



Evaluation of SERI support for VET research

Summary of final report and recommendations

Note: the full report in German may be obtained from the State Secretariat for Education, Research and Innovation SERI.

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Note: SERI support for VET research was evaluated under a mandate given by the State Secretariat for Education, Research and Innovation (SERI). This evaluation was conducted by consortium econcept AG and Prof. Dr. Philipp Gonon (Professor for Vocational Education and Training, Institute of Education Science, University of Zurich). The findings and recommendations do not necessarily reflect the views of SERI.

The authors are responsible for the content of this final report (including annexes) as well as the present summary. The separate Annex I showing financial figures, performance and dissemination activities pursued by LHs and IRPs was prepared by econcept. Annex II covering external surveys and country comparisons was drafted by P. Gonon and his team.

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Summary

Since 2004, the State Secretariat for Education, Research and Innovation (SERI) has supported research in the field of vocational education and training (VET) by virtue of Art. 4 of the Federal Vocational and Professional Education and Training Act (VPETA, SR 412.10). This support is intended to achieve three objectives: firmly establishing VET research in Switzerland, ensuring that policymaking for Switzerland's VPET system is backed by solid research findings and developing the VPET system on a continuous basis. In keeping with Art. 2 of the Vocational and Professional Education and Training Ordinance (VPETO, SR 412.101), SERI will continue to support VET research only until it has reached a point of sustainability of research staff and an internationally recognised level of scientific quality.

Purpose of evaluation

An evaluation commissioned by virtue of Art. 2 para. 2 VPETO is intended to show how well established VET research has become and the extent to which the other two objectives of SERI support for VET research have been reached. This will mainly be a summative evaluation (report on achievement of objectives) with formative aspects (whether research has served as a basis for policymaking decisions and improvement of the support strategy).

Focus of evaluation

This evaluation focuses on VET research supported between 2004 and 2013 by the Federal Office for Professional Education and Technology (OPET) and later by the State Secretariat for Education, Research and Innovation (SERI). The evaluation will cover the support programme as well as the actual research sponsored by this programme. Support for VET research is provided at two main levels: at the programme level where SERI has established a scientific steering committee to give advice on funding; and at project level, where individual research institutes and researchers are supported through Leading Houses (LHs) and individual research projects (IRPs).

Between 2004 and 2013, a total of seven LHs received support; three of these LHs are still active. In addition, between now and the end of 2013, a total of 21 sponsored IRPs reached completion. In the evaluation, both support instruments (i.e. LHs and IRPs) will be examined and assessed in terms of their overall impact. All seven of the LHs as well as a sampling of eight IRPs will be evaluated.

Leading Houses (LHs) supported by OPET/SERI between 2004 and 2013

HSG: LH Social Competences (Prof. D. Euler, 2003-2006, incl. CTI preliminary phase)
UniBas: LH Learning Competences (Prof. G. Steiner, 2003-2008, incl. CTI preliminary phase)
UniFR: LH Quality of Vocational Education (Prof. F. Oser/ starting from 2011: Prof. M. Stamm, 2004-2013)
UZH/UniBE: LH Economics of Education, Firm Behaviour and Training Policies (Prof. U. Backes-Gellner and Prof. S. Wolter 2005 ongoing)
UniGE: LH Economics of Education: Transitions, Skills and Labour (Prof. Y. Flückiger, 2006-2013)
EPFL: LH Technologies for Vocational Training (Prof. P. Dillenbourg, 2006 ongoing)
UZH: LH Learning and Instruction for Commercial Apprentices (Prof. F. Eberle, 2011 ongoing)

Table 1: Overview of the seven Leading Houses sponsored between 2004-2013

Since both the financial and personal linkages to previous support for VET research by the Commission for Technology and Innovation (CTI) in 2000-2003 exist, it was difficult to limit the evaluation period strictly to 2004-2013.

Evaluation questions

Evaluation questions relate to SERI programmes and projects supporting VET research as well as to the various levels (Concept, Implementation, Output, Impact and Outcome) of the impact model presented.

	Federal level/SERI (programme level)	Research institution level (LHs/IRPs) (project level)
Concept	1. To what extent has SERI's VET research support strategy led to successful implementation of legal requirements and resolution of original problems?	6. To what extent have the objectives and concepts of LHs and IRPs facilitated implementation of SERI's VET research support strategy and/or contractually agreed tasks?
Implementation	2. Have the measures taken for implementation of SERI's VET research support strategy helped to achieve established objectives?	7. To what extent have the measures and allocation of resources helped to fulfil the mandate?
Output	3. Have SERI activities in relation to VET research satisfied legal requirements and furthered strategic objectives in an efficient manner?	8a. Have the activities of IRPs and LHs matched the contractual agreements and have they been carried out in accordance with the allocated resources? 8b. To what extent have relevant research findings from LHs and IRPs continuously and sufficiently reached an internationally recognised scientific level (quality)?
Impact	4. Have relevant research findings been adequately used by the various actors to develop and manage the Swiss VPET system?	9a. To what extent has SERI managed to reach a critical mass with its support strategy, which has been aimed at achieving the continuity of VET research in Switzerland and a specific identity? 9b. To what extent is SERI-funded VET research in Switzerland recognised at the national and international levels?
Outcome	5. To what extent have the prerequisites for the integration of VET research within regular national research funding mechanisms been established?	10. To what extent has SERI's strategy furthered the objective of making VET research more appealing to universities and other research institutes, with valid career prospects?

Table 2: Overarching evaluation questions

Methodology – Evaluation design

In order to answer evaluation questions, various methods were used. We approached the topic from various perspectives and analysis was conducted in phases. The first step was to formulate suitable indicators (key figures, estimates, etc.) for a set of detailed evaluation questions together with a detailed concept that would enable us to gather this information.

The main core of the evaluation design is formed by the questions asked of different groups (main actors directly involved and external persons) and analysis of various types of documents (SERI documents, SERI-LHs/IRPs documents and LHs/IRPs documents, country comparison documents). An equally important part of the evaluation entailed regular interaction with and involvement of the client and advisory group. Our aim was to carry out targeted assessments based on as much information as possible.

The findings from a preliminary study “Analysis and Summary of SERI-funded VET Research” (Fontana, Fitzli, Inderbitzi 2013) were also taken into account. This study was conducted between November 2012 and September 2013 and includes a comprehensive analysis of documents combined with 17 interviews on the dissemination and use of SERI-funded VET research. On this occasion, the main representatives of the Confederation, the cantons and professional organisations and other (potential) users of research findings were interviewed. The study served as the basis for proposals and recommendations on how to optimise the federal strategy aimed at making use of research findings.

Findings

Evaluation question 1 – Extent to which LHs and IRPs have helped to further objectives

LHs and IRPs are designed to be complementary instruments. LHs pursue longer-term VET research and provide support to young researchers. In contrast, IRPs are intended to enable pursuit of short-term applied research for policymakers and/or practitioners within the Swiss system of vocational and professional education and training (VPET). Therefore, in principle, these two instruments should help to achieve the three overarching objectives of support for VET research, i.e. to establish VET research, to ensure evidence-based policymaking for the Swiss VPET system and to further develop the Swiss VPET system. However, these objectives have not been entirely reached, which begs the question of why this is so, thereby requiring more in-depth analysis. In particular, few LHs have managed to survive and institutionalise themselves, which are clear indications that as an instrument, LHs have certain weaknesses. Nevertheless, it is important to point out that SERI support has enabled VET research to grow considerably over the past ten years. Sustainability of VET research is at risk due to the difficulties encountered in achieving institutional anchoring. Those we interviewed felt that, while evidence-based policymaking for the VPET system could be partly achieved, it was unlikely that VET research would have any significant influence over developments taking place within the VPET system.

In terms of suitability of other aspects of research support, we noted the following:

- *Three funding phases*: most of the respondents felt that the concept of three funding phases made sense. However, they pointed out that difficulties had been noted during transitions from one phase to another (continuity of research, work contracts for PhD students) as well as in relation to the entire duration of support (last phase considered to be too short).
- *Steering committee*: the steering committee plays a key role in ensuring quality and as an advisory body of SERI. Respondents, however, criticised several aspects: the fact that the various disciplines are not represented on this body in a balanced fashion; the fact that decision-making processes are not always clear to those on the outside; the fact that the steering committee has a rather one-sided focus on quantitative and empirical methodology. Over the past 4-5 years, these criticisms have been heeded and improvements are currently underway.
- *LH advisory boards*: advisory boards are perceived to be important bodies when it comes to internal quality control and subsequent development of LHs.

- *Swiss tier-one universities as host institutions for LHs:* although most of the respondents support the idea that only Swiss tier-one universities should be able to apply for LHs, there seems to be a consensus that other Swiss higher education institutions, i.e. universities of applied sciences (UAS), universities of teacher education (UTES) and the Swiss Federal Institute for Vocational Education and Training (SFIVET), should be more involved as partners in LH activities.

Evaluation question 2 – Extent to which SERI implementation measures have helped to further objectives

The suitability of the main implementation measures was assessed as follows:

- *Process of deciding research themes for LHs:* none of the respondents called into question the principle that SERI should take the lead in deciding research themes for LHs. However, they felt that the other two main partners within the Swiss VPET system (i.e. cantons and professional organisations) should be more involved in the decision-making process.
- *Process of selecting LHs and IRPs and selection criteria:* the LH selection process and selection criteria were criticised from various fronts. However, action has already been taken over the past few years to improve the situation. With regards to the process of selecting IRPs, respondents felt that there was a need to improve transparency and consistency.
- *Process of deciding whether LHs should be continued:* the respondents felt that the decision on whether LHs should be continued or discontinued should be made earlier. Likewise, they felt that it would be desirable for university deans to be involved earlier in the process of institutional anchoring of LHs once such a decision has been reached.
- *Process of supervision and control:* on the whole, respondents appreciated the rather unbureaucratic process of supervision and control adopted by SERI.
- *Cooperation between SERI, its steering committee and LH advisory boards:* respondents felt that cooperation was good to very good. Nevertheless – and especially in the first years – there were uncertainties surrounding the allocation of roles, particularly between SERI's steering committee and LH advisory boards.

Evaluation question 3 – Extent to which SERI's VET research support strategy has helped to further objectives

The following can be said about the suitability of SERI activities:

- *Overall support portfolio:* respondents felt that the priorities supported thus far were generally the right ones. They mentioned that there was a bit too much emphasis on economics and pedagogy and that there was still a need for an LH devoted exclusively to the VPET system.
- *Allocation of resources to individual LHs and IRPs:* all things considered, respondents felt that the benchmark maximum annual cap of CHF 500,000 for LHs was a good one. However, programmes to support young researchers were partly covered using extra funding. For IRPs, which include very different projects, respondents felt that the maximum annual cap of CHF 100,000 was too rigid.

- *Proportion of LHs and IRPs qualifying for funding, incl. annual absorption of funds:* Between 2004-2013, only 59 project proposals were submitted for IRPs and in five calls only 12 project outlines were submitted for LHs. This shows that the field of VET research is comparatively small and that research capacities were still being built up. This explains the very little absorption of funds, particularly in the beginning. Since then, around CHF 3.4 million in funding has been absorbed each year.

Evaluation question 4 – Extent to which research findings have been used to develop and manage the Swiss VPET system

A comprehensive preliminary study has shown that, despite considerable commitment on the part of managers of LHs and IRPs to disseminate research findings, so far only half of the key findings are actually being used. Moreover, only some of the findings are being used by a broader circle of actors. This is because there are often no transfer products to facilitate the use of findings. So far, VET research findings have mainly been used by teachers and/or the institutions where they are employed. Other practitioners and particularly policymakers within the VPET system – based on our analysis – make very little use of VET research findings.

Nevertheless, research findings produced by individual LHs and IRPs are relatively frequently picked up by the media. However, not all LHs and IRPs receive the same level of media attention. Since successful dissemination of research findings is a lengthy and extensive process requiring strong networking within the entire system, the various interviews clearly show that even highly committed researchers working within LHs and on IRPs find it difficult to overcome the hurdle of dissemination and therefore wish to receive support.

Evaluation question 5 – Extent to which VET research has been integrated within regular national research funding mechanisms

Based on their own statements, the researchers surveyed had only achieved limited success in securing funding for VET research from other funding sources. One of the reasons mentioned for this was the fact that many VET research projects, particularly those with practical applications, were not very compatible with the profile of eligible projects used by the Swiss National Science Foundation (SNSF). Competition for SNSF funding was also more intense and VET research projects had difficulty meeting SNSF requirements. For its part, the Commission for Technology and Innovation (CTI) required applicants to find suitable business partners. And finally, foundations tended to favour projects that would bring scientific prestige.

Evaluation question 6 – Suitability of objectives and concepts of LHs and IRPs

The respondents felt that the objectives pursued by LHs (i.e. research, support for young researchers, networking and dissemination) made sense but were overly challenging in certain respects. Even the objectives of IRPs (research and dissemination) were considered suitable.

Evaluation question 7 – Measures and allocation of resources among LHs and IRPs

All things considered, respondents felt that the measures taken by managers of LHs and IRPs were adequate. Networking in particular was considered to be an important and useful measure. Respondents felt that there was a need for improvement with regards to project planning measures and with regards to the amount of support provided by LHs to young researchers at PhD and postdoctoral level.

Evaluation question 8 – LHs and IRPs activities

The activities pursued by LHs and IRPs are comprehensive and may be assessed as follows:

- *Fulfilment of contractual tasks*: for the most part, LHs and IRPs performed the agreed tasks. We found that a strong focus on specific themes as well as an adequate temporal and financial framework – such as is the case with LHs – is necessary. Nevertheless, IRPs are also needed in order to conduct research on themes that are not covered by LHs. With this in mind, it is worth considering the possibility of clustering LHs even more closely together to create competence centres with a specific thematic-interdisciplinary focus. Federalist arguments would then relate more to IRPs. However, in order to do this, IRPs should be given a longer life.
- *Assessment of scientific quality*: on the whole, respondents felt that the quality of research output of LHs was good, in some cases very good and even outstanding. The same assessments were given for some of the IRPs. This should come as no surprise since all of the projects undergo a stringent selection process. Reporting and feedback from advisory boards have also helped to maintain a high level of quality. All things considered, there have been many innovative research findings and reports relating to economics of education, particularly from LH UZH/UniBE. This research output has received national and international attention and has led to further studies being conducted in other countries. The second LH devoted to economics of education at UniGE had less of a profile in terms of theme and research-driven innovation. LH EPFL has been successful in drawing attention to its research activities among learning technology experts who have had very little prior exposure to VET-related themes. With regards to LH UZH (Learning and Instruction for Commercial Apprentices), there is not very much to say for the moment since research output is still in the early stages. It is also rather difficult to determine the scientific quality of LH UniFR. The lead researchers are not necessarily perceived as VET researchers. The discontinued LH Basel (Learning competence) and LH HSG (Social competence) both received good scores in the evaluation in terms of research quality, although respondents had diverging opinions as to the quality of research at LH HSG.
- *Publications and support for young researchers*: it was mainly LH UZH/UniBE and the LHs devoted to pedagogical and psychological themes (LH UniFR and LH UniBas, incl. LH HSG) that were the most successful in supporting young researchers and in producing publications. LH UZH/UniBE and LH UniFR have received the largest financial volumes over the longest time span. Together, these LHs have greatly increased the volume of VET research and publication density since 2004. This is mainly due to the

strong presence of economics of education of renowned journals in the German-speaking and English-speaking world. This increase is also due to sponsored IRPs, some of which have also led to publication in important scientific journals.

- *Dissemination of research findings and networking:* In terms of dissemination of research findings, LH UZH/UniBE (Economics of Education, Firm Behaviour and Training Policies) and LH EPFL (Technologies for Vocational Training) – which have managed to anchor developed learning technologies in VET programmes for several different occupations – have achieved very good results. The same can be said of the LHs devoted to pedagogical and psychological themes (LH UniFR and LH UniBas), which were able to raise their profile among trainees.

Evaluation question 9a – Critical mass and continuity

Assessment of critical mass: all of the respondents agreed that SERI support was the main reason why many researchers have been actively conducting VET research and why VET research has gained a certain amount of visibility at the international level. Respondents did not share the same opinions, however, as far as critical mass is concerned. The main hurdle seems to be that there are few career prospects for PhD students and postdoctoral students.

Continuity: All of the respondents felt that it would not be a good idea for SERI to withdraw its support for VET research in the medium-term. Research structures are still not sustainable enough. In particular, there is inadequate anchoring at Swiss tier-one universities and a need for even stronger alliances between LHs and Swiss UAS/UTES.

Evaluation question 9b – National and international recognition

Recognition by national bodies: Thanks to the support that SERI has given to VET research, the Swiss Parliament is now paying closer attention to it. Some practitioners feel, however, that SERI-sponsored VET research does not adequately cater to the actual needs of practitioners nor is it geared to produce concrete applications.

Recognition by peers: Both in Switzerland and abroad, the scientific quality of LHs and IRPs is considered to be solid and good. In qualitative terms, Swiss research output is deemed to be equivalent to other German-speaking countries (Germany, Austria). Those directly involved in VET research stated that the international profile of Swiss VET research has risen strongly in recent years; still, not everyone agreed with this assessment.

Evaluation question 10 – VET research as appealing field of research

VET research at Swiss higher education institutions: thanks to SERI support for VET research, more researcher positions have been created, not only at Swiss tier-one universities but also at Swiss UAS and UTES as well as at SFIVET. However, no university professorship positions have been created thus far. Moreover, from an academic viewpoint, VET research still offers only limited appeal.

Conclusion

The entire evaluation was conducted on the basis of established evaluation criteria

Sustainability of developed resources and organisational structures

SERI support has been a major driving force in VET research. Nevertheless, the sustainability of VET research is considered to be uncertain, particularly if SERI were to withdraw its support. One of the greatest challenges is the lack of institutional anchoring at Swiss tier-one universities and therefore limited academic career prospects for young VET researchers. However, researchers trained at LHs are not only useful for subsequent development of VET research as an academic research field, but rather also as experts and decision-makers in cantonal governments, within the Federal Administration and other VET-related institutions.

Scientific quality of research

The scientific quality of Swiss VET research is deemed to be good and equivalent to VET research conducted in German-speaking countries.

Domestic and international recognition of sponsored research

Swiss VET research is known mainly in the German-speaking world. However, it has received increasing attention from the English-speaking world as well.

Eligibility within existing national research support structures

Although the SNSF, CTI and foundations have occasionally provided grants for VET research projects, the field of VET research is clearly still in need of specific funding. Without this funding, LH Researchers would never have been able to devote so much attention to the Swiss VPET system in their fundamental research projects. Likewise, it would have been very difficult to secure alternative funding for most of the more practically oriented IRPs.

Contribution to the management and development of the Swiss VPET system

Respondents who were contacted for the present evaluation and the preliminary study felt that SERI-funded VET research had not made a major impact in terms of improved management and in particular further development of the Swiss VPET system. SERI and the steering committee are already aware of these shortcomings and the corresponding need for improvement. Over the past two years, several steps have already been taken. However, further efforts are still needed. So far, practitioners have not had much of a say in deciding and selecting VET research themes.

Country comparison

From the country comparison, only limited conclusions can be drawn that are applicable to support for VET research in Switzerland. In fact, the foreign experts whom we interviewed felt that it was actually Switzerland that was ahead of other countries. If we compare the various contexts, we find that VET research was able to flourish in all locations where a research institute with a stable budget was created for the specific purpose of conducting VET research. Likewise, VET research became well-anchored in those countries where

established or newly appointed professors at higher education institutions devoted themselves to VET research.

It is mainly the Federal Republic of Germany that has a longer research tradition, provides support for VET research and has reached a critical mass with VET research activities. VET research is highly institutionalised and mainly pursued by two non-university institutes. The German Federal Institute for Vocational Education and Training (BIBB) is part of the Federal Ministry of Education and Research. The Institute for Employment Research (IAB) is part of the Federal Employment Agency. Both institutions choose their own thematic priorities, are an integral part of policy area research and are funded as such. Moreover, nearly all universities, mostly faculties of education science or economics, have a sub-discipline called vocational and business pedagogy. In addition, several university chairs from the fields of sociology, political science and psychology conduct research into VET-related themes. There are also other short-term research initiatives, such as the VET research initiative (BBFI), which has existed since 2006. The BBFI is devoted to five thematic priorities (incl. demographics, continuing education and training, openness to Europe) and has smaller project volumes. For the period running from 2011-2015, apparently now reaching the end of its cycle, there is also the larger-scale ASCOT initiative (technology-based measurement of competences in vocational education and training), which also provides support to young researchers. Here it should be noted that at the national level, VET research is no longer at the heart of support activities for the corresponding federal agencies. Instead, general VET research has gained considerable importance (see "NEPS" National Education Panel).

Apart from the VET research tradition in Germany, similar activities in Austria, Denmark and the Netherlands are very limited. None of these three countries has a large institute devoted to VET research. The number of university chairs conducting VET research is small: in Austria, it is mainly university professors in the field of economic education that conduct this research; in Denmark, VET research has only recently started at one university; and in Holland, it is conducted at four to five different locations. VET research at the ministerial level makes up a small portion of policy area research and is only conducted occasionally. So far, there have not been any noteworthy VET research initiatives in these countries.

Room for improvement and recommendations

Considering the fact that ten years of federal support for VET research has had mixed results, the evaluation team feels that there is considerable room for improvement in the following areas:

- Institutionalisation of support for VET research at Swiss tier-one universities, with the added involvement of UAS, UTEs and SFIVET
- Use of findings in the further development and management of the Swiss VPET system
- Development of support for young researchers
- Positioning of IRPs as a means of sustaining VET research
- Consolidation of revised governance structures

In the following pages, we shall explain the various considerations that prompted each recommendation. In addition, the evaluation revealed that there is a need for optimisation of individual aspects of SERI's support strategy.

Recommendations

In order to establish clear priorities, our recommendations are focussed on five aspects of SERI research support that require considerable optimisation. The recommendations are formulated at the level of development objectives. A more specific action plan will be needed in order to implement these recommendations.

Recommendation 1: VET research conducted at the various LHs should be clustered into two to three national competence centres at Swiss tier-one universities and should include participation by Swiss UAS, UTEs and SFIVET.

OPET/SERI support for VET research in Switzerland has undoubtedly helped generate considerable momentum. In Switzerland, never before have there been so many VET researchers as now. Apart from Swiss tier-one universities, more UAS and UTEs are also actively pursuing VET research in parallel to SFIVET's own VET research activities.

The sustainability of support for VET research is uncertain, particularly if SERI withdraws its support. LHs have been largely unsuccessful in their efforts to become institutionally anchored. The past ten years have also shown that LHs that are created at a single university and led by a single professor find it particularly difficult to establish themselves, for various reasons. In order to better anchor VET research at Swiss higher education institutions, we recommend that VET research at LHs be clustered into two to three competence centres in Switzerland. These competence centres would be devoted exclusively to VET research, which would create a promising framework and open up new possibilities:

- So far, support for VET research has been particularly productive when a larger number of researchers worked on a single theme and when funding remained stable over a longer period of time.
- The existence of PhD programmes in many disciplines is an important means of support for young researchers, but requires a minimum number of PhD students.

- So far, there have not been too many prospects for postdoctoral students, and such opportunities would require larger structures.
- LH managers who retire or step down from their positions could be asked to join a network, which would help to ensure the continuity of research.

In these new competence centres for VET research, there would not only be a clustering of several Swiss tier-one universities. The aim would also be to have Swiss UTEs, UAS, and SFIVET become directly involved. This is an important point primarily because over the past ten years, not one new university professorship has been created. In contrast, several professors at Swiss UTEs and UAS actively pursue VET research.

Such competence centres would serve as platforms for cooperation between Swiss tier-one universities, on the one hand, and Swiss UTEs/UAS and SFIVET on the other. They would also offer a means of addressing the following shortcomings in current support for VET research:

- *Insufficient transfer of VET research findings to VET professionals:* so far, universities have not offered much specific training to VET professionals. Therefore, research transfer to VET professionals is deemed inadequate. At competence centres, this shortcoming could be addressed through a stronger commitment on the part of VET researchers to develop training courses at UTEs/UAS and/or SFIVET.
- *Most young researchers at UTEs and UAS have few chances of obtaining a PhD:* Young researchers who conduct VET research at UTEs/UAS and/or SFIVET could obtain a PhD through a cooperation contract. Such cooperation contracts would facilitate the participation of UTEs/UAS and/or SFIVET in the new competence centres and would help to draw young researchers and PhD students to work on VET research projects.

It still remains to be decided what legal form such competence centre would take. The commitment of the involved higher education institutions, however, should be obtained at an early stage. Likewise, it is important to decide whether this network should include all of the higher education institutions involved or be limited to a few “core institutions”.

A new approach based on 2-3 national competence centres would also imply the need for a new solution for funding. In such a model, the current three-phase concept is unlikely to work. Likewise the complete withdrawal of the Confederation would also not be a very realistic proposition. In such a case, an adequate solution could be found by considering the entire range of funding instruments that the Confederation uses for policy area research and for research of national interest.

Assuming that development of two to three competence centres for VET research would require a longer planning and preparatory phase, we suggest that support for LHs at higher education institutions remain based on the three-phase model for the short- and medium-term.

We consider the following points to be important for subsequent development:

- The heads of host higher education institutions should be involved from the very beginning. They should also show greater commitment in deciding whether to continue LHs as early as in Phase 2.
- The entire duration of support should be extended to 14 years and the transitions between each phase should be better managed.
- Phase I launch and development (3+2 years): the transition between phases could be managed as follows: after 2.5 years, the first feedback and requests for change would be taken into account for the purpose of adapting performance. Once Phase I has reached Year 4, the situation would once again be examined and validated to determine whether and to what extent the findings from the interim evaluation have been taken into account. The additional two years would allow PhD students to complete their dissertation. The decision on whether to continue funding in a Phase II would be made after 4.5 years of support.
- Phase II anchoring and consolidation (4 years): the decision on whether to continue funding for a Phase III would take place after 7.5 years of support. The decision concerning a Phase III would be determined mainly on whether there is solid commitment from the host institution (e.g. university) to cover the costs of the LH on its own.
- Phase III independence and partial replacement of funding (5 years): This phase should also last longer (i.e. 5 years) but be combined with a degressive model of funding.

Recommendation 2: improvements should be made to ensure that VET research findings may be used for further development and management of the Swiss VPET system and for the entire dissemination process.

Despite a major commitment shown by some of the managers of LHs and IRPs to disseminate VET research findings, so far only some VET research findings have been used by a broader circle of actors. For this reason, respondents felt that the objective of ensuring extensive use of VET research findings for the further development and management of the Swiss VPET system has not been reached. The VET research evaluated here falls into the category of policy area research, which by definition is supposed to deliver findings for policymaking, and in this case not just for the Confederation but also for all three of the main partners within the Swiss VPET system. In this light, significant improvements need to be made. SERI and the steering committee were already aware of the problem before this evaluation was conducted and have already taken initial steps to optimise the dissemination processes.

With this in mind, we recommend that the dissemination process be optimised as follows: careful thought should be given to the subsequent usage of VET research findings by the Confederation, the cantons and professional organisations and other actors within the Swiss VPET system. This thought process should continue from the very beginning and throughout the various phases of an LH or IRP and special measures should be taken to support these endeavours if necessary.

This includes the following aspects; additional details can be found in the final report on the preliminary study:

- Earlier and more consistent involvement of practitioners and the three main partners within the Swiss VPET system, i.e. both in the selection of research themes for LHs as well as – where meaningful – in the supervision of LHs and IRPs.
- The managers of LHs and IRPs should be encouraged to design research projects in such a way as to ensure that there is at least a potential for research findings to be used. In addition, they should be required not only to publish their research findings, but also to inform potential users of the existence of these research findings. Funding should also be contractually set aside for presentations and publication in non-scientific journals (dissemination).
- Not all research findings lend themselves to direct usage by a larger circle of actors. For this reason, some of the research findings should first be tested in pilot projects to be developed further. Alternatively, transfer products such as teaching materials or tools should be developed beforehand. In these transfer tasks, the managers of LHs and IRPs should receive structural support. Here too, the competence centres mentioned in Recommendation 1 could offer the framework needed to create synergies and offer the potential for career development.
- Given the key role that SFIVET plays in the provision of basic and continuing training to teachers and trainers within the Swiss VPET system, SFIVET should play a greater role in the dissemination and transfer of research findings to practitioners.

Recommendation 3: Support for PhD students should be based on SNSF standards and support for young researchers should include postdoctoral students.

All of the respondents felt that good and active support for young researchers was absolutely essential for development of a given research field. Therefore, more consistent support should be given to young researchers. Thus far, not all young researchers have enough time to pursue their own research. In addition, supervision and selection of PhD students have not always been ideal. Previous experience has shown that focussing only on PhD students is not enough. Postdoctoral students also require support. The following specific steps should be taken to improve support for young researchers:

- At the very least, PhD students who receive support from LHs should have the same rights and obligations as PhD students who receive their funding from the SNSF. In particular, this includes the amount of time set aside for research, the amount of supervision given and the planning of their doctoral thesis.
- If it is geographically feasible, consideration should be given to the idea of introducing PhD programmes for individual linguistic regions. Here, the competence centres referred to in Recommendation 1 would create an ideal framework for this.
- Special funding possibilities should also be created for postdoctoral students. IRPs would be one option, SNSF fellowships for stays abroad would be another.
- Funding to cover support for young researchers should be drawn from a single budget line.
- PhD students hired by an LH up to two years before the end of a given phase should have secure funding for at least 3 but no more than 4 years; this funding should cover

the transition period from one phase to the next as well as in the case where the LH is discontinued.

Recommendation 4: IRPs should be reinforced as a complementary support instrument.

The merits of IRPs as a complementary instrument to LHs have been clearly demonstrated. IRPs can contribute to a more rounded research portfolio at national level and may be used by the Confederation as a means of pursuing short-term mandates as well as bottom-up projects involving a broad spectrum of institutions. In consideration of this, we recommend that IRPs initially be maintained and reinforced as an instrument. The following aspects should be taken into account:

- Calls for project proposals should be used more frequently as a means of actively awarding contracts for IRPs.
- The broad spectrum of institutions eligible for funding should be maintained: Swiss tier-one universities, UAS, UTEs, SFIVET, and also private institutions.
- Funding of IRPs should be specifically adjusted for the project at hand rather than based on fixed rules on maximum annual caps.

Recommendation 5: Governance should be strengthened through a clear allocation of tasks and roles for the various bodies involved. The Confederation, cantons and professional organisations should work more closely together in the support programme.

Over the past ten years, the allocation of tasks and roles for the various bodies involved has gradually become clearer. Now, there is a need for further strengthening of governance by ensuring that the Confederation, cantons and professional organisations work more closely together in the support programme.

As in previous years, consideration should be given to further development of support programme governance. The following decisions were important steps in this direction: members of the steering committee cannot at the same time manage an LH; a more equitable balance must be achieved within the steering committee in terms of disciplines, methods, age, gender and nationality; the advisory boards of individual LHs will be included in status reports. For this aim in mind, steps have been taken to ensure that both SERI and the steering committee are involved in the selection of members of LH advisory boards and that a member of the steering committee is able to take part in the meetings between individual LHs and their advisory board. Moreover, over the past few years, the allocation of roles between SERI and the steering committee have been more sharply delineated. Specifically, SERI has increasingly and visibly taken the lead and the steering committee has increasingly played the role of scientific advisor.

Given the insufficient use and usability of research findings produced by LHs and IRPs (see Recommendation 2) and the fact that vocational and professional education and training is a joint mission of the Confederation, the cantons and professional organisations, the

extent of cooperation between these three partners within the decision-making process has been inadequate.

In light of the foregoing, the following specific steps should be taken with regards to Recommendation 5:

- The current steering committee should – within the scope of its remit – be renamed as a scientific advisory committee. In addition, the terms of office of members of this body should be made shorter.
- In order to ensure the more consistent participation of all three of the main partners within the Swiss VPET system, a body comprising all three (e.g. EBBK) should be involved in the selection of research themes. When supervising sponsored VET research, a new support committee could be set up to provide general support to SERI-sponsored VET research. Alternatively, there could be one practitioners committee for each LH.
- All in all, all governance structures should be summarised in a single document and made accessible to everyone. This document should also describe the main processes (e.g. process used to select research themes, process used to select LHs and IRPs, processes for the drafting of status reports and financial reports, processes for continuation of LHs, etc).

Summary of recommendations

To sum up, respondents felt that there is considerable need for optimisation. Fundamental changes are needed to ensure that VET research is institutionally anchored, sustainable and able to contribute substantially to further development and strategic management of the VPET system (see Recommendations 1 and 2).

In addition, support for VET research has enabled considerable progress to be made over the past ten years. In order not to lose this investment, SERI needs to maintain its support for VET research until sustainable structures can be put in place. The current situation is very promising: thanks to SERI's support, Swiss VET research has become much stronger and has achieved a good position both at the national and international levels. Never before have so many researchers in Switzerland focussed on VET issues.