inleddes således processen för att utvärdera masterprogrammet Digital Leadership med hjälp av en extern bedömargrupp. Institutionen för tillämpad informationsteknologi samlade in relevant underlag och föreslog bedömare till den externa bedömargruppen. Dekan beslutade som ordförandeåtgärd om den externa bedömargruppen den 11 januari 2022 och kort därefter inledde gruppen sitt arbete. Den 2–3 maj 2022 genomförde bedömargruppen ett platsbesök för intervjuer med programledning, lärare, studenter och verksamhetsstöd. Det skedde också en återkoppling till fakultetsledningen av gruppens intryck från besöket. Den 16 september 2022 mottog IT-fakulteten den externa bedömargruppens rapport *Master in Digital Leadership, 120 credits, University of Gothenburg. Assessment Statement by Extranal Assessment Group, 2022-09-16.* Rapporten bifogas denna PM. Rapporten presenteras av programledaren för masterprogrammet Digital Leadership vid IT-fakultetsstyrelsens sammanträde den 26 oktober 2022.

Fortsatt process

På basis av bedömargruppens utlåtanden och rekommendationer tar institutionen fram en utvecklingsplan/åtgärdsplan som presenteras vid IT-fakultetsstyrelsens sammanträde den 22 februari 2023. Planen följs upp kommande år 2024.

Enligt uppdrag
Cecilia Ihse, kanslichef

Master in Digital Leadership, 120 credits, University of Gothenburg

Assessment Statement by the External Assessment Group, 2022-09-16

Background

The Swedish national system for assuring quality in higher education means that the institutions themselves are responsible for assuring and developing the quality of their education. In accordance with these requirements, the University of Gothenburg has produced a quality framework, including a quality policy describing the starting points and processes for quality assurance and quality development of education.

At the University of Gothenburg, the Faculty Boards are responsible for ensuring that the policy is implemented given the specific requirements stipulated by their own Faculty (Policy for quality assurance and continuous quality improvement of education at the University of Gothenburg of 27th of June 2016, revised 24th of August 2017, 20th of September 2018 and 27th of February 2020). In accordance with the above, the IT Faculty decided that the Programme Master in Digital Leadership (MDL), 120 credits, should be evaluated using an External Assessment Group, which started its work in March 2022.

The purpose of the quality assessment is to make recommendations for development work to ensure that the Faculty's education meets the standards and reaches the goals stated of the quality framework and policy.

The policy also stipulates that the External Assessment Group shall consist of a minimum of two people that are both scientific and pedagogical experts, and both active at a university other than the University of Gothenburg; one scientific and pedagogical expert active at a faculty other than the IT Faculty.

Given these stipulations, the IT Faculty appointed the following external experts as members of the External Assessment Group:

- ➢ Professor Matti Rossi, Aalto University School of Business, Finland
- ➢ Professor Sue Newell, Warwick Business School, University of Warwick, UK
- ➢ Associate professor Andreas Moberg, Department of Law, University of Gothenburg

Strengths and weaknesses of the Programme and the assessment group's reflections and recommendations

Introduction

The MDL has undergone a structural re-design, which was introduced in the academic year 2021-22. The main difference in the new design is that courses are taught more intensively, in-sequence, rather than in parallel; and the 2nd year (3rd semester) courses are recommended

rather than mandatory to allow students to study elsewhere so that mobility is encouraged. Discussion of some of the changes is included below as the program is assessed against the stipulated criteria. However, it is important to note that the new structure cannot be fully evaluated given that this is the first year in which it has run. Nevertheless, the process of redesign, which included top-down and bottom-up innovation cycles demonstrates a teaching group dedicated to designing a program that would be useful to students and reflect the research strengths of the group. And the review team commend the team for taking this step, even while encouraging them to continue to evaluate the changes that have been made.

The overall impression of the assessment group is that the MDL at the University of Gothenburg is focused on high quality learning among its students, with teachers dedicated to supporting students' learning. By considering the individual criteria, the assessment group has been able to identify both strengths and weaknesses. The comments and reflections below aim at summarizing the assessment group's impressions of the strengths and weaknesses of the Programme and at identifying areas for improvement and internal development of MDL. The assessment group presents its reflections and recommendations in direct connection with the specified criteria. In the final summing-up, the presentation highlights several concrete measures that, according to the assessment group, could particularly stimulate quality development work.

In the assessment, the External Assessment Group focuses on the criteria stated in Policy for Quality Assurance and continuous Quality Improvement of Education at the University of Gothenburg (p. 3):

1. Achieved study results match intended learning outcomes and the qualitative targets of the Higher Education Ordinance.
2. Teaching is focused on student/doctoral-centered learning.
3. The content and form of teaching rests on scientific and/or artistic bases and proven experience.
4. Teachers have up-to-date and adequate competence as regards their subjects and teaching and learning in higher education, and the numbers of teachers are in proportion to the scope and content of study courses and programmes.
5. Study courses and programmes are relevant to the needs of the students/doctoral students and society.
6. Students/doctoral students have influence in planning, implementing and monitoring study courses and programmes.
7. The study and learning environment is accessible and purpose-oriented for all students/doctoral students.
8. The study courses and programmes are continuously monitored and developed.

The External Assessment Group decided on how the work should be done and what additional information on the education they needed access to. Based on this, the evaluation of the MDL at University of Gothenburg is based on the following material together with a site visit 2-3rd May 2022 at the University of Gothenburg:

1. Program level documents for MDL (which included details of how the program had been recently redesigned)
2. Courses within MDL for years 1 and 2
3. GU Policy for quality assurance

Link to the documents: https://gunet.sharepoint.com/sites/sy-grp-utvardering-digital-leadership-20212022/Delade%20dokument/Forms/AllItems.aspx?ga=1&id=%2Fsites%2Fsy%2Dgrp%2Dutvardering%2Ddigital%2Dleadership%2D20212022%2FDelade%20dokument%2FGeneral%2FProgram%20Level%20Documents&viewid=1f068279%2Df7ec%2D4511%2Db13d%2D62b18fb96b75

The above documents and site visit form the basis of this report, the assessment and suggestions of ways of development to meet the assessment requirements. Below, the reflections of the assessment group related to each of the above criteria stated in the Policy for Quality Assurance and continuous Quality Improvement of Education at the University of Gothenburg are presented.

The assessment group submitted a preliminary report regarding the evaluation of the MDL on the 3rd of May 2022. The members of the assessment group have discussed the response from the Department of Applied IT and addressed its most central comments in this final report.

Criterion 1: Achieved study results match intended learning outcomes and the qualitative targets of the Higher Education Ordinance

The External Assessment Group has evaluated how the intended learning outcomes are examined on each course as well as how the intended learning outcomes of the courses match the intended learning outcomes of the MDL. The External Assessment Group has also compared the intended learning outcomes of the MDL with the qualitative targets for the Degree of Master (120 credits) of the Higher Education Ordinance. The assessment of whether or not achieved study results match the intended learning outcomes in a particular case on a particular course is a matter for the course examiner on the course in question, and it is not the role of any External Assessment Group to question the examiners assessment. Thus, it is in fact questionable whether the criterion, as formulated in the Policy for Quality Assurance and continuous Quality Improvement of Education at the University of Gothenburg, can be assessed by the External Assessment Group.

It would be possible to examine statistical data on student course completion rates and retention as a preliminary analysis of whether or not the students' reach the intended learning outcomes, but such data has not been made available to the External Assessment Group. Nothing in the material presented to the External Assessment Group, including the on-site visit and interviews, has indicated that there is a mismatch between the *achieved study results* and the *intended learning outcomes*.

Turning instead to the matching of intended learning outcomes on the course level with those on the program level, the External Assessment Group has found that while these are satisfactorily matched, there are certain program level learning outcomes covered by only one or two courses. This is not necessarily a cause for concern in itself but given that some of these intended learning outcomes are integral for the program and that in all of these cases at least one of the courses is an elective course, the overall assessment is that it would be advised to review the matching.

Such a review should take into account that the on-site visit revealed that the learning outcomes on the course level may indeed not give a full account of what is actually taught on the course. The general consensus amongst the teachers was that some of the program level

learning outcomes identified by the External Assessment Group as potentially insufficiently covered, were in fact covered although this was not reflected in the learning outcomes on the course level. While this raises the question of how well the course level intended learning outcomes reflect what is taught on the courses, the External Assessment Group wants to highlight that the exercise of matching learning outcomes must not become and end in itself but should rather be seen as a useful instrument when planning, evaluating and improving the program.

As regards the matching of the intended learning outcomes on the MDL-program level with the outcomes for the Degree of Master (120 credits) of the Higher Education Ordinance, it is noted that the program syllabus includes all of the intended learning outcomes for the general degree of master *per verbatim*, before adding the so called "local outcomes". Although no obvious mismatch is identified, the management might consider removing the general outcomes from the program syllabus having followed an independent matching of "local" outcomes with the general outcomes.

*The review team recommends that the program management map the learning outcomes on the course level with the outcomes on the program level with the aim of identifying more courses that enable the students to reach certain program level outcomes, such as e.g.:

- Exhibit deep knowledge about and ability to apply theories in <u>innovation</u>
- Demonstrate ability to design and evaluate <u>governance configurations and control for digital leadership</u>
- Demonstrate ability to <u>develop future oriented business models</u> based on digital infrastructures
- Demonstrate ability to <u>lead, implement and communicate development work</u> within different organizational contexts
- Demonstrate ability to compare and contrast industrial innovation and digital innovation

When performing the mapping exercise, particular attention should be paid to the distinction between mandatory courses and elective courses.

Criteria 2: Teaching is focused on student/doctoral-centered learning

To assess the completion of this objective we interviewed teachers and students and reviewed the available teaching material. We also interviewed one alumni representative. The program has been redeveloped in an incremental fashion and there is not much feedback yet on how the students acquire skills in the new program. The pass/fail grading system and many courses having group projects seem to work well to lessen unhealthy competition between students. Both teachers and students gave feedback that this grading system helps in achieving the learning targets. We were surprised by how much the students liked this system, but this seems to be a very good thing.

The courses are organized as quite large modules that follow each other in a logical order. The modules have usually a large real world project component and more theoretical component that support each other. The course work is done in groups, which give the students relevant experience of working with diverse people.

The students mentioned that some of the early courses present a very large number of concepts that are assumed to be known in advance, and those without the prerequisite knowledge from their bachelor's studies might find the courses hard to follow. The students pressed the importance of the research methods course and suggested that this should be early in the studies.

The alumni representative that was interviewed mentioned a largish gap between what is taught in courses and what happens in work life. This is a relevant issue for a digital leadership program, where there is a need for learning high level strategy and transformation concepts, which will need quite a conversion for language and action of everyday business.

*The review team recommends that there is a healthy balance between theoretical and abstract module contents and real-world cases in which students engage in realistic situations, and if possible, get feedback from case stakeholders.

Criteria 3: The content and form of teaching rests on scientific and/or artistic bases and proven experience

The program has a good portfolio of teachers with different degrees of academic experience, practical experience and teaching competence. The mix of professors and lecturers seems to be in balance and allows for a reasonable workload. The teaching staff are leading researchers in information systems and digitalization, and the connection to current research is strong.

The content of the courses is up to date and follows established theories and approaches of digital leadership. The teachers stressed that they keep the materials current and update the courses with relevant new cases when needed. The material provided and the comments from student and alumni interviews highlight the large number of concepts that need to be internalized in the first courses of the program. Digital strategy calls for understanding of digital technology, digital platforms and infrastructure and strategy applications in these fields. The concepts are quite abstract and if they are not connected to practise, it is difficult to grasp them. The program design with project work interweaved among more theoretical courses is a good way of acquiring knowledge about how these things work in practise. The success of this interweaving rests on the connection between the theoretical and practical courses and on suitable project topics. The projects need to be realistic in scope and they need to have some strategic components. In practise it is not possible to have all aspects of digital strategy and governance in a few projects, but the students should be exposed to some parts of strategizing early on and they should be given a concrete idea of how the abstract ideas affect everyday operations in sometimes surprising ways.

As mentioned in Criteria 2 above, it is of utmost importance for a leadership program to have teachers and visitors who have real world digital leadership experience. The pedagogical goal of having the students engaged with learning and not just passive receivers is important for this kind of program. It is also important to distill the idea that strategizing and leadership is not something that you will learn wholly in classes and be ready to employ in your first job, but this is rather a life-long journey.

*The review team recommends that the plan for a partnership program with industry, public authorities, nongovernment organizations, and other organizations is developed further. This

takes time, but it can provide long term relationships with different kinds of learning possibilities, as noted in the planning documents.

Criteria 4: Teachers have up-to-date and adequate competence as regards their subjects and teaching and learning in higher education, and the numbers of teachers are in proportion to the scope and content of study courses and programmes

The teachers of the program have the pedagogical and subject matter competence needed to fulfil the program needs. The teachers have basic pedagogical training and students are in general satisfied with the pedagogical aspects of the courses. The teachers are competent researchers and there is a good ratio of younger and more experienced faculty.

The evaluation team was pleasantly surprised by the fact that program and department leadership and teachers were happy with the available teaching resources and that the Faculty assured that if needed, new resources can be obtained. This is a rare and healthy situation that the external evaluators are very happy to hear about.

*The review team recommends that the ratio of teachers to students is kept at a reasonable level. As this is a digital leadership program, it is important to have teachers with real world leadership and digitalization competence as well as more theoretically versed teachers.

Criteria 5: Study courses and programmes are relevant to the needs of the students/doctoral students and society

Digital transformation is occurring rapidly in all organizations and societies. The covid pandemic accelerated these processes in many cases, because of the need to allow people to work remotely so that the virus was more contained. Such remote working relied on good digital infrastructures to allow access to organizational digital resources as well as safe and secure connections to individual computers that were now accessed in many cases from home.

While the speed with which many organizations converted to home working was remarkable, research nevertheless shows us that digital transformation is not always successful and requires 'mindful' consideration of what and how to introduce new technologies to support the organization and management of work (in all kinds of organizations). The MDL is focused explicitly on understanding why digital transformation is so important but also why it can be difficult. The MDL then provides some of the important knowledge and skills that are needed to lead organizations through the process of digital transformation and change, recognizing that processes will differ across organizations and that there is no simple prescription for how to do this. Moreover, the MDL is explicitly built on the recognition that the knowledge and skills needed for digital transformation are not confined to those with high level technical skills in computing and informatics. Rather, digital transformation involves soft skills, such as strategizing, governing, and leading. Thus, while the MDL course does cover general technical aspects of technology, infrastructure and platforms, this is to familiarize students with the material features of digital technologies that afford or constrain action, rather than to develop deep technical knowledge and skills. It is for this reason that the MDL does not require any specific prior knowledge of IS or informatics; students can come from any bachelor's program. This does create some problems, but in terms of being relevant to students and societies, it is the case that having diverse groups involved in digital transformation, with different knowledge and backgrounds, can help to ensure that problems

and opportunities are reviewed from a broader range of perspectives. In other parts of this review we discuss the challenges of having students from diverse backgrounds and of ensuring that these different backgrounds are fully embraced in the teaching and learning process but here we can highlight the advantages of this diversity for organizations and society.

This being said, a program focused on digital *leadership*, that attracts students with no or limited post-bachelors work experience (regardless of degree), may create challenges for some students because they are not going to get entry level digital leadership positions. This was identified both by the alumni that we spoke to and some of the students.

*The review team recommends more consideration of the kinds of jobs that their students will begin in. This may be done by getting better data on what alumni have done on graduating from the course and sharing this with current students; and building better connections with alumni so that they can come and talk to existing students and potentially even mentor those interested.

Another feature that links to this point relates to the final dissertation. Students and faculty expressed the view that the 30 credit thesis was an important feature of the program because it allowed them to connect with organizations and do some relevant digital transformation research to showcase their knowledge and skills (leading at times to job opportunities). The review team recognizes this as an important feature of the program, but comments were made about the difficulties some students faced in finding suitable (and willing) organizational research sites. This may be especially difficult, for example, for international students with no or few local connections. It was mentioned that 2 organizational sites were identified for students, with 4 project opportunities. The students were appreciative of this but would have liked more sites, albeit recognizing that they would still need to compete and 'sell' themselves to the organizations.

*The review team recommends that the faculty identify further research sites for the final dissertation (and potentially also the project modules) by building stronger connections with local organizations (potentially again using alumni as a starting point for this).

Criteria 6: Students/doctoral students have influence in planning, implementing and monitoring study courses and programmes

The formal quality assurance processes at GU were followed in redesigning the MDL, thus including Student Union (SU) representative involvement as the new program was reviewed by the IT Department. However, the SU reps at the IT Department tend to be UG students and there does not appear to be any formal involvement of MDL students in the SU (and so in the redesign process).

*The review team recommends that future redesign efforts consider including some existing students and alumni in these processes.

The review team were provided with the student course evaluation results of individual courses but there were no course reviews included (summaries of the reflections of how the course has gone and what changes will be introduced and why) even though course reviews do seem to be part of the IT Department quality assurance process. It may be because the redesigned courses are very new but it also appears to be because the teaching faculty on the

MDL have introduced an informal review process, involving the entire teaching team, following the delivery of each course. This is to be commended because it helps to ensure integration of content across the courses and so builds progression over time (this was explicitly part of the redesigned MDL). Nevertheless, the students we talked to mentioned that there were 2 courses where there had been problems. They felt that ultimately the teachers involved had been made aware of these problems (to do with the newness of the language being used that is completely unfamiliar to those without an IS/Informatics background) but this was based on individual students 'speaking up'.

The students did mention that the faculty who were teaching them were very approachable so that 'speaking up' was possible, but of course some students are less prepared to do this than others. Some faculty included weekly student feedback sessions in order to gauge how their course was going. However, not all faculty did this. Moreover, given the very short duration of the new course design (5 weeks) it is very hard to make changes mid-way through a course.

*The review team recommends that the Program Manager considers encouraging students at the start of the program to elect 1-2 representatives (that do not need to be affiliated to the SU and can be part of internal processes) who can collate and communicate any issues that arise during the semesters. The review team also recommends that the informal review process post course delivery be formalized to include minutes of what has been discussed. This will help to ensure that there is cumulative learning from these post-course reviews.

Criteria 7: The study and learning environment is accessible and purpose-oriented for all students/doctoral students.

We have already mentioned the diversity of the student intake. This has been an explicit decision given that leading digital transformation requires a range of skills and knowledge, not just technical, as already discussed. This decision, however, requires attention to this diversity and the review team identified that this was not always fully embraced. This was the case despite faculty pointing to the helpfulness of having students with diverse points of view during discussions of cases and papers; and students also recognizing that this could be helpful (e.g., the law student who could focus on privacy issues and the psychology student who could focus on employee well-being).

The aspect where students identified most problems, especially at the start of the program, was in the language and concepts. Those from non IS/Informatics backgrounds at times felt over-whelmed and found it hard to follow papers that they were asked to read because terms just did not make sense. This appeared to be the case especially in relation to the early, more technical courses, such as the infrastructure course. Potentially this issue has been exacerbated by the very short duration of the redesigned courses (not giving students time to get used to the new language), reinforcing the point made elsewhere about the importance of evaluating the redesign course after a couple of years.

*The review team recommends that the teaching team considers ways to provide a bridge for non IS/Informatics students so that they quickly get up to speed with the technical terms. This could be done right at the start of the program – a one-week induction course to introduce general themes, concepts and language that would help those entirely new to the subject area. Alternatively, at the start of each course, the first 1-2 sessions could potentially provide the bridging needed for these students.

Beyond ensuring that there is a base level of understanding of relevant concepts at the start of each course, the review team also reflected that potentially the diversity of the student body could be even more fully embraced by the teaching team. That is, rather than simply hoping that students with diverse backgrounds will bring in different points of view, they could more explicitly encourage this.

*The review team recommends that faculty teaching courses explicitly review the background mix of the students in the class and identify what types of different perspectives this will allow them to explore and then encourage this diversity. This could be done, for example, by organizing the groupwork in teams which include students from different backgrounds; or by having questions that directly relate to the backgrounds of the different students in the class.

Criteria 8: The study courses and programmes are continuously monitored and developed

The program and its courses are continuously monitored and evaluated. On the course level, the main tool for evaluation is the student survey. The surveys are conducted online and submitted anonymously and contain a number of set multiple choice questions as well as the possibility to submit written feedback on anything course related. The External Assessment Group has had access to one such survey for most of the courses on the program. The response rate varies significantly from course to course (the number of students taking each course also varies). Based on these reports the review team concludes that the surveys share similar traits while there are certain courses that adopt their own standard questions. The most important conclusion to be drawn from the materials provided is that there is no evidence on how the surveys are used to develop the courses.

During the site visit, the interview with the teachers revealed that an important part of the continuous monitoring and development of the program takes place during monthly staff meetings (as noted above). These meetings seem to serve many of the functions necessary for effective continuous quality management. This holds especially true in an organisation such as this one, where the teachers teach separate courses to a large extent, meaning that many teachers are more or less the only teacher on the course in question. These meetings seem to play a very important role in the MDL quality assurance procedure, which is why it is strongly recommended that they are documented.

While talking to the students, the External Assessment Group learned that many students feel that the learning environment is open and welcoming, also when it comes to critical remarks about the education. This is not always the case, and such relations should be nurtured as they are conducive to better learning.

*The review team proposes that the management considers the implementation of written course reports, or the equivalent, in order to document both the results of the surveys and other input, discussion of these results, but most of all the reflections on the collected data made by the teacher responsible for the evaluation of each course.

Furthermore, the monthly teacher meetings should be documented in some way, in order to be of more use for the development of the program.

Conclusion

The review team commend the development of this digital leadership program. There are many positive aspects of the program and student satisfaction seems generally high. Nevertheless, focusing on the given criteria for this evaluation there were a number of recommendations that we hope can lead to the continuous improvement of this program.