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Organizational and societal goals in tension? A survey of communication practitioners at Swiss higher education institutions

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Abstract

The public communication of higher education institutions (HEIs) has gained importance both in practice and research and can serve different goals. Many scholars argue that HEI communication departments mainly aim to promote their organization and are less concerned with broader societal goals and normative principles of communication. Since these assumptions have not yet been explored empirically, we surveyed 203 communication practitioners from all 42 Swiss HEIs on their role conceptions and the quality criteria used in their communication departments. Our results show no general dominance of organizational over societal goals and revealed few differences between different types of HEIs.

Keywords

Participation and science governance; Professionalism, professional development and training in science communication; Science and media

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Introduction

The communication of higher education institutions (HEIs) is becoming increasingly influential in the public communication about science [Fähnrich, 2018; Marcinkowski, Kohring, Fürst & Friedrichsmeier, 2014; Schäfer & Fähnrich, 2020]. Communication departments in HEIs have expanded in recent years and now use many online and offline channels to address more target groups [Autzen & Weitkamp, 2020; Vogler & Schäfer, 2020; Wormer, 2017]. In contrast, journalism in general, and science journalism in particular, has suffered from cuts in staff and resources [Guenther, 2019].

The growing influence of HEI communication is fueled by the broader changes in the digital media ecosystem but also by developments in academia itself. Higher education and science policies of the past decades have encouraged HEIs and scientific organizations to compete with one another, with scientific performance

being measured metrically, for instance, by the quantity of publications, third-party funding, citations, and public attention [Davies & Horst, 2016; Franzen, 2020; Friedrichsmeier & Fürst, 2012; Krücken, 2021; Weingart, 2017]. Some researchers fear this might stimulate an unhealthy orientation towards measurable and 'rankable' output, and lead to an exaggeration, oversimplification, or sensationalization of scientific findings [König, 2020; Sumner et al., 2014; Treise & Weigold, 2002; Weingart, 2017]. They also argue that this development is increasingly orienting the public communication of HEIs towards organizational reputation, with communication practitioners primarily aiming to promote their organization and seeing as secondary the dissemination of knowledge to society and serving the public interest [Bauer & Gregory, 2007; Weingart & Joubert, 2019; Wormer, 2020]. However, this assumed "tension between organizational and societal goals" [Raupp, 2017, p. 150] has not yet been explored empirically.

This study addresses this gap by examining how organizational and societal goals are reflected in role conceptions of HEI communicators and in the quality and success criteria of HEI communication departments. In doing so, it also assesses potential differences between different types of HEIs. The analysis is based on a standardized online survey of 203 communication practitioners from all 42 HEIs in Switzerland.

Literature review

Theoretical and empirical research on HEI communication has grown in recent years and is conducted in various fields, including strategic communication and public relations (PR) research, higher education research, science and technology studies, science communication, and organizational sociology [Fähnrich, 2018; Fähnrich, Metag, Post & Schäfer, 2019; Koivumäki, Koivumäki & Karvonen, 2021; Schäfer & Fähnrich, 2020; VanDyke & Lee, 2020]. Under labels like "institutional science communication", "university communication", "university PR", or "HEI communication", scholars analyze the communication *in*, *from*, and *about* higher education institutions, taking internal and external stakeholders into account [Fähnrich et al., 2019, pp. 8–9]. In this article, we focus on the external, public communication by central communication departments in HEIs, including media relations, marketing and public events, or online communication via websites, blogs, and social media.

Empirical studies revealed that communication departments in HEIs have significantly expanded and diversified over the past 20 years [Bühler, Naderer, Koch & Schuster, 2007; Engwall, 2008; Marcinkowski, Kohring, Friedrichsmeier & Fürst, 2013; Schwetje, Hauser & Leßmöllmann, 2017] and now use a broader variety of communication channels [Autzen & Weitkamp, 2020; Fähnrich, 2018; Metag & Schäfer, 2019] to directly reach a growing number of target groups and stimulate news media coverage [Autzen & Weitkamp, 2020; Bühler et al., 2007; Franzen, 2020; Lederbogen & Trebbe, 2003; Marcinkowski et al., 2013; Raupp, 2017]. Social media have become more important in recent years even though news media remain crucial for HEI communication [Davies & Horst, 2016; Lo, Huang & Peters, 2019; Scheu, 2019].

Many studies on HEI communication were based on semi-structured interviews with communication practitioners [Davies, 2020; Elken, Stensaker & Dedze, 2018; Engwall, 2008; Lo et al., 2019; Schwetje, Hauser, Böschen & Leßmöllmann, 2020].

Moreover, research "has frequently been desk-based" [Davies, 2020, p. 228] and analyzed only outputs of HEI communication. Few standardized surveys of HEI communication practitioners have been conducted [Bühler et al., 2007; Marcinkowski et al., 2013; Schwetje et al., 2017], and they all focused on Germany. Research has yielded valuable findings on the structures, professionalization, and outputs of HEI communication departments [e.g., Davies, 2020; Davies & Horst, 2016; Elken et al., 2018; Engwall, 2008; Lo et al., 2019; Trench, 2017; Vogler & Schäfer, 2020] but have neglected their goals. Moreover, many scholars [Autzen & Weitkamp, 2020; Fähnrich, 2018; Lynch, Bennett, Luntz, Toy & VanBenschoten, 2014; Medvecky & Leach, 2017; VanDyke & Lee, 2020] have noted a knowledge gap on how the professionalization of HEI communication relates to its quality criteria and foundational normative principles. Although several studies investigated scientists' motives for public engagement [e.g., Carlsen & Riese, 2016; Kessler, Schäfer, Johann & Rauhut, 2022; Peters et al., 2008], few studies have examined how HEI communication practitioners perceive their professional roles [Elken et al., 2018; Schwetje et al., 2020; Schwetje et al., 2017] and normative standards of HEI communication [Koivumäki & Wilkinson, 2020]. In turn, scholarship on the ethics and quality of science communication neglects to consider the role of HEI communication offices and communication practitioners [Dahlstrom & Ho, 2012; Medvecky & Leach, 2019; Nordmann, 2011; Olesk et al., 2021; Priest, Goodwin & Dahlstrom, 2018]. A recent study [Koivumäki & Wilkinson, 2020] conducted seven interviews with employees of HEI central communication offices and found that they were also concerned with the ethical responsibilities of their work and the societal implications of science communication beyond the strategic interests of their organization. A German survey [Schwetje et al., 2017] of 280 HEI communicators in central communication offices indicates that HEI communication aims to gain a competitive advantage for the organization and ensure the accuracy of the communicated scientific knowledge. However, both studies did not examine details or different facets of the normative principles and quality criteria of HEI communication.

Despite this lack of empirical evidence, scholars have made strong assumptions on whether HEI communication pursues societal goals such as knowledge dissemination, public dialogue, and citizen participation, or only organizational goals such as legitimation and strategic self-promotion (see Figure 1, [cf. Raupp, 2017]). While some scholars perceive both goals as irreconcilable opposites [Bauer & Gregory, 2007; Entradas et al., 2020], others argue that HEI communication can pursue both organizational *and* societal goals simultaneously [Irwin & Horst, 2016; McKinnon, Black, Bobillier, Hood & Parker, 2019; Roberson, 2020]. A third position claims a tension between the two goals [Borchelt & Nielsen, 2014; Lehmkuhl, 2019; Leßmöllmann, 2019; Raupp, 2017], with organizational goals recently tending to become dominant [Peters et al., 2008; Weingart & Joubert, 2019; Wormer, 2020].

Based on a review of the scattered literature on this topic, we identified criteria according to which one can analytically distinguish between societal and organizational goals of HEI communication. The most commonly cited facets of organizational goals are that HEI communication departments allegedly aim to:

- legitimize an HEI and its funding [Borchelt & Nielsen, 2014; Schwetje et al., 2017], create a positive reputation of the organization [Autzen & Weitkamp,

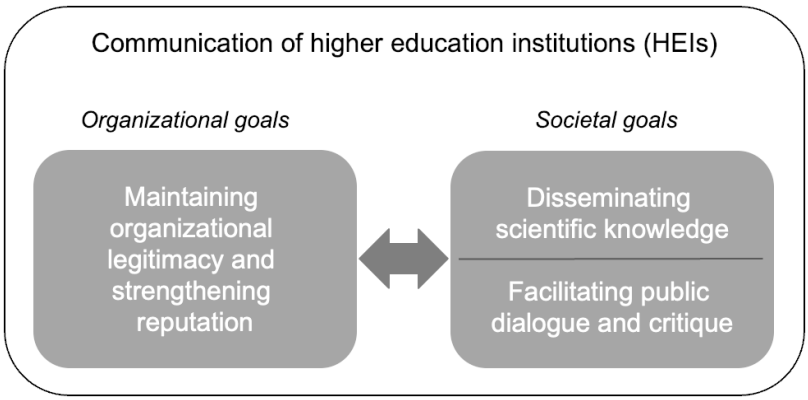

Figure 1. Dual goal orientation of HEI communication (adapted from Raupp [2017, p. 150].

2020; Engwall, 2008; Raupp & Osterheider, 2019], and avert negative news coverage [Bauer & Gregory, 2007; Engwall, 2008; Scheu, 2019];

- attract high public visibility [Friedrichsmeier & Fürst, 2012; Lo et al., 2019], often quantitatively measured by the amount of news media coverage [Borchelt & Nielsen, 2014; Peters et al., 2008], the number of attracted participants and users [Kaplow, 2019; Weingart & Joubert, 2019], or the number of followers, likes, and shares on social media [Kaplow, 2019; Raupp & Osterheider, 2019]; and
- produce much output, such as a large volume of content and media releases [Borchelt & Nielsen, 2014; Kaplow, 2019].

These criteria overlap with strategic goals of communication departments outside science and higher education [Fredriksson, 2020; Hallahan, 2015]. They reflect the changes brought about by new public management reforms — greater autonomy of HEIs but also pressure to strive for legitimation and public reputation [Fumasoli & Lepori, 2011; Marcinkowski et al., 2014]. This has led to the increased importance of quantitative measures and the growing competition for public visibility among HEIs [Davies & Horst, 2016; Espeland & Stevens, 2008; Friedrichsmeier & Fürst, 2012; Krücken, 2021].

However, since universities and colleges are part of the public sector and central sites for the production and discussion of knowledge, it is also often argued that their communication has to meet societal expectations and normative standards [Brüggemann, Lörcher & Walter, 2020; Lehmkuhl, 2019; Leßmöllmann, 2019; Raupp, 2017; Wormer, 2017]. This is mirrored in the most commonly cited facets of societal goals of HEI communication. Accordingly, HEI communication departments should aim to:

- convey and disseminate scientific knowledge to society [Autzen, 2014; Raupp, 2017; Raupp & Osterheider, 2019; Schwetje et al., 2017];
- follow the "rules of good scientific practice" [Schwetje et al., 2017, p. 51] as they apply to scientists, which include accurate presentation of scientific findings and disclosure of scientific uncertainties and knowledge limitations

[Claessens, 2014; Dempster, 2020; Leßmöllmann, 2019; Weingart, 2017; Wormer, 2017]; and

– enable participation and critique, including dialogues with citizens — in situ and online via social media [Autzen, 2014; Borchelt & Nielsen, 2014; Claessens, 2014; Raupp, 2017; Roberson, 2020; Weingart & Joubert, 2019; Wormer, 2017].

These societal goals reflect normative principles of science and correspond to deliberative requirements of public communication [Esteve Del Valle, Sijtsma, Stegeman & Borge, 2020; Nordmann, 2011; Sprain, 2018; Weingart, Joubert & Connoway, 2021]. In science communication research, the emphasis on participation and critique marks the shift from the concept of "public understanding of science" to "public engagement with science" [Sprain, 2018, p. 76; Weingart et al., 2021, p. 5]. Raupp [2017] has highlighted that both the accurate dissemination of scientific knowledge and the facilitation of dialogue and critique are constitutive parts of societal goals (see Figure 1).

However, no study has comprehensively examined yet how these different goal orientations manifest themselves empirically. We will do so here, assuming that both organizational and societal goals can be observed in the role conceptions of HEI communicators (individual level) and in the criteria used in their communication departments to evaluate the success and quality of communication (organizational level). It is likely that different types of HEIs differ in their orientation towards organizational and societal goals. Research universities (RU), for example, may be more inclined to engage in the public communication of scientific knowledge and to align their communication efforts with rules of good scientific practice (such as accurate presentation of scientific findings and disclosure of scientific uncertainties) than universities of applied sciences (UAS), which are generally more focused on applications and the needs of the regional economy [Lepori, 2008]. These societal goals could be even less important for colleges of education (CE) due to their specialization in teacher education [Denzler, 2014]. However, although different types of HEIs have different general objectives, performance, and stakeholders, they may become more similar in the long run. For example, due to the growing competition among HEIs for funding and a good reputation and due to the "flagship" position of RU [Sataøen & Wæraas, 2016, p. 168], UAS are seeking to adopt some of the structures of RU [Lepori & Müller, 2016; Truniger, 2017]. The "challenge for individual HE institutions, then, is to respond successfully to similarity and differentiation pressures at the same time" [Sataøen & Wæraas, 2016, p. 167]. This could mean that HEIs of all types strive to demonstrate communication-wise that they adhere to "general standards and norms" [Sataøen & Wæraas, 2016, p. 168] championed by flagship universities.

Against this background, we ask the following research questions (RQs):

RQ1a: To what extent are organizational and societal goals reflected in HEI communicators' role conceptions?

RQ1b: Do different types of HEIs differ regarding their communicators' role conceptions?

RQ2a: To what extent are organizational and societal goals reflected in the quality and success criteria of HEI communication departments?

RQ2b: Do different types of HEIs differ regarding the quality and success criteria of their communication departments?

Methods and data

We surveyed communication practitioners at Swiss HEIs and considered changes in HEI communication and its diverse formats and channels. This study is part of a major research project investigating the communication of HEIs in Switzerland (https://c3h.ch/en) and has been funded by the Swiss National Science Foundation (SNSF).

The case of Switzerland

Switzerland is one of the most innovative countries in the world and has a high density of world-leading HEIs [Fumasoli & Lepori, 2011; Griessen & Braun, 2008]. Thus, it has a high need for a well-educated workforce and has generally favorable political, socioeconomic, and cultural conditions for science and research [for an overview, see SERI, 2020]. Switzerland is a typical case for the worldwide expansion and diversification of higher education systems [Frank & Meyer, 2007; Lepori, 2008; Marginson, 2016]. As in many other countries [Christensen, 2011; Marcinkowski et al., 2014; Sataøen & Wæraas, 2016], Swiss HEIs have been influenced by new public management reforms, which have resulted in greater pressure for legitimation and growing competition for public visibility [Fumasoli & Lepori, 2011; Truniger, 2017]. Moreover, digitalization now allows communication via diverse formats and channels. These developments led to an expansion of Swiss HEI communication departments and their outputs [Fürst, Volk, Schäfer, Vogler & Sörensen, 2022], and to their growing influence on news media reporting [Vogler & Schäfer, 2020].

Switzerland has three types of HEIs: research universities (RU), universities of applied sciences (UAS), and colleges of education (CE). While most Swiss RU cover a broad spectrum of disciplines and have a long tradition, UAS and CE were founded in the 1990s and 2000s and specialize in applied research and teacher education, respectively [Denzler, 2014; Lepori, 2008; Truniger, 2017]. In Switzerland, HEIs of all types are largely based on public funding [Truniger, 2017].

Online survey

A pretest was conducted to assess the quality and comprehensibility of our questionnaire. Ten participants, including communication officers, heads of communication, and scholars of higher education research and university communication, were invited to fill in the questionnaire and make comments and suggestions, after which they were interviewed individually. After their feedback, question and item wording were partly changed, some questions and items were added, and further changes were made.

The online survey was programmed with EFS survey software and was conducted between September 1 and December 1, 2020. It included all 42 HEIs in Switzerland: 14 RU, 10 UAS, and 18 CE. By searching for publicly available information on all these HEIs, we compiled a list of all communicators working in their central

communication departments, such as their communication, media, and marketing offices. Similar to Germany [Schwetje et al., 2017, p. 23], the number of staff in Swiss communication departments differs according to the type of HEI. Of the 552 people we identified and invited by email to participate in the online survey, 297 were from RU, 186 from UAS, and 69 from CE. The questionnaire was available in German, French, and Italian, as the survey included HEIs located in all three main linguistic regions of Switzerland. Two email reminders were sent out. Moreover, the association Swiss Universities Communications Officers Conference (SUPRIO) informed its members about the survey and encouraged them to participate.

Sixty people in our contact list could not be reached or did not work in HEI central communication offices. Of the 492 individuals successfully contacted, 203 participated in our survey, yielding a 41% response rate, which is somewhat lower than the response rates of previous surveys of HEI communicators in Germany [Marcinkowski et al., 2013; Schwetje et al., 2017] but very satisfactory compared to other online surveys [Hagenah, 2017; Hooker & Gil de Zúñiga, 2017].

The number of respondents was balanced in terms of gender (see Table 1) but varied considerably according to the HEI type: more than half (52%, 106) of the respondents worked in RU communication departments, whereas only 27 percent (55) worked at UAS and 12 percent (24) at CE. Nine percent (18) did not reveal their HEI type. These numbers reflect the above-mentioned differences in size of communication departments according to the type of HEI.

Table 1. Sample description (n = 203).

Gender	Age	Educational level	Working years at the HEI	HEI type
Female: 51%	M = 45, SD = 9	Apprenticeship degree, high school diploma, or bachelor's degree: 24%	M = since 2013, SD = 5	Research universities: 52%
Male: 48.5%	< 35 years: 13%	Master's degree: 71%	before 2005: 10%	Universities of applied sciences: 27%
Non-binary: 0.5%	> 50 years: 27%	Doctorate: 6%	after 2015: 37%	Colleges of education: 12%

Operationalization

The organizational and societal goals of HEI communication were measured with six items each (see Tables 2 and 3). These six items captured individual role conceptions ("I consider it my task to…") and perceptions of the quality and success criteria used in HEI communication departments ("How important are the following success and quality criteria in your current department?"). The items were formulated based on the literature outlined above (see the section "Literature review") and encompass different forms and channels of communication, including news media and social media. The respondents replied on a seven-point scale from 0 ("not at all" or "not at all important") to 6 ("very much" or "very important"). The participants in our pretest argued that HEI communication departments might have specific quality and success criteria beyond those operationalized. Thus, we

included an open text field in the questionnaire that allowed the participants to add important quality and success criteria. Ten respondents used this option.

The respondents were also asked to indicate the type of HEI that they were working for (as shown in Table 1). This item was used to determine if HEIs' organizational and societal goals for their communication differ according to their type. As the data for both dimensions were not normally distributed and the numbers of subjects according to the HEI type varied considerably, we applied the nonparametric Kruskal- Wallis test [MacFarland & Yates, 2016]. We used the z-value to calculate the effect size (r), with $r = 0.1$ indicating a small effect, $r = 0.3$ indicating a medium effect, and $r = 0.5$ indicating a large effect [Fritz, Morris & Richler, 2012, p. 12].

Results

Pertaining to RQ1a, on how strongly organizational and societal goals are reflected in the individual role conceptions of HEI communicators, our results showed that both dimensions are part of HEI communicators' jobs (Table 2). However, the respondents saw their most important task as the promotion of the public visibility and reputation of their organization ($M = 5.6$), which is an organizational goal. To a lesser but still considerable degree, they considered it their duty to transfer scientific knowledge to society ($M = 4.7$) and to engage citizens in dialogue ($M = 4.3$), which are societal goals. These are followed rather distantly by the organizational goals of fending off negative headlines ($M = 3.7$) and justifying funding ($M = 3.5$). The respondents least agreed that they should take on a critical role towards their HEI ($M = 3.0$), which is a societal goal.

Regarding potential differences in the role conceptions according to HEI types (RQ1b), the Kruskal- Wallis test revealed that RU communicators considered the societal goal of mediating scientific knowledge much more important than did their counterparts at CE ($r = 0.38$; $p = .001$) and UAS ($r = 0.34$; $p = .001$). The calculated r-values indicate medium effects. However, we found no significant differences between HEI types in terms of organizational goals.

Regarding RQ2a, on respondents' perceptions of the quality and success criteria used to evaluate the work in their department, and RQ2b, on potential differences between HEI types, our results again showed no general dominance of organizational over societal goals (see Table 3). The organizational goal of attracting attention in news media ($M = 4.9$) was deemed almost as important as the societal goal of accurately presenting scientific findings ($M = 4.7$). Achieving many likes and shares ($M = 3.9$) was considered as important as stimulating dialogue with users on social media ($M = 3.9$). The societal goal of transparent presentation of scientific uncertainties ($M = 2.9$) and the organizational goal of producing a maximum output ($M = 3.1$) were the least agreed to as quality criteria of HEI communication.[1] Overall, these results suggest that organizational and societal quality criteria balance each other.

[1]The open text field in our questionnaire yielded information on additional success and quality criteria in HEI communication departments ($n = 10$). They highlighted the societal goals of demonstrating the social relevance of research, teaching, and knowledge transfer; communicating complex issues as comprehensively as possible; and fostering dialogue not only with citizens or social media users — as was asked in the survey — but with different stakeholders of the organization. Additional organizational goals were to recruit students and participants of continuing education; increase students' pride in their alma mater; engage employees and (prospective) students

Table 2. Role conceptions related to organizational and societal goals (individual level) according to HEI types.

"I consider it my task to…"					
Organizational goals	**n**	**M** (SD)	**RU** M (SD)	**CE** M (SD)	**UAS** M (SD)
boost my institution's public visibility and reputation	202	5.6(0.8)	5.6(0.8)	5.5(0.8)	5.7(0.5)
avert negative headlines about my institution	201	3.7(1.8)	3.4(1.9)	4.0(1.2)	4.0(1.6)
justify the funding of my institution	202	3.5(1.8)	3.7(1.9)	3.2(1.8)	3.5(1.7)
Societal goals	**n**	**M** (SD)	**RU** M (SD)	**CE** M (SD)	**UAS** M (SD)
communicate scientific knowledge to society	200	4.7(1.5)	5.1***(1.2)	4.0***(1.7)	4.3***(1.6)
allow citizens to engage in dialogue with my institution	202	4.3(1.5)	4.4(1.5)	4.2(1.1)	4.3(1.3)
shed a critical light on my institution	200	3.0(1.7)	3.0(1.6)	3.2(1.7)	2.9(1.7)

Notes. *M* = arithmetic mean; *SD* = standard deviation; *RU* = research universities; *UAS* = universities of applied sciences; *CE* = colleges of education. Measurements were on a seven-point scale from 0 ("not at all") to 6 ("very much"). Significant differences were calculated using the Kruskal-Wallis nonparametric test (*$p \leq .05$, **$p \leq .01$, ***$p \leq .001$).

With respect to differences between HEI types, for organizational goals, the Kruskal- Wallis test showed that the RU communicators considered attention in news media significantly more important as a success criterion than did their CE counterparts ($r = 0.26$; $p = .009$). The UAS communicators deemed getting lots of likes and shares on social media significantly more important than did their CE counterparts ($r = 0.32$; $p = .014$). In terms of societal goals, the RU communicators also more significantly valued quality criteria such as accurate presentation of scientific facts than did their counterparts at UAS ($r = 0.38$; $p = .001$) and CE ($r = 0.37$; $p = .001$). Again, all the calculated *r*-values indicate medium-sized effects.

Discussion and conclusion

Discussion

The increasing professionalization and growth of HEI communication departments has led to different yet pronounced assumptions about the prevalence of organizational and societal goals in HEI communication. But these assumptions have only rarely been empirically examined. We addressed this gap by developing a conceptualization of both goals. Using a standardized survey of 203 communication practitioners in central communication offices at Swiss HEIs, we assessed individual role conceptions as well as criteria used in communication departments to evaluate the success and quality of communication.

Our results show that communicators see their most important task as the organizational goal of enhancing the public visibility and reputation of their HEI.

with the university brand; increase the visibility of the HEI's services and courses; present the HEI as an important player in the social and cultural life of the town; and achieve good ranking positions and awards to enhance the HEI's international reputation.

Table 3. Quality and success criteria related to organizational and societal goals (organizational level) according to HEI types.

"How important are the following success and quality criteria in your current department?"					
Organizational goals	**n**	**M** (SD)	**RU** M (SD)	**CE** M (SD)	**UAS** M (SD)
attract a lot of attention from news media	195	4.9 (1.2)	4.9**(1.2)	4.1**(1.6)	4.8(1.1)
get lots of likes and shares on social media	194	3.9 (1.4)	3.9(1.4)	3.0*(1.6)	4.2*(1.2)
produce as much output as possible	194	3.1 (1.6)	3.1(1.6)	2.8(1.3)	3.3(1.6)
Societal goals	**n**	**M** (SD)	**RU** M (SD)	**CE** M (SD)	**UAS** M (SD)
accurately represent scientific facts	194	4.7 (1.4)	5.2***(1.2)	4.2***(1.4)	4.2***(1.5)
stimulate dialogues with users on social media	195	3.9 (1.5)	4.0(1.5)	3.4(1.8)	4.2(1.2)
make uncertainties and limitations of scientific studies transparent	193	2.9 (1.7)	3.1(1.8)	2.8(1.7)	2.6(1.5)

Notes. *M* = arithmetic mean; *SD* = standard deviation; *RU* = research universities; *UAS* = universities of applied sciences; *CE* = colleges of education. Measurements were on a seven-point scale from 0 ("not at all important") to 6 ("very important"). Significant differences were calculated using the Kruskal- Wallis nonparametric test (*$p \leq .05$, **$p \leq .01$, ***$p \leq .001$).

Correspondingly, attracting a lot of news media attention is considered a crucial success and quality criterion. Beyond these two items, however, both organizational and societal goals are important for communicators and communication departments. Unlike common assumptions [Bauer & Howard, 2009; Göpfert, 2007; Weingart, 2017; Weingart & Joubert, 2019; Wormer, 2020], there is no irreconcilability between organizational and societal goals nor general dominance of organizational goals over societal goals. Therefore, we need a more nuanced view of the different qualities of HEI communication in actual practice. Most recently, Entradas and Bauer [2022, p. 5] suggested that organizational and societal goals be conceived more as a continuum. Ultimately, one could argue that this is an analytical distinction, as it is conceivable that HEIs may pursue societal goals as a means of organizational self-promotion in practice. Few goals tend to be incompatible, such as the societal goal of shedding a critical light on one's HEI and the organizational goal of averting negative headlines. Depending on the situation, however, shedding a critical light on one's HEI can also be in the HEI's own interest, for instance, in a crisis where a self-critical attitude can avert further damage to the HEI's public reputation despite negative headlines.[2]

Our results also show that the respondents' individual role conceptions and the quality criteria of their departments seem to be largely similar across HEI types. However, few differences exist between types of HEIs. Specifically, the RU communicators consider societal goals more important than do their CE and UAS counterparts, both in terms of role conceptions and quality criteria. In particular,

[2]Here is an example from Germany: in a media release titled "Study on the origin of the coronavirus pandemic published," the University of Hamburg misrepresented and widely communicated a non-peer-reviewed research article by a professor that was not based on scientific methods as a scientific study, which caused strong public criticism [see, e.g., Matthews, 2021, March 17]. In such a situation, a self-critical reflection could avert (further) reputational damage.

the RU communicators consider accurate representation of scientific facts as their most important quality criterion. Overall, this relates to the trend of HEIs of all types striving to demonstrate their adherence to "general standards and norms" [Sataøen & Wæraas, 2016, p. 168] but also shows that RU still hold a flagship position.

Implications

The respondents across all HEI types are least likely to take on a critical role towards their organization or to address the limitations and uncertainties of the scientific knowledge produced by their organizations. This is worth noting, since the economic crisis of journalism and the simultaneous growth of HEI communication have led to less critical and investigative journalism and more and more media coverage initiated and shaped by organizations' PR departments [Göpfert, 2007; Guenther, 2019; Starr, 2012; Vogler & Schäfer, 2020]. Researchers have argued that this changing balance of power between science journalism and organizational PR could increase the uncritical dissemination of affirmative messages of organizations [Bauer & Howard, 2009; Göpfert, 2007; Weingart, 2017], which could jeopardize societal trust in science and HEIs in the medium to long terms [Dempster, 2020; Peters et al., 2008; Weingart & Joubert, 2019]. On the one hand, our study highlights the importance of securing resources for critical science journalism; and on the other hand, it points out the need to strengthen normative principles in HEI communication, such as by intensifying their self-critical reflections and more strongly anchoring their communication on rules of good scientific practice.

For these purposes, powerful normative and ethical guidelines are important instruments. Associations and networks of HEI communication in most countries have hardly established ethical guidelines and codes [Autzen & Weitkamp, 2020; Davies & Horst, 2016, pp. 92–94; Medvecky & Leach, 2017] and have thus neglected an important area of professionalization [Bowen, 2008; Davies & Horst, 2016; Trench, 2017]. However, in Germany, Switzerland, and the UK, such codes have been developed in recent years. The codes address normative principles of knowledge dissemination, including critical self-reflection and the disclosure of scientific uncertainties [see Acatech, Leopoldina & Akademienunion, 2017; DRPR, 2022; Siggener Impulse, 2016; Stempra, 2019; Swiss Academies of Arts and Sciences, 2021]. In light of the increasing influence of HEI communication on science communication and journalism, sector-wide discussions and developments as well as robust implementation of such principles seem crucial.

Our results also have implications for higher education policies, which strongly influence HEIs [Autzen & Weitkamp, 2020, p. 476; Marcinkowski et al., 2013; Schäfer & Fähnrich, 2020, p. 144]. In recent decades, higher education policies have focused on "governance by numbers" [Heintz, 2008] and stimulated competition between HEIs [Friedrichsmeier & Fürst, 2012; Krücken, 2021; Marcinkowski et al., 2013]. This is reflected in our results regarding organizational goals. As our findings show, communication quality and success are often evaluated with easily measurable output criteria, such as number of media articles, volume of content produced, or likes on social media (with similar observations: Weingart and Joubert [2019]). At the same time, however, higher education policies also require

HEIs to pursue societal goals, that is, to foster dialogue, open science, participation, and criticism and to enhance the quality of their communication of scientific results [Burgelman et al., 2019; Davies & Horst, 2016; Franzen, 2020; Weingart & Joubert, 2019] — aspects that are quantifiable only to a limited extent and necessitate more qualitative indicators and evaluation methods [cf. Raupp & Osterheider, 2019, p. 187; Weingart & Joubert, 2019]. Thus, if higher education policies are meant to strengthen the public role of HEIs in society and to prioritize dialogical, informative, and critical communication by HEIs, such policies must dispense with purely quantitative benchmarks and set appropriate incentives.

Limitations and further research directions

This study has several limitations. First, it provides empirical data for HEI communication only in Switzerland, which naturally restricts the generalizability of the results. However, it is plausible to assume that HEIs in other Western countries are similarly affected by the growing competition for public visibility among HEIs [Davies & Horst, 2016; Friedrichsmeier & Fürst, 2012] stimulated by new public management reforms in higher education systems [Krücken, 2021; Marcinkowski et al., 2014; Teichler, Arimoto & Cummings, 2013]. Looking ahead, the measurement developed here could be used in future studies to compare differences and similarities in the organizational and societal goal orientations of HEI communication in different countries. Second, the few responses from the CE communicators limit the comparison of HEI types. However, according to our search of publicly available information on communication practitioners of all 42 Swiss HEI communication offices, CE are typically smaller and have much fewer communication employees than RU or UAS (see the section "Online survey"). Third, our study collected self-reported data and thus has focused on the perceptions of HEI communicators rather than observing their actual practices. Observations or qualitative interviews with HEI communicators could reveal whether the equal or similar importance of organizational and societal goals leads to potential conflicts in certain situations [see the example in Leßmöllmann, 2019, pp. 79–80] and how communicators resolve such problems. Fourth, it would be valuable to relate the role conceptions of HEI communicators to their professional socialization (e.g., in journalism, PR, or other occupations) and demographic data. Fifth, future studies could consider conducting content analyses of the outputs (e.g., media releases or social media posts) of HEI communicators to find out how organizational and societal goals manifest themselves in the actual content. Finally, future research could examine the quality and success criteria of different HEI actors such as central or decentral communicators, scientists, students, university leaders, and university boards and investigate the dynamics of their interplay and the consequences of potentially diverging perspectives and practices [cf. Davies, 2020]. For example, surveys with scientists could shed more light on whether the communication materials created by HEI communicators align with "rules of good scientific practice" [Schwetje et al., 2017, p. 51] and normative principles of knowledge dissemination. Overall, this study calls for greater scholarly attention to the different qualities and normative principles of HEI communication.

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