

Validating the Organizational Climate Measure for Norwegian Universities and
Colleges (NOCM_UH)

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May 2011

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Abstract: Organizational climate predicts individual and organizational outcomes. One established measure of organizational climate is the organizational climate measure (OCM) developed by Patterson et al. (2005). However, Patterson and colleagues argue that climate measures have little descriptive power and that respondents often are confused when answering climate questionnaires as to which target they should answer according to. To ensure the questionnaire's descriptive power and applicability in the educational sector, Hoff (2010) adjusted the existing OCM resulting in 7 additional sub-dimensions that aimed to capture the uniqueness of the organizational structure and objectives (research, teaching, and societal gains). One new dimension that was related to team and teamwork was also added. This article investigates the validity of the NOCM_UH. A sample of 470 employees at 20 different institutes and departments within the education sector completed the questionnaire. Results from confirmatory factor analysis indicated good levels of fit, supporting both the adjustments implemented by Hoff (2010) and the 22-latent factor structure model. However, values of interrater agreement did not yield acceptable results, indicating that the current sample results should not be aggregated to the organizational level. However, as the confirmatory factor analysis achieved acceptable fit, it was concluded that the NOCM_UH is applicable in the Norwegian educational sector.

Introduction

Factors that contribute to an organization's success have for long been of interest for social scientists (Pickle & Friedlander, 1967). Extensive research has shown the importance of employee contribution at the work place and its effect on organizational outcome (De Cuyper, Van der Heijden, & De Witte, 2011). One contribution that is indicated to correlate positively with organizational success is the employees' shared perception of practices and procedures at the work place such as handling innovative ideas, the extent of performance feedback given, and their perception of autonomy; these perceptions are often described as the organizational climate of the organization (Patterson et al., 2005).

Organizational climate is defined as the employees' perceptions of the work place practices, events, and procedures (Schneider & Reichers, 1983; e.g. Ashkenasy, Wilderom, & Peterson, 2000; Schneider, 1990) and claims to predict future employee outcomes such as compliance with safety procedures and regulations (Neal, Griffin, & Hart, 2000), job satisfaction (Johnson & McIntye, 1998), and organizational outcomes such as service quality (Ehrhart, Schneider, Witt, & Perry, 2011) and organizational efficiency (Arnetz, Lucas, & Arnetz, 2011).

Research on organizational climate has existed since the beginning of the 1940s (Schneider, Ehrhart, & Macey, 2011). Consequently several approaches to measure organizational climate exist. Questionnaires are the most frequent method to measure climate (Patterson et al., 2005). Some of these questionnaires have been locally developed, while others are more standardized measurements (Hunter, Bedell, & Mumford, 2007). Patterson and colleagues (2005) argued that because of all the inconsistencies in the measurements, it was not possible to draw clear research conclusions regarding proper measurements on organizational climate. For example, Patterson et al. (2005) argued that Goodman and Svyantek (1999) used their Organizational Climate Questionnaire to measure dimensions of *culture*; a related topic often confused with climate (Rentsch, 1990; Payne, 2000). In order to solve such problems, Patterson and colleagues (2005) decided to develop a more thoroughly validated questionnaire that would measure the global organizational climate. This resulted in the development of the Organizational Climate Measure (OCM).

OCM consists of 17 dimensions that cover different aspects of organizational efficiency such as employees' perception of supervisory support (e.g. Nijman & Gelissen, 2011), the organization's emphasis on training (e.g. Almeida-Santos, Chzhen, & Mumford, 2010), the organization's orientation towards change (e.g. Zhou & Wu, 2009; West & Farr, 1990), and employee welfare (e.g. Jiao, 2010). Based on the Competing Values Model

framework (CVM) by Quinn and colleagues (Quinn & Rohrbaugh, 1983; Quinn & McGrath, 1982; Quinn, 1988) the OCM has received support as a solid theoretical model (Bernstrøm, Lone, Bjørkli, Ulleberg, & Hoff, 2011; Lamond, 2003; Kwan & Walker, 2004; Howard 1998). (For more about CVM see Patterson et al., 2005). OCM is argued to be a comprehensive and general model of organizational efficiency, and is therefore said to be a valid model across sectors and countries (Bernstrøm et al., 2011; Patterson et al., 2005). However, because OCM is meant to be applicable to many sectors, it is reasonable to assume that it is a general model rather than a specific model. Thus the OCM might be general enough to be applicable to every sector, but it might also *be too* general to be able to capture contextual aspects specific for a particular sector.

Patterson and colleagues (2005) pointed out that climate measures might yield a contextual problem. They argued that climate measures show little descriptive power (Patterson et al., 2005) as a result of too general phrases and targets (e.g. Howe, 1977; Schneider & Reichers, 1983). This means that when answering climate measure questionnaires, the respondents are not completely sure as to which target they should answer according to (team, department, or organization). When speaking of the development of the OCM instrument Patterson and colleagues (2005) argued: “The content and wording of such measures should therefore be relevant and comprehensible to all organizational members “ (p. 383). However, to develop the OCM instrument to be a general model that it is applicable to every employee and every sector might decrease the model’s ability to consider contextual aspects within most sectors. Is it possible to make a general model like OCM considerate of contextual aspects within a specific organization or sector? The current article aims to explore this issue.

The Norwegian Organizational Climate Measure for Universities and Colleges (NOCM_UH)

Hoff (2010) attempted to consider the contextual aspects within a sector and tailored the OCM to the educational sector (i.e. universities and colleges). Hoff (2010) adjusted the original OCM to fit local and contextual aspects of the educational sector and thereby simplified which target to answer according to. As the OCM is argued to be an established model (Bernstrøm et al., 2011), the original dimensions are assumed to be fairly valid for the educational sector as well as any other sector; therefore the original dimensions in OCM were believed to be applicable to universities. However, Hoff (2010) considered other studies with empirical results that led Hoff to argue one dimension was missing from the OCM instrument

(Hønsen, 2010). This dimension consisted of factors important within the educational sector; factors related to team and teamwork.

Content Adjustments

By focusing on the content captured by the OCM, a thorough qualitative analysis of open, unstructured interviews regarding aspects of organizational climate at universities was carried out by Hønsen (2010). Statements were categorized according to the OCM dimensions by way of thematic analysis. Statements that did not fit OCM dimensions were content analyzed. The result of the content analysis revealed that 30.42% of the residual statements were related to teamwork issues and that the original OCM categories only explained 50% of the data. Based on the results by Hønsen (2010), Hoff (2010) therefore developed a 'Team' dimension in addition to the 17 dimensions in the original OCM. With the additional dimension, the model explained 65.18% of the data. Consequently, empirical results supported the addition of a team dimension to the OCM instrument (Hønsen, 2010). Because teamwork clearly was an important topic in the organizational climate of universities, the team dimension consisted of 7 questions aimed at covering central aspects of team dynamics. The dimension covered team aspects like efficiency, effectiveness, a joint focus on task and human relation issues, and cohesiveness.

Besides the team dimension, the original OCM dimensions had received extensive support and were believed to be valid and applicable to all sectors including the educational sector. Since the empirical study conducted by Hønsen (2010) only argued for the addition of one new dimension, Hoff (2010) made no further attempt to investigate whether there were additional factors that should be considered. Therefore, the following adjustments to fit the context and structure of the educational sector were only adjustments on the original 17 OCM dimensions (Hoff, 2010). By focusing on the original dimensions there were several adjustments implemented by Hoff (2010) that targeted structural aspects within the educational sector.

Structural Adjustments

One central topic in Scandinavian universities and colleges is the distinction between scientific staff (teaching and research) and support staff (HR, IT, maintenance, finance, and others) (Hoff, 2010). When asked about integration (an OCM dimension tapping the internal communication of a division or department), there is potentially a big difference between internal communication among scientific staff, and internal communication between scientific and support staff. Hence, Hoff (2010) split the integration dimension into two separate

dimensions. (For more on organizational climate in relation to structure and context see e.g. Payne & Mansfield, 1973).

Furthermore, universities produce three types of products that might be rather different in nature: research, teaching, and societal benefits (Hoff, 2010). Because they are fairly different, it is quite conceivable to have a high score for research and a low score for teaching, or vice versa. Hence, Hoff (2010) split the outward focus dimension of OCM into the three aforementioned dimensions: research, teaching, and societal benefits, respectively. Because the product is split into three different functions, the quality dimension in the original OCM should be split accordingly. However, Hoff (2010) only splits this dimension into quality of research and quality of teaching, and gave no explanation as to why societal benefits were not measured as a separate quality dimension. Based on the structural and content changes of the original OCM, the NOCM_UH consisted of 22 dimensions, as opposed to the original 17. See Table 1 on the following page for description of the new dimensions of NOCM_UH (Hoff, 2010).

Moreover, as the distinction between support staff and scientific staff is profound, Hoff (2010) conducted an additional split. This split was a partition of the questionnaire in its whole. Patterson et al. (2005) argued that the wordings and content of the climate questionnaire should be relevant and comprehensive by all employees, therefore one part was tailored at scientific employees while the other part targeted support staff. The differences between the questionnaires could be the insertion of a specific name to a target in a statement. For instance, in the questionnaire for support staff, a statement was “*ways of improving the communication with society in general is not given much thought in the technical /administrative unit*”, whereas a scientific employee would be given a similar statement “*ways of improving the communication with society in general is not given much thought*”. (For a more detailed presentation on how the NOCM_UH items were adjusted, see *Sample and Procedure* in the methods section). An overview of the questionnaire for scientific staff is found in Appendix A and for support staff in Appendix B.

Table 1. *New NOCM_UH Dimensions Adjusted From Previous OCM Dimensions.*

Previous Dimensions	New Dimensions	Content
Integration	Integration within the group (among support staff or within the scientific staff).	The level of interdepartmental communication and trust within the closest group.
	Integration between groups (between the support staff and scientific staff).	The level of interdepartmental communication and trust between groups.
<i>None</i>	Team	Level of cooperation, cohesiveness, effectiveness, sharing of information, group support, and flexibility in permanent or semi-permanent work groups.
Outward focus	Outward focus – Teaching.	The level of communication and responsiveness to students’ needs.
	Outward focus - Research	The level of communication and responsiveness to the external research community.
	Outward focus - Society	The level of communication and responsiveness to societal needs.
Quality	Quality – Research	The focus on the research quality and the perception of importance of delivering high quality research.
	Quality – Teaching	The focus on the teaching quality and the perception of importance of delivering high quality teaching.

Aim of This Study

To test the new climate instrument, the present article investigated whether statistical analysis would support the 22-latent factor structure. If the 22-latent factor structure was supported, the new dimensions would be seen as factorially distinct and thus providing the OCM with additional information. If the results indicated that to be the case, then Hoff’s (2010) contribution and adjustments to the OCM instrument might provide new solutions on how to increase descriptive power within climate questionnaires. Therefore, the aim of the current article was to carry out an empirical validation of the NOCM_UH developed by Hoff (2010) by way of confirmatory factor analysis (CFA). Hoff (2010) made several adjustments and all of these adjustments should be extensively tested.

Firstly, one should investigate if the new team dimension is factorial distinct and belongs in a climate measure targeting/for universities. Further, even though there are theoretical reasons to partitioning the three original dimensions (integration, outward focus, and quality), empirical research should be conducted to see if empirical results also would support such a partitioning. In other words, does the 7 new dimensions (integration*2,

outward focus*3, and quality*2) contain more information than the original 3? By including the team dimension the current article tests if the 8-factor model indicates a better fit than the 4-factor model. Assuming that the new adjustments have only increased descriptive power, the author assumes that the 8-factor model will convey a better fit. Therefore, the current article hypothesize the following:

Hypothesis 1a: Confirmatory factor analysis finds a better model fit for the 8-factor model than for the 4-factor model.

Secondly, even though scientific staff and support staff were given somewhat different questionnaires, the aim was to only add contextual aspects and not to ask different questions. In other words, if the NOCM_UH adjustments only differed according to context, then the factor structure should remain stable for both groups. Therefore, the current article hypothesize the following:

Hypothesis 1b: Confirmatory factor analysis finds a better model fit for the 8-factor model than for the 4-factor model among scientific staff.

Hypothesis 1c: Confirmatory factor analysis finds a better model fit for the 8-factor model than for the 4-factor model among support staff.

Thirdly, based on the theoretical assumption that OCM can be generalized across organizational sectors and countries, the current article assumed the OCM's 17 original dimensions to also be applicable to the educational sector. This includes the new adjustments because the adjustments on the OCM instrument was only adjusted to increase descriptive power as recommended by Patterson et al. (2005). Statistical analysis should therefore support the 22-latent factor structure (Costello & Osborne, 2005). Previous results on the OCM's factor structure (Bernstrøm et al., 2011; Patterson et al., 2005) have found support for a 17-latent factor structure. Therefore; this article attempted to investigate whether the original OCM also could be generalized to the educational sector. Based on the original 17 dimensions alongside with Hoff's (2010) new adjustments to increase the instruments' descriptive power, the present article investigated whether the overall 22-latent factor structure would receive support within Norwegian universities and colleges. Therefore, the current article hypothesize the following:

Hypothesis 2a: Confirmatory factor analysis supports the new 22-latent factor structure constituting NOCM_UH.

Fourthly, assuming that support staff had received and answered the same questionnaire as scientific staff, the current article assumed to find indications of the same factor structure among support staff (HR, IT, maintenance, finance, and others) and among scientific staff. Therefore, the current article hypothesize the following two:

Hypothesis 2b: Confirmatory factor analysis supports a 22-latent factor structure among technical/administrative staff.

Hypothesis 2c: Confirmatory factor analysis supports a 22-latent factor structure among scientific staff.

Method

Sample and Procedure

To ensure the continued contextual adaptations of the NOCM_UH, the current article did some continued adjustments on the NOCM_UH. By use of four university employees (two employees from support staff and two employees from scientific staff) the research team (three master students, including this article's author, and two researchers) conducted a Think-Aloud (TA) pilot of the questionnaire, in an attempt to discover where the questionnaires' descriptive power was weak. A TA is a pragmatic approach where a sample of respondents from an equivalent sample of the target sample (in this case employees at a university or college), answers the whole questionnaire while speaking out loud about thoughts, future actions, analytical resonance, and questions. (e.g. Oort, Schröder, and French, 2011). While speaking out loud a member of the research team took notes of the comments or constraints reported by the respondent. The positive outcome of conducting a TA was that it gave immediate feedback on how an actual respondent or user perceived and believed the content and relevance of the NOCM_UH. Mainly, which target the respondent was answering about and according to what perspective. After going through the results, the research team added "here" to most statements, in order to specify that respondents should answer according to their closest department or institute and not to different parts within the organization (Rousseau, 1988). Insertion of specific target names were also implemented, as the majority of respondents were unsure whether to answer according to the institute, the faculty level, or the university as a whole.

Further procedures within the questionnaire were a replication of the Bernstrøm et al. study (2011) as the items were not randomly arranged, but rather arranged by their attachment to a scale. It is argued that researchers probably want to extract scales relevant to the aim of their study. Therefore, the scales presented with their items attached will be more similar to

the way they will be used in later studies. Hence, they were not randomized (Bernstrøm et al., 2011; Patterson et al., 2005). See Appendix A and B for an overview of the item order.

The NOCM_UH questionnaire was administered to 808 employees from twenty different departments or institutes at three different universities and colleges (høgskoler) in Norway. In return for their participation, most schools were promised individual reports at faculty level. The questionnaire was sent through an online service (Questback) and answered via e-mail. The respondents were asked to answer questions regarding their work climate where they would answer according to their perception of their work place in general and not according to specific events. All respondents were ensured that the data would not be used for other purposes than this current study and that the data would be deleted after analysis. Respondents were also assured that their responses were anonymous and would not be linked back to them.

Management in each department briefed their employees on the matter and asked all employees to participate. The employees were separated by type of job-position consisting of two groups. Group one was scientific employees, such as professors and researchers. Group two was comprised of support staff, such as technical and administrative staff. In all, 470 employees completed the questionnaire, resulting in a 58% response rate. This is a very high response percentage for this type of studies (Baruch & Holtom, 2008). Scientific staff consisted of 67,23% of the sample (N=316) and technical/administrative staff consisted 32,77% (N=154).

To check for response biases, logistic regression was conducted between the respondents that answered after the first e-mail invitation and those who did not respond till after the first reminder. There were no significant difference between the groups ($p < .01$) regarding the 22 dimensions.

Two items were deleted from the questionnaire as they were only given to one of the groups (scientific staff). The items correlated with the other items, item1: $r = .518$ and item2: $r = .491$, within the same dimension, assumed to reveal no new information. The items were at the very end of the questionnaire and therefore not believed to affect the answers to other questions. Consequently, these two items were excluded from all further analysis. (See Appendix A to see which items were deleted, items are marked in bold).

There were no missing values as it was made mandatory to answer all questions resulting in less bias and no loss of information (Sterne et al., 2009). On the other hand, by giving respondents no choice but to answer all questions, information about the questions' relevance may be lost. In other words, if a question seem irrelevant to a respondent, they must

answer it anyway, giving no feedback to researchers about redundant or misplaced questions.

Data were collected from November 4, 2010 to March 22, 2011.

Questionnaire

The questionnaire was a renewed version of OCM, re-named NOCM_UH. For a full version see Appendix A and B. The questionnaire was administered in both Norwegian and English, as some of the employees did not speak Norwegian. The questions in Norwegian were from the Norwegian organizational climate measure (NOCM) questionnaire by Bernstrøm and colleagues (2011), which was a translated and back translated version of the original OCM. The additional dimensions and items were developed by Hoff (2010) and implemented by the research team.

The NOCM_UH consisted of 106 items in total, spread on the 22 scales. The number of items per scale varied from 3 to 7. The response format was a four point Likert scale, ranging from 1: 'agree', to 4: 'disagree'.

Results

Confirmatory Factor Analysis

Hypothesis 1a argued that the new adjustments have only increased the instruments' descriptive power by adding contextual adjustments and therefore assumed that the 8-factor (integration*2, outward focus*3, and quality*2, and team) model would convey a better model fit than the 4-factor model (integration, outward focus, and quality, and team). By using Structural Equation Modeling (SEM) the 8-factor model and the 4-factor model were compared. All models were estimated using AMOS 16.0 (Arbuckle, 1997-2007). The results from the confirmatory factor analysis are shown in Table 2. Included are the chi-square and the degrees of freedom, as the model fits are a function of these numbers (Curran, Bollen, Chen, Paxton, Kirby, 2003).

There are several ways to interpret the model fit and there is no overall agreement on one analysis that yields better values than the others (Fan & Sivo, 2007). Some statistical tests are highly sensitive to sample size, some are dependent on the sample being normally distributed (e.g. McIntosh, 2007), while others are affected by the number of parameters (e.g. Hooper, Coughlan, & Mullen, 2008). Therefore, several indices of model fit are included. However, even though Patterson et al. (2005) utilized the Tucker-Lewis Index (TLI) (also known as Non-Normed Fit Index, NNFI), the current article will not discuss this value as it prefers simpler models, similar to the RMSEA (Hooper et al., 2008).

Table 2. *Compared Goodness of Fit Indices by the 4-Factor and the 8-Factor.*

Index	Original 4 factors	Modified 8 factors
CFI	.669	.883
RMSEA	.100	.060
Chi-square (d.f.)	3740.970 (659)	1723.942 (637)
Chi-square/d.f.	5.677	2.706

N=470

RMSEA. The root mean squared error of approximation (RMSEA) is regarded as “one of the most informative fit indices” (Diamantopoulos & Siguaaw, 2000, p. 85) because of its sensitivity to the models’ estimated parameters. A RMSEA value should be below 0.05 to be considered a good fit and below 0.08 to be an acceptable fit (McDonald & Ho, 2002; Hooper et al., 2008). The value for model fit for the 4-factor model was .100 and the RMSEA value for the 8-factor model was .060. This indicates that the model fit for the 8-factor model predicted the items’ observed covariance better than the 4-factor model. However, one of the RMSEA weaknesses is that it rewards simpler models (Fan & Sivo, 2007). Because the items in the NOCM_UH are only hypothesized to load on one factor, this is regarded as a simple model. Regardless, RMSEA is viewed as the better measure for model fit as its greatest advantage is its ability to calculate a confidence interval around its value (MacCullum, Brown, & Sugawara, 1996), thus, testing the null hypothesis more accurately (McQuitty, 2004).

CFI. The CFI (comparative fit index) value should optimally be 0.9 or higher to be accepted as a good fit. The CFI value for the 4-factor model was .669 and at .883 for the 8-factor model thus not indicating good fit. Moreover, The CFI is one of the most reported fit indices due to the fact that it is the measure that is least affected by sample size (Fan, Thompson, & Wang, 1999).

Other fit indices. One of the traditional measures to evaluate model fit is the chi-square (Hooper et al., 2008). Unfortunately, as it is highly sensitive to the sample distribution it cannot be used on the NOCM_UH data as some of the different dimensions are not normally distributed. McIntosh (2007) went as far as saying that even a properly specified model would be rejected if there were severe deviations from normality. Another way to view the model fit represented by the chi-square is by using Wheaton, Muthen, Alwin, & Summers’ (1977) relative/normed chi-square ($\chi^2/df.$) represented by the chi-square value divided by the degrees of freedom (d.f.) (Hooper et al., 2008). A value close to 2 is argued to indicate good

fit (Wheaton et al., 1977; Tabachnick & Fidell, 2007). The value obtained for the 4-factor model was at 5.677 and at 2.706 for the 8-factor model. Thus, the 8-factor model indicated a better fit.

Results for Hypothesis 1a summarized. Based on the results from the CFA the model fit indices for the 8-factor model were significantly better than for the 4-factor model indicating that the 8-factor model fits the data better. Therefore hypothesis 1a was confirmed.

Hypothesis 1b predicted that the confirmatory factor analysis would support the 8-factor model among scientific staff. Confirmatory factor analysis compared the model fit of both the 4-factor and the 8-factor structure. Table 3 depicts the values for the scientific staff.

Table 3. Goodness of Fit Indices of the 4 Factors and the 8 Factors Between Scientific Staff.

Index	Original 4 factors	Modified 8 factors
CFI	.656	.863
RMSEA	.106	.068
Chi-square (d.f.)	2987.987 (659)	1562.878 (637)
Chi-square/d.f.	4.534	2.453

N=316

RMSEA. The RMSEA value obtained for the 4-factor model was at .106 among scientific staff, indicating a poor fit. However, the value for the modified 8-factor model indicated acceptable fit, RMSEA=.068.

CFI. The CFI value for the 4-factor model was at .656 indicating poor fit. Moreover, the CFI value for the modified 8-factor model was at .863 also indicating poor fit.

Other fit indices. The relative chi-square (CMIN/d.f.) had a value of 4.534 for the 4-factor model and a value at 2.453 for the 8-factor model. This indicates a better fit for the 8-factor model.

Results for Hypothesis 1b summarized. Based on these results the 8-factor model indicated a better model fit between the scientific employees, implying that the 8-factor model describes the data better. Hence hypothesis 1b was confirmed.

Hypothesis 1c predicted that the results from the CFA would support the 8-factor model among support staff. Confirmatory factor analysis compared the model fit of both the 4-factor and the 8-factor structure. See Table 4 for goodness of fit indices for both the original 4-factor model and the modified 8-factor model among support staff.

Table 4. *Goodness of Fit Indices of the 4-Factor and the 8-Factor Among Support Staff.*

Index	Original 4 factors	Modified 8 factors
CFI	.662	.872
RMSEA	.098	.061
Chi-square (d.f.)	1623.525 (659)	1003.578 (637)
Chi-square/d.f.	2.464	1.575

N=154

RMSEA. The RMSEA value of the model fit for the 4-factor model was .098, indicating poor fit. The RMSEA value for the 8-factor model indicated an acceptable fit among support staff with a value of .061.

CFI. The CFI values indicated poor fit for both the original 4-factor model and the modified 8-factor model. See Table 4.

Other fit indices. The relative chi-square indicated similar results for both the original and the modified model, indicating relatively same model fit.

Results for Hypothesis 1c summarized. Based on the results in Table 4, only the RMSEA indicated one of the models to fit. Even though the other indices yielded no results that favored a model, the RMSEA indicated a better fit for the 8-factor model. Therefore hypothesis 1c was supported indicating that the 8-factor model was a better fit among support staff.

Hypothesis 2a predicted that confirmatory factor analysis would support a 22-latent factor structure. The results from the confirmatory factor analysis are shown in Table 5 and the factor loadings based upon the confirmatory factor analysis are presented in Table 7.

Table 5. *Goodness of Fit Indices for NOCM UH's 22-Latent Factor Model*

Index	
CFI	0.837
RMSEA	0.044 (LO90: 0.043 HI90: 0.046)
SRMR	0.066
Chi-squared (d.f.)	10009.489 (5228)

N=470

RMSEA. Just as Bernstrøm et al. found in 2011, a RMSEA value of 0.044 was found, indicating good fit. Similar results for stability (LO90: 0.043 HI90: 0.046.) as those found by Bernstrøm et al. (2011) were also obtained in the present article.

CFI. Similar to both results from Patterson et al. (2005) and Bernstrøm et al. (2011), an acceptable value of the CFI was not found. See Table 5.

SRMR. The standardized root mean square residual (SRMR) measures the differences between the predicted covariance and the observed variance. The values for the SRMR range from 0 to 1, where 0 indicates perfect fit. Acceptable levels should be below 0.08 (Hu & Bentler, 1999). The current article received a value of 0.066, indicating a good fit. However, it is important to know that the SRMR value will decrease as the number of parameters increase (Hooper et al., 2008). With a model like the NOCM_UH regarding number of items, the SRMR value might have been influenced by this.

Other fit indices. The relative chi-square value was close to 2, value=1.914, that is argued to indicate good fit (Wheaton et al., 1977; Tabachnick & Fidell, 2007).

Other indicators. Similar to the result of Bernstrøm et al. (2011) the results from the confirmatory factor analysis indicated high factor loadings between the items and the respective dimensions (factor loadings above .50 for most items) which further supported the 22-factor model. See Table 7 for a full overview of factor loadings for all items in each dimension. However, the current article found a Cronbach's alpha above 0.70 for all factors including autonomy (most dimensions exceeded .80), which differed from the findings of Patterson et al. (2005) and Bernstrøm et al. (2011) as autonomy had previously not exceeded .70. This further supported the model in the present article. Some factors correlated highly with each other (*welfare* and *supervisory support* had a correlation of .786 and *welfare* and *involvement* had a correlation of .703). However, modification indices in SEM suggested no further modifications would improve the model fit significantly. For a more detailed version see descriptive statistics and inter-correlations for the 22 NOCM_UH dimensions in Table 8.

Results for Hypothesis 2a summarized. Based on the results from the CFA all fit indices (except the CFI) indicated a good fit. Hence hypothesis 2a was confirmed.

Hypothesis 2b and 2c. To investigate differences between support staff and scientific staff a CFA was conducted on these groups separately. Hypothesis 2b and 2c predicted that these would both find support for a 22-latent factor structure. Table 6 shows the results from this analysis.

Table 6. *Goodness of Fit Indices for the 22-Factor Structure Per Group.*

Index	Support Staff	Scientific Staff
CFI	0.690	0.800
RMSEA (LO90-HI90)	0.066 (0.064-0.069)	0.051 (0.049-0.052)
SRMR	0.082	0.073
Chi-squared (d.f.)	8780.573 (5228)	9484.578 (5228)

N=470

RMSEA. The RMSEA for both groups were fairly stable, indicating a slightly better fit for the scientific staff, RMSEA=.051. Further, the RMSEA values showed little variation within the samples indicating stable values within the groups and that the values did not occur by chance (Bernstrøm et al., 2011).

CFI. Both the CFI for the scientific staff and support staff were below acceptable levels, indicating that the 22-latent factor structure deemed poor fit.

SRMR. The SRMR value indicated only acceptable fit for scientific staff with a SRMR=.073.

Other fit indices. The relative chi-square indicated acceptable fit for both groups, support staff=1.679 and scientific staff=1.814.

Results for Hypotheses 2b and 2c summarized. Based on these results it was concluded that the 22-factors indicate a 22-factor structure between scientific staff. Moreover, as the RMSEA yielded acceptable values for support staff, the 22-factor model fit the support staff as well. This means that hypotheses 2b and 2c are confirmed and that the 22-latent factor structure fits the data in both groups.

Consensual Validity

The NOCM_UH was developed as a measure of the global organizational climate within universities and colleges. The current article has applied statistical analyses on the NOCM_UH instrument in an attempt to validate the factor structure. However it is also important to investigate the more pragmatic perspective because NOCM_UH was developed to be applied by organizations as well (as a questionnaires mapping perceptions of organizational procedures). Differing from researchers, organizations applying the instrument might be more interested in the results that NOCM_UH might provide rather than the factor structure. This implies that how the organizational climate is measured should actually reflect all the employee opinions. To measure organizational climate it is common to use questionnaires (Patterson et al., 2005). This means that the employees' individual perceptions

of the climate are measured first, before the employees' perceptions are aggregated to the organizational level (Cohen, Doveh, & Nahum-Shani, 2009; James, 1982; Schneider, 1981).

Table 7: *Standardized Regression Weights*

Dimension	Item	Estimate	Item	Estimate	Item	Estimate	Item	Estimate	Item	Estimate
Autonomy Integration – within group Integration – between group	Q1	0.432	Q2	0.486	Q3	0.613	Q4	0.519	Q5	0.650
	Q6	0.552	Q7	0.498	Q8	0.648	Q9	0.671	Q10	0.535
	Q11	0.619	Q12	0.512	Q13	0.555	Q14	0.667	Q15	0.636
Involvement	Q16	0.644	Q17	0.827	Q18	0.665	Q19	0.801	Q20	0.616
	Q21	0.716								
Supervisory support	Q22	0.748	Q23	0.640	Q24	0.504	Q25	0.687	Q26	0.694
Emphasis on training	Q27	0.847	Q28	0.873	Q29	0.465	Q30	0.740		
Employee welfare	Q31	0.676	Q32	0.737	Q33	0.718	Q34	0.721		
Team	Q35	0.693	Q36	0.757	Q37	0.654	Q38	0.621	Q39	0.425
	Q40	0.459	Q41	0.539						
Formalization	Q42	0.588	Q43	0.612	Q44	0.633	Q45	0.536	Q46	0.629
Tradition Innovation & Flexibility	Q47	0.704	Q48	0.802	Q49	0.378	Q50	0.673		
	Q51	0.560	Q52	0.669	Q53	0.693	Q54	0.672	Q55	0.667
	Q56	0.527								
Outward focus – teaching	Q57	0.555	Q58	0.721	Q59	0.703	Q60	0.737	Q61	0.589
Outward focus – research	Q62	0.675	Q63	0.686	Q64	0.854	Q65	0.807	Q66	0.634
Outward focus – society	Q67	0.652	Q68	0.738	Q69	0.743	Q70	0.765	Q71	0.536
Reflexivity Clarity of organizational goals	Q72	0.618	Q73	0.681	Q74	0.641	Q75	0.628	Q76	0.656
	Q77	0.616	Q78	0.717	Q79	0.591	Q80	0.758	Q81	0.744
Efficiency	Q82	0.775	Q83	0.585	Q84	0.703	Q85	0.761		
Effort	Q86	0.543	Q87	0.575	Q88	0.600	Q89	0.576	Q90	0.606
Performance feedback	Q91	0.815	Q92	0.709	Q93	0.496	Q94	0.643	Q95	0.721
Pressure to produce	Q96	0.682	Q97	0.550	Q98	0.669	Q99	0.769	Q100	0.548
Quality – research	Q101	0.790	Q102	0.779	Q103	0.608				
Quality – teaching	Q104	0.665	Q105	0.669	Q106	0.542				

For a full view of the questions, see Appendix A

Table 8. Cronbach's Alpha, Means, SD's, and Correlations for the Climate Scales

Scales	Cronbach's alpha	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1 Autonomy	0.768	3.149	0.620																						
2 Integration within group	0.754	2.963	0.673	0.149																					
3 Integration between group	0.768	2.853	0.687	0.100	0.414																				
4 Involvement	0.890	2.997	0.753	0.352	0.514	0.339																			
5 Supervisory support	0.890	3.255	0.692	0.391	0.420	0.314	0.651																		
6 Training	0.823	2.738	0.792	0.108	0.361	0.254	0.429	0.415																	
7 Welfare	0.880	3.116	0.757	0.347	0.481	0.306	0.703	0.786	0.502																
8 Team	0.863	2.718	0.636	0.133	0.529	0.384	0.605	0.532	0.516	0.579															
9 Formalization	0.808	2.687	0.666	-0.184	0.088	0.121	0.047	0.030	0.043	0.060	0.084														
10 Tradition	0.783	2.370	0.718	-0.218	-0.269	-0.214	-0.330	-0.246	-0.280	-0.275	-0.279	0.036													
11 Innovation & flexibility	0.884	2.777	0.671	0.243	0.454	0.349	0.592	0.607	0.485	0.612	0.595	-0.060	-0.505												
12 Outward focus - teaching	0.852	3.121	0.710	0.230	0.397	0.283	0.443	0.404	0.350	0.480	0.405	0.091	-0.405	0.542											
13 Outward focus - research	0.870	2.842	0.781	0.096	0.404	0.229	0.381	0.333	0.383	0.376	0.428	0.026	-0.309	0.433	0.436										
14 Outward focus - society	0.887	3.053	0.727	0.187	0.359	0.294	0.348	0.436	0.375	0.491	0.451	0.074	-0.338	0.532	0.590	0.554									
15 Reflexivity	0.843	2.594	0.706	0.020	0.432	0.298	0.436	0.452	0.376	0.476	0.503	0.145	-0.328	0.616	0.489	0.466	0.578								
16 Clarity of organizational goals	0.878	2.794	0.732	0.115	0.418	0.343	0.509	0.451	0.370	0.461	0.530	0.080	-0.315	0.561	0.435	0.465	0.535	0.588							
17 Efficiency	0.841	2.470	0.769	0.116	0.328	0.261	0.363	0.300	0.309	0.334	0.388	0.031	-0.288	0.421	0.386	0.339	0.450	0.355	0.428						
18 Effort	0.865	3.365	0.626	0.194	0.341	0.257	0.388	0.361	0.215	0.368	0.350	0.115	-0.262	0.421	0.485	0.375	0.524	0.407	0.410	0.398					
19 Performance feedback	0.830	2.497	0.744	0.093	0.412	0.241	0.429	0.422	0.382	0.482	0.502	0.137	-0.322	0.536	0.445	0.374	0.445	0.543	0.467	0.412	0.382				
20 Pressure to produce	0.821	2.641	0.709	-0.125	-0.066	-0.013	-0.062	-0.075	-0.138	-0.077	-0.021	0.111	-0.038	0.045	0.135	0.041	0.178	0.051	0.024	0.044	0.318	0.020			
21 Quality - research	0.831	3.026	0.792	0.071	0.307	0.253	0.268	0.301	0.268	0.268	0.360	0.142	-0.174	0.352	0.278	0.577	0.352	0.421	0.361	0.285	0.369	0.342	0.032		
22 Quality - teaching	0.826	3.274	0.685	0.069	0.289	0.200	0.273	0.322	0.190	0.332	0.332	0.116	-0.173	0.392	0.554	0.350	0.471	0.434	0.384	0.304	0.523	0.337	0.269	0.401	

N=470

All correlations are statistical significant with $p=0.05$, except for those between autonomy and quality of research ($p=0.071$) and autonomy and reflexivity ($p=0.020$). Moreover, few correlations were statistical significant with pressure to produce and formalization.

To be able to aggregate one must imply a reasonable level of agreement within each organization. Consequently, if one cannot find a reasonable level of agreement within employees working in the same department, there would be no ‘organizational’ climate (James et al., 2008), only a mix of individual perceptions of the organizations’ climate. Therefore, to ensure that the NOCM_UH investigated the employees’ common perceptions and not perceptions at random, the current article included the level of interrater agreement (IRA). The estimated agreement was provided by values of the rwG(j) index (James, Demaree, & Wolf, 1984).

For the rwG(j) index, values above .70 are indicated as acceptable levels of agreement (Richardson, 2010; James et al., 2008). The index ranges from 0 (complete lack of agreement) to 1 (complete agreement). However, the rwG(j) index is based upon variation obtained through the complete lack of agreement, a so-called theoretical null distribution. This means that the index is predicted based on the assumption that there is one true score of every construct, and that all variance beyond this true score is caused by error variance (LeBreton & Senter, 2007). Because of this the rwG(j) index would be highly affected by the existence of sub-groups of judges within a department (respondents that disagree), that would each try to assign a true score (LeBreton & Senter, 2007). In other words, if there exists two groups of employees that disagree on many scores the rwG(j) will compute a meaningless true score, either a negative value or values exceeding normal psychometric properties. Because of this, the IRA in the current article might unveil the existence of such sub-groups. The rwG(j) mean score seen in Table 9 is a computation of the mean rwG(j) index within each department. The rwG(j) was originally not provided for the two different groups, scientific and support staff. However, Hoff (2010) argued for a divisional split based on theory among support staff and scientific staff. Consequently, there was an a priori assumption that the rwG(j) would be attenuated. By viewing the results in Table 9, we see some values that exceed psychometric properties (integration within group and reflexivity) and very few values exceeding the criterion of .70.

Table 9. *IRA Indices*

Scales	rwg(j)	Scientific st.	Support staff
1 Autonomy	0.71	0.68	0.78
2 Integration (within-group)	1.47	0.68	0.63
3 Integration (between group)	0.68	0.64	0.75
4 Involvement	0.87	0.78	1.04
5 Supervisory Support	0.78	0.76	0.85
6 Training	0.63	0.67	0.87
7 Welfare	0.71	0.86	0.76
8 Team	0.95	0.77	1.19
9 Formalization	0.75	0.79	0.71
10 Tradition	0.65	0.69	0.05
11 Innovation & Flexibility	0.63	0.80	0.63
12 Outward Focus – Teaching	0.70	0.75	0.79
13 Outward Focus – Research	0.61	0.63	0.66
14 Outward Focus – Society	0.71	0.74	0.59
15 Reflexivity	1.11	0.73	1.59
16 Clarity of Organizational Goal	0.62	0.65	0.64
17 Efficiency	0.58	0.70	0.67
18 Effort	0.81	0.77	0.82
19 Performance Feedback	0.57	0.62	0.66
20 Pressure to Produce	0.69	0.68	0.62
21 Quality – Research	0.65	0.66	1.26
22 Quality – Teaching	0.80	0.74	0.91

Measures of IRA (Interrater Agreement)

The fact that the perceptions among employees within the same department (despite job-positions) were mostly unshared might give indications of the existence of different sub-groups that systematically disagree. To see if the lack of shared perceptions were a result of disagreement between scientific staff and support staff, the rwg(j) index was computed for each group. See Table 9. The rwg(j) index did increase on several factors, however there were still values below .70. Seemingly, other authors argue for another factor that has been found to affect the values of the rwg(j) index. They argue that a sample with few judges is said to attenuate the rwg(j) values (James et al., 1984; Lindell, Brandt, & Whitney, 1999). This might be an important factor as some of the groups did not consist of more than one or two respondents. Based on these results this sample did not meet the level of criterion. Consequently, aggregation from individual level to the organizational level should not take place.

Discussion

The OCM is an established measure of organizational climate, as has because of its theoretical foundation received extensive support within the climate research (Bernstrøm et al., 2011; Patterson et al., 2005; Lamond, 2003; Kwan & Walker, 2004; Howard 1998). However, as Patterson and colleagues argue that there is a problem with weak descriptive power of climate measures, Hoff (2010) made some adjustments on the OCM instrument to increase this power by adding contextual aspects. This article was conducted to examine whether Hoff's (2010) Norwegian Organizational Climate Measure for Universities and Colleges (Høgskoler) (NOCM_UH) is an adequate measure of organizational climate in Norwegian universities and university colleges. If so, the contextual adjustments implemented by Hoff (2010) to increase descriptive power was successful. Results from CFA indicate that the NOCM_UH could be used on the Norwegian sample.

The 8-Factor Model Versus the 4-Factor Model

Hypothesis 1a-c stated that the new adjustments made by Hoff (2010) would provide a better model fit than the original (integration, outward focus, and quality) and team, and that the factor structure would remain stable across scientific and support staff. According to the results from the CFA hypothesis 1a, 1b, and 1c were all supported. The 8-factor model received model fit values that were significantly better than those of the 4-factor model, in both groups separately and both groups together. Even though the CFI were somewhat below acceptable levels, the RMSEA and the relative chi-square indicated acceptable fit. In other words, the partitioning of the original dimensions was supported and that this would be supported among scientific staff and among support staff as well.

Even though the 8-factor model indicated better results than the 4-factor model, this only implies that the 8-factor model is deemed better than the 4-factor model. It does not imply the 8-factor model to be the true dimensions of the educational sector. However this problem is not only exclusive to climate research. To be able to investigate this, one would have to conduct an exploratory factor analysis (EFA) on *all* dimensions assumed to be associated with the educational sector. However, this might provide a random picture of related topics as related topics is bound to correlate somehow, hence they are related. But it is impossible to use an EFA to determine whether the correlations single out important aspects contributing to organizational efficiency or just topics that are correlated. Therefore, when topics or phenomenon are based on a theoretical foundation (such as OCM and NOCM_UH), the chosen topics are already deemed important. In this way, statistical analyses provide an

overall picture of important aspects and not just correlations in general. Consequently, as the NOCM_UH dimensions are based on a theoretical foundation, the dimensions received further support and deemed a sufficient CFA. Thus, hypotheses 1a, 1b, and 1c were supported.

Consequently, the results from the CFA support the empirical results from Hønsen's study (2010) and indicate the team dimension to be a distinct dimension that belongs in a climate measure for Norwegian universities and colleges. Moreover, by comparing the 8-factor model with the 4-factor model, the current article has attempted to provide empirical evidence in support of Hoff's (2010) adjustments to OCM. Because the 8-factor model received better indices of fit, there are now empirical reasons to support the contextual adjustments, and because the 8-factor model had the best fit in both employee groups, this is assumed to be valid for both scientific staff and support staff.

Confirmatory Factor Analysis of the 22-Latent Factor Structure

Hypothesis 2a stated that all 22 dimensions would be factorial distinct and thus provide unique information, while hypotheses 2b and 2c assumed that this would remain the same among scientific staff and support staff. However, the results from the CFA were somewhat contradicting.

Just as Bernstrøm et al. found in 2011, the current article found a RMSEA, indicating good fit and also the same results for stability, which means that the value is quite stable. However, one of the RMSEA weaknesses is that it rewards simpler models (Fan & Sivo, 2007). As the 106 items are only assumed to have factor loadings on one factor, the model is assumed to be a fairly simple model. This may have caused the RMSEA value to be artificially low and thus giving the impression that the model fit is better than it actually is.

According to the results, the CFA found support for a 22-factor structure, indicating that NOCM_UH provides a good model for measuring university climate. Although some of the findings were contradictory, this article found similar results as previous OCM studies. The RMSEA indicated good fit but a CFI value below the acceptable level. However, in the previous OCM research, Bernstrøm et al. (2011) and Patterson et al. (2005) both disregarded the CFI value because of its weakness to achieve high values when there are many observed values (such as in the case of OCM and NOCM_UH). However, in accordance with Bernstrøm et al. (2011) one should stay hesitant to only rely on the RMSEA value, because it is suggested to favor models with many items (Fan & Sivo, 2007), which might have contributed to the low RMSEA value. Nevertheless, if accepting the argument by Blunch

(2008) and Bernstrøm et al. (2011) that one can assume a good model fit as long as the RMSEA is good and that the CFI is above 0.8, then one can conclude in favor of confirming hypothesis 2a. Therefore, the current article conclude in favor of hypothesis 2a, indicating that the 22-latent structure fits the data very well. This means that the NOCM_UH in its whole is applicable to Norwegian universities and colleges.

Hypotheses 2b and 2c investigated the differences in factor structure between the scientific staff and support staff. If the adjustments implemented by Hoff (2010) only increased NOCM_UH's descriptive power, then the factor structure should remain stable independent of groups and suggest support for a 22-latent factor structure. Results from the CFA supports hypothesis 2b, but only partially supports hypothesis 2c. The model fit for the support staff were lower for all the model fit indices than compared to scientific staff, indicating that the NOCM_UH fits scientific employees better than for support staff. However, the low values could also be a result of the low sample size (N=154). Nevertheless, acceptable levels were found by all indices, again excluding the CFI value. Scientific staff received an acceptable RMSEA value and a CFI value above 0.8, which was Blunch's (2008) criterion, meaning that hypothesis 2c was confirmed. Conversely, the support staff received model fit indices acceptable for the 22-factor structure, but the CFI was below 0.8, thus hypothesis 2c was only partially supported.

Interestingly, the model fit indices for the 8-factor model among the support staff received acceptable values, while also receiving a CFI value above 0.8. If one accepts the argument by Blunch (2008), then the 8-factor model should indicate an acceptable fit among the support staff. This is also reflected by hypothesis 1c being supported. Consequently, as the 8-factor model were the results of Hoff's (2010) adjustments, then the remaining dimensions would originate from the original OCM. Because the OCM has received extensive support as a good theoretical model (Bernstrøm et al., 2011; Patterson et al., 2005; Lamond, 2003; Kwan & Walker, 2004; Howard 1998) and because the new adjustments were supported (the 8-factor model) then the same factor structure for all 22 factors should also be found among support staff. As it is not, one can argue that the model fit indices received for the overall 22-latents factor structure would have to be a consequence of a small sample size. Therefore, based on a RMSEA value indicating a good fit and because of a small sample size, hypothesis 2c was partially supported.

Consensual Validity

To be able to aggregate from individual responses to organizational climate one must imply a certain level of agreement (Cohen, Doveh, & Nahum-Shani, 2009). However, in this article the values of interrater agreement (IRA) did not exceed their criterion, implying that one should not aggregate to a higher level. In other words, as the organizational climate is defined as the employees' perceptions of the work place practices, events, and procedures (Schneider & Reichers, 1983) these perceptions must be *shared* to be utilized as an overall view of the organizational climate (Chan, 1998; James et al., 2008). It is argued that if there are no shared perceptions, the measure taps the psychological climate of every employee instead (James et al., 2008). However, as the level of agreement increased on some factors when computing the rwg(j) for both groups (see Table 9) this might give empirical reasons for supporting Hoff's (2010) partition between support and scientific staff.

Conversely, as the results also included values that exceeded the normal limit among support staff (see involvement, team, reflexivity, and quality - research in Table 9), this might actually indicate a further sub-division within the administrative and technical department (that two groups within the support staff disagree). However, as a result of the small sample within the group of support staff there were difficulties with either rejecting or confirming any of these assumptions. Further research investigating the organizational climate within the educational sector, should focus on attaining larger samples within the groups and to further inspect interdepartmental sub-divisions.

Limitations and Further Research

In this article there were several aspects that should be considered when viewing the results:

Firstly, only 470 respondents within three universities and university colleges in Norway completed the questionnaire, which might overrate NOCM_UHs generalizability to other universities and colleges. Therefore, extensive research is needed to validate the NOCM_UH's generalizability to other countries, universities, and colleges.

Secondly, as scientific and support staff got somewhat different wordings in their questionnaire, it is possible that they answered somewhat differently than had they received the same questionnaire, even though it was modified to increase the NOCM_UHs descriptive power. Moreover, the model fit indices indicated better fit for the scientific staff than for the support staff which might be a consequence of the small sample of support staff, or it might indicate that the NOCM_UH is more appropriate for scientific staff. Future research should

focus on the differences between these two groups and investigate the relevance of the NOMC_UH among support staff.

Thirdly, two items were deleted from the analysis as they were only given to the scientific staff. They were at the very end of the questionnaire and therefore not assumed to significantly affect the final answers. However, these questions might reveal important answers from the scientific department. Further, if the items were kept then the analyses conducted would have had to deal with missing values. However, the items deleted might have been a positive contribution in explaining the quality focus on research and teaching within the educational sector.

Fourthly, as it was mandatory to rate all statements, respondents were not able to give information about non-relevant statements. Even more, they also had to answer on a Likert-scale ranging from 1-4, hence a lack of a middle value. This forces each respondent to make a statement, no-matter if they agree or do not. By not including a middle value for each statement, the variation within the sample might be artificially high (Garland, 1991). Further, as the NOMC_UH is a work climate measure with the purpose of viewing the overall organizational functioning, the actual results might be artificially high or low as it is impossible to take a neutral position. Consequently, the results may provide the incorrect climate profiles of organizations due to inflated respondent answers.

As all statements in the questionnaire were made mandatory, the current article had no problems with missing values. Even though use of several statistical methods can cope with missing values, the actual responses from respondents is preferable (Sterne et al., 2009). However, the use of a 4-point Likert-scale when answering items is mandatory can be problematic. This forces the respondents to take a stand on organizational procedures that they might not agree nor disagree with. The research team did get some feedback from frustrated respondents on this topic. Because of the 4-point Likert-scale the current sample may include some overrated variance that might have affected the results. However, Garland (1991) found that when they eliminated the neutral point from a 5 to 4-point Likert scale, the response bias decreased. This means that the respondents who actually disagree but that want to appear helpful and positive, rate at the middle value. However, respondents who did not agree nor disagree were forced into answering. As Garland (1991, p. 67) states, “Resorting to a scale without a mid-point seems to help alleviate this social desirability bias without changing the direction of opinion but, of course, it can alter the intensity of the opinion held”. This means that the consequences of having this type of scale might be severe for the NOMC_UHs’ actual purpose, a work climate measure, as it might give overrated results to

organizations using it.

Finally, as argued by Bernstrøm (2009), even though both this and previous studies give support to the OCM and the NOCM_UH as a way of measuring organizational climate, it is not known for certain that the items comprising the OCM and the NOCM_UH capture the latent structures better than other items would. As Bernstrøm (2009, p. 20) states very well: “When describing the development of OCM, Patterson et al. (2005) give good theoretical explanations for the latent factors included...but say little of how they arrived at the definitions...”. Further studies should consider the item development and investigate whether there are other items that might be more appropriate for measuring the dimensions.

Implications of the Findings

Theoretical implications. The results from the current article have certain implications regarding the theoretical framework of the Organizational Climate Measure (OCM). As previous studies have indicated that the OCM have showed good generalizability (Bernstrøm et al., 2011; Patterson et al., 2005) this article only further supports this assumption. And based on the results of the CFA conducted, the current article found a support for a 22-latent factor structure, and thereby also the original 17 dimensions. This means that this article found continued support of OCM as a good model that is generalizable to other businesses and countries.

Moreover, the 8-latent factor structure model was supported, which lends support to the adjustments implemented by Hoff (2010) as well. This indicates that the new dimensions are factorially distinct, and the new dimensions seemed to reveal unique information that was not covered by the original dimensions. This further supports considering contextual aspects in future climate research so as to increase descriptive power.

Practical implications. The results indicate that the new dimensions in NOCM_UH developed by Hoff (2010) are factorially distinct and display additional information. Consequently, the NOCM_UH is argued to be generalizable and can be utilized as an instrument to measure organizational climate in Norwegian universities and colleges.

Moreover, as the new dimensions were supported this means that team and teamwork related topics are important aspects within the educational sector and that team should be included when measuring organizational climate within this sector.

The 8-factor model indicated best model fit for both the scientific staff and support staff, which gives further support of the partitioning of certain types of job-positions within a particular sector. As the results indicate, it was only the questionnaires' descriptive power that

increased while the questions were still revealing the same information. The practical implication of this finding is that similar adjustments to a measure do not destroy the underlying factor structure. Instead it can increase the chance of respondents understanding what they are answering and thereby give you the actual answer you seek.

Finally, as the NOCM_UH is utilized as a work climate measure of organizations, it is important to inspect levels of agreement alongside with descriptive statistics. In doing so, employers can see the actual employee perceptions before utilizing the results. As the current article wanted to investigate the factor structure, it was not a major issue that it did not find acceptable levels of interrater agreement. However, if future organizations wish to utilize the NOCM_UH as a work climate measure, they should include this measure. By doing so, they can determine whether their sample is suited for aggregation from the individual employee perceptions to the organizational climate.

Concluding Remarks

The current article found support for a 22-latent factor structure and that the new adjustments implemented by Hoff (2010) seemed reasonable. This indicates that the NOCM_UH seems to be an appropriate instrument for measuring organizational climate within Norwegian universities and colleges. The most interesting results are the contextual adjustments' power to reveal distinctly new information about different aspect of organizational goals, structure, and interdepartmental cooperation (Hoff, 2010). Hence implying that the original OCM could be generalized to different sectors and countries, but maybe not as concerned with context-specific information such as descriptive power. The results from this current article indicate that context-specific adjustments can be useful within climate research and points out that future research should take descriptive power more into account.

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**Appendix A: Norwegian Organizational Climate Measure for Universities and Colleges
(Høgskoler) – Norwegian version for scientific staff.**

Response format: 1 = Enig, 2 = Litt enig, 3 = Litt uenig, 4 = Uenig.

Reversed items are marked with an asterisk (*) and were reversed before the scale was calculated. Items marked in bold were deleted from all analyses.

Autonomy (Autonomi)

- Q1 Lederne her lar stort sett ansatte ta sine egne beslutninger*
- Q2 Lederne her har tillit til at man kan ta arbeidsrelaterte beslutninger uten å innhente tillatelse først*
- Q3 Lederne her holder streng kontroll med arbeidet til sine ansatte
- Q4 Her må man sjekke med lederne når man skal fatte beslutninger
- Q5 Lederne her har et strengt regime over måten ting blir gjort på

Integration Among Scientific Staff (Integrasjon - mellom vitenskapelige faggrupper)

- Q6 Forskerne er skeptiske overfor de andre forsker- eller faggruppene her
- Q7 Det er lite konflikt mellom forsker- eller faggruppene her*
- Q8 De ansatte er innstilt på å dele informasjon på tvers av forsker- eller faggrupper her *
- Q9 Det er effektivt samarbeid mellom forsker- eller faggruppene her *
- Q10 Det er lite respekt mellom forsker- eller faggruppene her

Integration Between Support Staff & Scientific Staff (Integrasjon – imellom teknisk/administrative avdelinger og faglig ansatte)

- Q11 Forskerne er skeptiske overfor den tekniske/administrative avdelingen her
- Q12 Det er lite konflikt mellom forsker- eller faggruppene og den tekniske/administrative avdelingen her*
- Q13 De ansatte er innstilt på å dele informasjon på tvers av faglige avdelinger og den tekniske/administrative avdelingen*
- Q14 Det er effektivt samarbeid mellom forsker- eller faggruppene og den tekniske/administrative avdelingen her*
- Q15 Det er lite respekt mellom forsker- eller faggruppene og den tekniske/administrative avdelingen her

Involvement (Involvering)

- Q16 Her lar lederne de ansatte medvirke i beslutninger som angår dem*
- Q17 Endringer blir gjort uten å snakke med de involverte
- Q18 De ansatte har ingen innvirkning i avgjørelser som påvirker arbeidet deres
- Q19 De ansatte føler at beslutninger ofte tas uten at de blir hørt
- Q20 Informasjon deles i stor grad her*
- Q21 Det er ofte kommunikasjonssvikt her

Supervisory Support (Støtte fra ledelsen)

- Q22 Overordnede er dyktige til å forstå de ansattes problemer*
- Q23 Overordnede viser at de har tiltro til sine ansatte*
- Q24 Overordnede hos oss er vennlige og lette å henvende seg til*
- Q25 De ansatte kan stole på at overordnede gir god veiledning*
- Q26 Overordnede viser forståelse for sine ansatte*

Emphasis on training (Trening)

- Q27 De ansatte får ikke tilstrekkelig opplæring i nye systemer eller nytt utstyr
- Q28 Her gis det kun et minimum av den opplæringen de ansatte trenger for å gjøre jobben sin
- Q29 De ansatte blir oppmuntret til å utvikle sine ferdigheter*
- Q30 De ansatte får tilstrekkelig opplæring i å bruke nytt utstyr*

Employee Welfare (Velferd)

- Q31 Her vies lite oppmerksomhet til ansattes interesser
- Q32 Her blir de ansatte tatt vare på*
- Q33 Her bryr man seg om de ansatte*
- Q34 Her prøver man å handle rettferdig overfor sine ansatte*

Team (Teamarbeid)

- Q35 Samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.) preges av god informasjonsdeling*
- Q36 Målene for samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) er godt kjent blant alle medlemmene*
- Q37 Samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) er preget av å være fleksible slik at man kan dele på oppgavene dersom det er behov for dette*

- Q38 Både oppgavegjennomføring og mellommenneskelige relasjoner blir viet oppmerksomhet i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.)*
- Q39 Møtene i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.) gjennomføres ikke effektivt
- Q40 Det blir oppmuntret til engasjement og deltakelse i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.)*
- Q41 Det er ingen kultur i samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) for å aktivt støtte og anerkjenne hverandre

Formalization (Formalisering)

- Q42 Hos oss blir det oppfattet som svært viktig å følge reglene*
- Q43 Ansatte kan ignorere formelle prosedyrer og regler hvis det bidrar til å få jobben gjort
- Q44 Hos oss må alt gjøres etter reglene*
- Q45 Hos oss er det ikke nødvendig å følge alle prosedyrer til punkt og prikke
- Q46 Hos oss blir ingen særlig opprørt hvis reglene brytes

Tradition (Tradisjon)

- Q47 Ledelsen foretrekker å holde seg til de etablerte, tradisjonelle måtene å gjøre ting på*
- Q48 Måten ting gjøres på her har aldri forandret seg særlig mye*
- Q49 Stolthet og lange tradisjoner er viktig hos oss*
- Q50 Hos oss skjer endringer i måten ting gjøres på langsomt*

Innovation & Flexibility (Innovasjon og fleksibilitet)

- Q51 Hos oss blir nye ideer godt mottatt*
- Q52 Her reagerer man raskt når endringer er nødvendig*
- Q53 Behov for å gjøre ting annerledes fanges raskt opp av ledelsen*
- Q54 Her er vi fleksible; prosedyrer kan endres for å møte nye vilkår, og problemer løses når de oppstår*
- Q55 Det er lett å få støtte til utvikling av nye ideer*
- Q56 De ansatte her er alltid ute etter å løse problemer ved å se dem fra nye vinkler*

Outward Focus – Teaching (Utadrettet fokus – Undervisningsdelen)

- Q57 Her er vi ganske innadrettet; man bryr seg ikke om hva som skjer i de andre undervisningsinstitusjonene
- Q58 Det legges lite vekt på måter å bedre tilbudet til studentene
- Q59 Studentenes behov er ikke ansett som topp prioritet hos oss
- Q60 Her er vi trege til å reagere på endringer i studentenes behov
- Q61 Her er man hele tiden opptatt av å utvikle og forbedre studietilbudet*

Outward Focus – Research (Utadrettet fokus – Forskningsdelen)

- Q62 Her er man ganske innadrettet; man bryr seg ikke om hva som skjer ved forskningsfronten
- Q63 Det legges ikke mye vekt på måter å bedre kommunikasjonen med andre forskningsinstitusjoner
- Q64 Problemstillinger som preger den internasjonale forskningsfronten har ikke topp prioritet hos oss
- Q65 Her er vi trege til å reagere på utviklingen ved den internasjonale forskningsfronten
- Q66 Vi er stadig på jakt etter muligheter for samarbeid med eksterne forskningsmiljøer*

Outward Focus – Society (Utadrettet fokus – samfunnsdelen)

- Q67 Her er vi ganske innadrettet; man bryr seg ikke om hva som skjer i samfunnet for øvrig
- Q68 Her legges det lite vekt på å bedre kommunikasjonen med samfunnet for øvrig
- Q69 Samfunnets behov er ikke ansett som topp prioritet hos oss
- Q70 Her er vi trege til å reagere på endringer i samfunnets behov
- Q71 Her er vi stadig på jakt etter nye muligheter i samfunnet for øvrig*

Reflexivity (Refleksivitet)

- Q72 Måten de ansatte jobber sammen på her endres gjerne hvis det bedrer prestasjonen*
- Q73 Arbeidsmetodene som brukes her blir ofte diskutert*
- Q74 Hvorvidt de ansatte her jobber effektivt sammen, blir regelmessig diskutert*
- Q75 Målsetningene her endres i takt med forandringer i samfunnet*
- Q76 Man tar seg tid til å evaluere målsetningene her*

Clarity of Organizational Goals (Klarhet i organisasjonens mål)

- Q77 De ansatte har en god forståelse av denne organisasjonens formål*
- Q78 Organisasjonens fremtidige retning blir klart og tydelig kommunisert til alle*
- Q79 De ansatte har ikke en klar forståelse av hva som er organisasjonens mål
- Q80 Alle som jobber her er bevisste på vår fremtidsplan og retning*
- Q81 Det finnes en klar oppfatning her angående hvilken retning vi går i*

Efficiency (Effektivitet)

- Q82 Tid og penger kunne blitt spart dersom arbeidet her var bedre organisert
- Q83 Ting kunne blitt gjort mer effektivt her hvis de ansatte tok seg tid til å tenke seg om
- Q84 Her resulterer dårlig planlegging ofte i at man ikke når sine målsetninger
- Q85 Produktiviteten kunne blitt forbedret her om arbeidet ble bedre organisert og planlagt

Effort (Innsats)

- Q86 Hos oss ønsker de ansatte alltid å prestere så godt de kan*
- Q87 De ansatte er entusiastiske i forhold til jobben sin*
- Q88 Her slipper de ansatte unna med å gjøre så lite som mulig
- Q89 De ansatte er innstilt på å gjøre en ekstra innsats for å utføre en god jobb*
- Q90 Her legger ikke de ansatte mer innsats i arbeidet sitt enn det de må

Performance Feedback (Feedback på prestasjon)

- Q91 De ansatte får som regel tilbakemelding i forhold til kvaliteten på det arbeidet de gjør*
- Q92 De ansatte har ingen anelse om hvorvidt de gjør en god jobb
- Q93 Det er generelt vanskelig for ansatte å vurdere kvaliteten på det de presterer
- Q94 De ansattes prestasjoner måles regelmessig*
- Q95 Måten de ansatte gjør jobben sin på blir sjelden evaluert

Pressure to Produce (Produksjonspress)

- Q96 Det forventes for mye av de ansatte i løpet av en dag*
- Q97 Vanligvis er ikke de ansattes arbeidsbelastning spesielt krevende
- Q98 Ledelsen krever at de ansatte jobber ekstremt hardt*
- Q99 De ansatte er under sterkt tidspress for å nå målsetninger*
- Q100 Arbeidstempoet her er ganske avslappet

Quality Focus - Research (Kvalitet – Forskningsdelen)

Q101 Her forsøker vi alltid å oppnå de høyeste kvalitetsstandardene for forskning*

Q102 Hos oss blir forskningskvalitet tatt seriøst*

Q103 De ansattes oppfatning er at suksess avhenger av høy forskningskvalitet*

Q104 Vi har ikke rykte på oss for å levere produkter av topp forskningsmessig kvalitet

Quality Focus - Teaching (Kvalitet – Undervisningsdelen)

Q105 Her forsøker vi alltid å oppnå de høyeste kvalitetsstandardene for undervisning*

Q106 Hos oss blir undervisningskvalitet tatt seriøst*

Q107 De ansattes oppfatning er at suksess avhenger av høy kvalitet på undervisningen*

Q108 Her har vi ikke rykte på oss for å levere produkter av topp kvalitet

**Appendix B: Norwegian Organizational Climate Measure for Universities and Colleges
(Høgskoler) – Norwegian version for support staff.**

Response format: 1 = Enig, 2 = Litt enig 3 = Litt uenig, 4 =Uenig.

Reversed items are marked with an asterisk (*) and were reversed before the scale was calculated.

Autonomy (Autonomi)

- Q1 Lederne her lar stort sett ansatte ta sine egne beslutninger*
- Q2 Lederne her har tillit til at man kan ta arbeidsrelaterte beslutninger uten å innhente tillatelse først*
- Q3 Lederne her holder streng kontroll med arbeidet til sine ansatte
- Q4 Her må man sjekke med lederne når man skal fatte beslutninger
- Q5 Lederne her har et strengt regime over måten ting blir gjort på

Integration Among Support Staff (Integrasjon - mellom teknisk/administrative avdelinger og faglig ansatte)

- Q6 Det er mistenksomhet imellom teknisk/administrative enheter her (for eksempel mellom studieavdeling, IT, drift, personal)
- Q7 Det er lite konflikt innad i teknisk/administrativ avdeling (for eksempel mellom studieavdeling, IT, drift, personal)*
- Q8 De teknisk/administrativt ansatte er innstilt på å dele informasjon på tvers teknisk/administrative enheter (for eksempel mellom studieavdeling, IT, drift, personal)*
- Q9 Det er effektivt samarbeid mellom teknisk/administrative enheter (for eksempel mellom studieavdeling, IT, drift, personal)*
- Q10 Det er lite respekt mellom noen av de teknisk/administrative enhetene her (for eksempel mellom studieavdeling, IT, drift, personal)

Integration Between Support Staff & Scientific Staff (Integrasjon – imellom teknisk/administrative avdelinger og faglig ansatte)

- Q11 Teknisk/administrativt ansatte er skeptiske overfor fagansatte
- Q12 Det er lite konflikt mellom den tekniske/administrative avdelingen og forsker- eller faggruppene her*

- Q13 De ansatte er innstilt på å dele informasjon på tvers av den tekniske/administrative avdelingen og forsker- eller faggruppene her*
- Q14 Det er effektivt samarbeid mellom den tekniske/administrative avdelingen og forsker- eller faggruppene her*
- Q15 Det er lite respekt mellom den tekniske/administrative avdelingen og forsker- eller faggruppene her

Involvement (Involvering)

- Q16 Her lar lederne de ansatte medvirke i beslutninger som angår dem*
- Q17 Endringer blir gjort uten å snakke med de involverte
- Q18 De ansatte har ingen innvirkning i avgjørelser som påvirker arbeidet deres
- Q19 De ansatte føler at beslutninger ofte tas uten at de blir hørt
- Q20 Informasjon deles i stor grad her*
- Q21 Det er ofte kommunikasjonssvikt her

Supervisory Support (Støtte fra ledelsen)

- Q22 Overordnede er dyktige til å forstå de ansattes problemer*
- Q23 Overordnede viser at de har tiltro til sine ansatte*
- Q24 Overordnede hos oss er vennlige og lette å henvende seg til*
- Q25 De ansatte kan stole på at overordnede gir god veiledning*
- Q26 Overordnede viser forståelse for sine ansatte*

Emphasis on Training (Trening)

- Q27 De ansatte får ikke tilstrekkelig opplæring i nye systemer eller nytt utstyr
- Q28 Her gis det kun et minimum av den opplæringen de ansatte trenger for å gjøre jobben sin
- Q29 De ansatte blir oppmuntret til å utvikle sine ferdigheter*
- Q30 De ansatte får tilstrekkelig opplæring i å bruke nytt utstyr*

Employee Welfare (Velferd)

- Q31 Her vies lite oppmerksomhet til ansattes interesser
- Q32 Her blir de ansatte tatt vare på*
- Q33 Her bryr man seg om de ansatte*
- Q34 Her prøver man å handle rettferdig overfor sine ansatte*

Team (Teamarbeid)

- Q35 Samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.) preges av god informasjonsdeling*
- Q36 Målene for samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) er godt kjent blant alle medlemmene*
- Q37 Samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) er preget av å være fleksible slik at man kan dele på oppgavene dersom det er behov for dette*
- Q38 Både oppgavegjennomføring og mellommenneskelige relasjoner blir viet oppmerksomhet i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.)*
- Q39 Møtene i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.) gjennomføres ikke effektivt
- Q40 Det blir oppmuntret til engasjement og deltakelse i samarbeidsgruppene her (komiteer, utvalg og råd, prosjektgrupper etc.)*
- Q41 Det er ingen kultur i samarbeidsgruppene (komiteer, utvalg og råd, prosjektgrupper etc.) for å aktivt støtte og anerkjenne hverandre

Formalization (Formalisering)

- Q42 Hos oss blir det oppfattet som svært viktig å følge reglene*
- Q43 Ansatte kan ignorere formelle prosedyrer og regler hvis det bidrar til å få jobben gjort
- Q44 Hos oss må alt gjøres etter reglene*
- Q45 Hos oss er det ikke nødvendig å følge alle prosedyrer til punkt og prikke
- Q46 Hos oss blir ingen særlig opprørt hvis reglene brytes

Tradition (Tradisjon)

- Q47 Ledelsen foretrekker å holde seg til de etablerte, tradisjonelle måtene å gjøre ting på*
- Q48 Måten ting gjøres på her har aldri forandret seg særlig mye*
- Q49 Stolthet og lange tradisjoner er viktig hos oss*
- Q50 Hos oss skjer endringer i måten ting gjøres på langsomt*

Innovation & Flexibility (Innovasjon og fleksibilitet)

- Q51 Hos oss blir nye ideer godt mottatt*
- Q52 Her reagerer man raskt når endringer er nødvendig*
- Q53 Behov for å gjøre ting annerledes fanges raskt opp av ledelsen*

- Q54 Her er vi fleksible; prosedyrer kan endres for å møte nye vilkår, og problemer løses når de oppstår*
- Q55 Det er lett å få støtte til utvikling av nye ideer*
- Q56 De ansatte her er alltid ute etter å løse problemer ved å se dem fra nye vinkler*

Outward Focus – Teaching (Utadrettet fokus – Undervisningsdelen)

- Q57 Her er vi ganske innadrettet; man bryr seg ikke om hva som skjer i de andre undervisningsinstitusjonene
- Q58 Det legges lite vekt på måter å bedre tilbudet til studentene
- Q59 Studentenes behov er ikke ansett som topp prioritet hos oss
- Q60 Her er vi trege til å reagere på endringer i studentenes behov
- Q61 Her er man hele tiden opptatt av å utvikle og forbedre studietilbudet*

Outward Focus – Research (Utadrettet fokus – Forskningsdelen)

- Q62 Den teknisk/administrative avdelingen er ganske innadrettet; man bryr seg ikke om hva som skjer ved i eksterne forskningsfora
- Q63 I teknisk/administrativ avdeling legges det ikke mye vekt på måter å bedre kommunikasjonen med eksterne forskningsmiljøer
- Q64 Problemstillinger som preger forskningsagendaen har ikke topp prioritet i teknisk/administrativ avdeling
- Q65 I teknisk/administrativ avdeling er vi trege til å reagere på endringer i betingelser for forskning (for eksempel publiseringskanaler, forskningsfinansiering, regelverk med mer)
- Q66 Teknisk/administrativt ansatte er stadig på jakt etter nye forskningsmuligheter sammen med forskerne*

Outward Focus – Society (Utadrettet fokus – samfunnsdelen)

- Q67 Den teknisk/administrative enheten er ganske innadrettet; man bryr seg ikke om hva som skjer i samfunnet for øvrig
- Q68 Den teknisk/administrative enheten legger ikke mye vekt på å bedre kommunikasjonen med samfunnet for øvrig
- Q69 Samfunnets behov er ikke ansett som topp prioritet hos den teknisk/administrative enheten
- Q70 Den tekniske/administrative enheten er trege til å reagere på endringer i samfunnets behov

Q71 Den tekniske/administrative enheten er stadig på jakt etter nye muligheter i samfunnet for øvrig*

Reflexivity (Refleksivitet)

Q72 Måten de ansatte jobber sammen på her endres gjerne hvis det bedrer prestasjonen*

Q73 Arbeidsmetodene som brukes her blir ofte diskutert*

Q74 Hvorvidt de ansatte her jobber effektivt sammen, blir regelmessig diskutert*

Q75 Målsetningene her endres i takt med forandringer i samfunnet*

Q76 Man tar seg tid til å evaluere målsetningene her*

Clarity of Organizational Goals (Klarhet i organisasjonens mål)

Q77 De ansatte har en god forståelse av denne organisasjonens formål*

Q78 Organisasjonens fremtidige retning blir klart og tydelig kommunisert til alle*

Q79 De ansatte har ikke en klar forståelse av hva som er organisasjonens mål

Q80 Alle som jobber her er bevisste på vår fremtidsplan og retning*

Q81 Det finnes en klar oppfatning her angående hvilken retning vi går i*

Efficiency (Effektivitet)

Q82 Tid og penger kunne blitt spart dersom arbeidet her var bedre organisert

Q83 Ting kunne blitt gjort mer effektivt her hvis de ansatte tok seg tid til å tenke seg om

Q84 Her resulterer dårlig planlegging ofte i at man ikke når sine målsetninger

Q85 Produktiviteten kunne blitt forbedret her om arbeidet ble bedre organisert og planlagt

Effort (Innsats)

Q86 Hos oss ønsker de ansatte alltid å prestere så godt de kan*

Q87 De ansatte er entusiastiske i forhold til jobben sin*

Q88 Her slipper de ansatte unna med å gjøre så lite som mulig

Q89 De ansatte er innstilt på å gjøre en ekstra innsats for å utføre en god jobb*

Q90 Her legger ikke de ansatte mer innsats i arbeidet sitt enn det de må

Performance Feedback (Feedback på prestasjon)

Q91 De ansatte får som regel tilbakemelding i forhold til kvaliteten på det arbeidet de gjør*

Q92 De ansatte har ingen anelse om hvorvidt de gjør en god jobb

Q93 Det er generelt vanskelig for ansatte å vurdere kvaliteten på det de presterer

- Q94 De ansattes prestasjoner måles regelmessig*
- Q95 Måten de ansatte gjør jobben sin på blir sjelden evaluert

Pressure to Produce (Produksjonspress)

- Q96 Det forventes for mye av de ansatte i løpet av en dag*
- Q97 Vanligvis er ikke de ansattes arbeidsbelastning spesielt krevende
- Q98 Ledelsen krever at de ansatte jobber ekstremt hardt*
- Q99 De ansatte er under sterkt tidspress for å nå målsetninger*
- Q100 Arbeidstempoet her er ganske avslappet

Quality Focus - Research (Kvalitet – Forskningsdelen)

- Q101 De teknisk/administrativt ansatte forsøker alltid å oppnå de høyeste kvalitetsstandardene for forskning*
- Q102 I teknisk/administrativ avdeling blir støtte til forskningskvalitet tatt seriøst*
- Q103 De teknisk/administrative ansattes oppfatning er at suksess avhenger av teknisk/administrativ støtte for å oppnå forskningskvalitet*

Quality Focus - Teaching (Kvalitet – Undervisningsdelen)

- Q105 De teknisk/administrativt ansatte forsøker alltid å oppnå de høyeste kvalitetsstandardene for undervisning*
- Q106 Blant de teknisk/administrativt ansatte blir undervisningskvalitet tatt seriøst*
- Q107: De teknisk/administrativt ansattes oppfatning er at suksess avhenger av høy kvalitet på undervisningen*