Conference
University of Copenhagen
Make a difference – teach and learn with technology

WORKSHOP

November 12, 2015

University students of tomorrow?

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The National Research-, Development- and Network Project

Teaching Organisation, Teaching Forms/Methods and Teaching Media
- seen across
subjects
in
upper secondary education

2010-2014

Funded by The Danish Ministry of Education

Plan

The research project, - frame and findings

Discussion in groups, "keyword-production"

"Post-its walk and talk"

Research project, 2010-2014
Involved high schools:

548 teachers
5081 students

Aalborg Tekniske Gymnasium

Støvring Gymnasium

Nørre Nissum HF

Struer Gymnasium

Viborg Katedralskole

Randers HF og VUC

Mercantec

Uddannelsescenter

Holstebro

Aarhus Købmandsskole

Favrskov Gymnasium

Viden Djurs

Tradium HHX og HG

Belisborg Gymnasiumnasium

Egaa Gymnasium

Langkær Gymnasium

Odder Gymnasium

Aarhus Statsgymnasium

Frederiksværk
Gymnasium & HF

Gribskov Gymnasium

Nærum Gymnasium

Espergærde Gymnasium

Glads. Gymnasium

Ordrup Gymnasium

Grindsted Gymnasium

Horsens Gymnasium

Birkerød Gymnasium

Herlev Gymnasium

Rødovre Gymnasium

KVUC   VUC Roskilde

Rosborg Gymnasium

Brøndby
Gymnasium

Klassikerforeningen -KU

Rødkilde Gymnasium

Roskilde Gymnasium

Niels Brock

Fredericia Gymnasium

Nordfyns Gymnasium

Roskilde
Handelskole

Ørestad Gymnasium

Esbjerg Gymnasium   IBC, Kolding

Sorø Akademi

CPH W Ballerup

Tietgenskolen

Mulernes Legatskole

Tårnby Gymnasium

Haderslev Katedralskole

VUC Fyn

Nyborg Gymnasium

I Jesp.

KVUC, København

Ribe Katedralskole

Midtfyns
Gymnasium

Efterslægten

7 Fynske skoler

Næstved
Gymnasium

Rystensteen

Borupgaard Gymnasium

Faaborg Gym. Svendborg Gymnasium og HF

Nykøbing
Katedralesk.

Vordingborg Gymnasium

CELF

Oversigt over projektskoler i det nationale forsknings-, udviklings- og netværksprojekt: Undervisningsorganisering,- fo
og - medier på langs og tværs af fag og gymnasiale uddannelser, 1- 4. runde, 2010-2014 (Aarhus Universitet)

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Overriding Purpose of Research Project

Focus on rethinking - to be used in relation to:

New forms of teaching organizations, including feedback, evaluation, supervising, etc.

Student/teacher roles and functions

Learning resources (paper/digital media)

Assignment and assessment formats (paper/digital media)
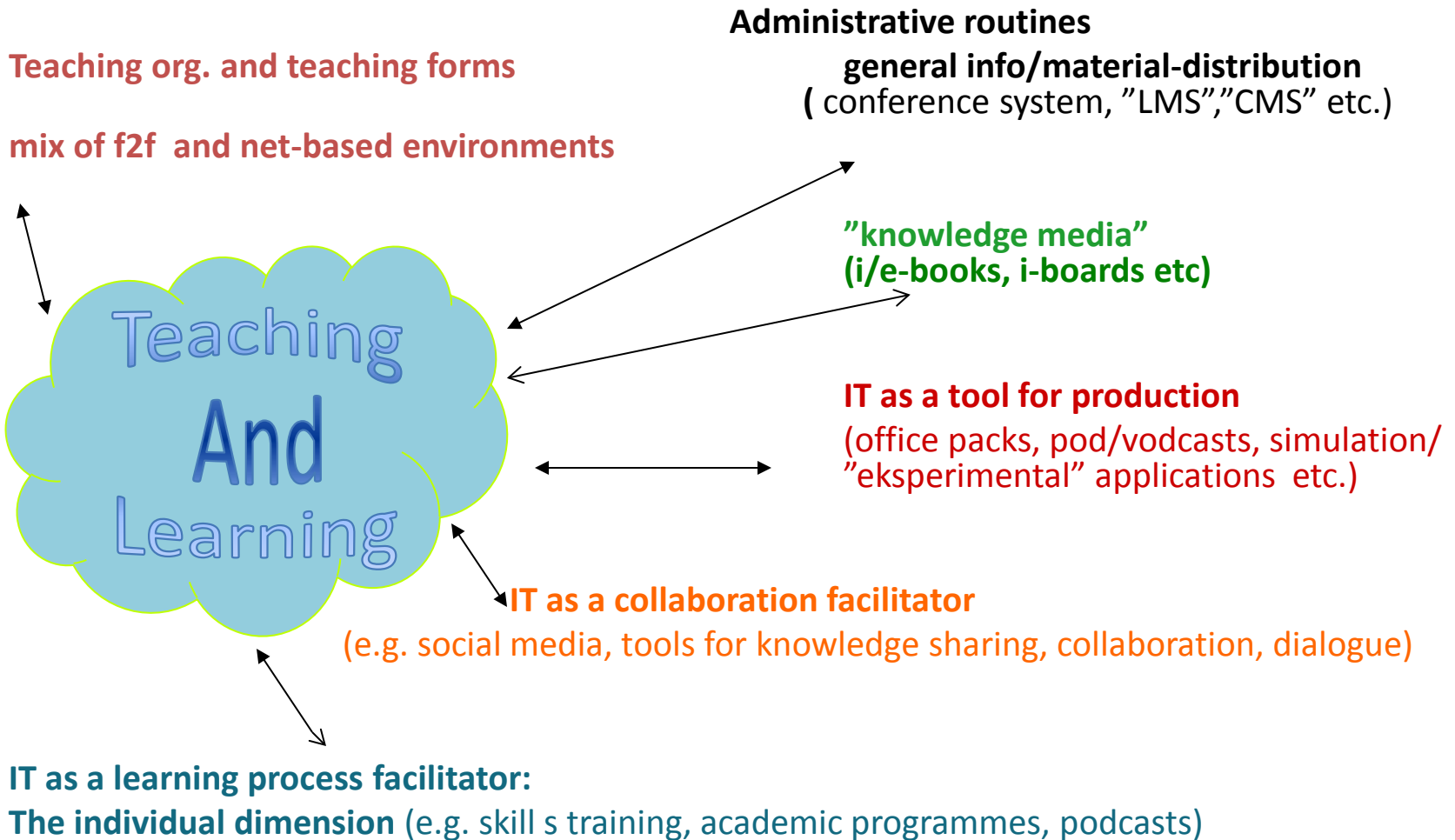
Teaching activities -Student activation

Allocated time/place to homework/assignments

Leadership, role(s), school project support, implementation of new knowledge, school development and (ICT)-strategy

IT-usage in teaching – some perspectives
**Net-based teaching and learning technologies to underpin communication processes**

Administrative routines
general info/material-distribution
(conference system, "LMS","CMS" etc.)

Teaching org. and teaching forms

mix of f2f and net-based environments

"knowledge media"
(i/e-books, i-boards etc)

Teaching
And
Learning

IT as a tool for production
(office packs, pod/vodcasts, simulation/
"eksperimental" applications etc.)

IT as a collaboration facilitator
(e.g. social media, tools for knowledge sharing, collaboration, dialogue)

IT as a learning process facilitator:
The individual dimension (e.g. skill s training, academic programmes, podcasts)

Empirical research design

A consecutive research design (inspired by systems theory)

Focus on communication

Data collection methods:
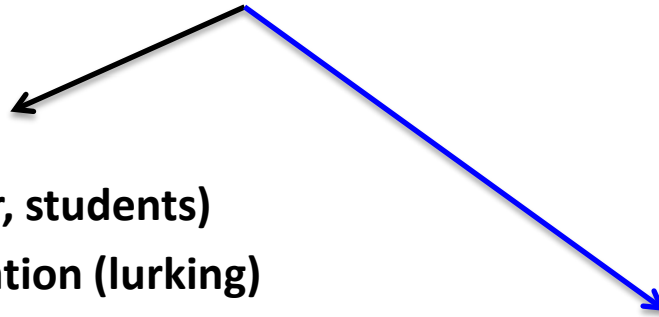
Observations (classroom)

Group interviews (teacher, students)

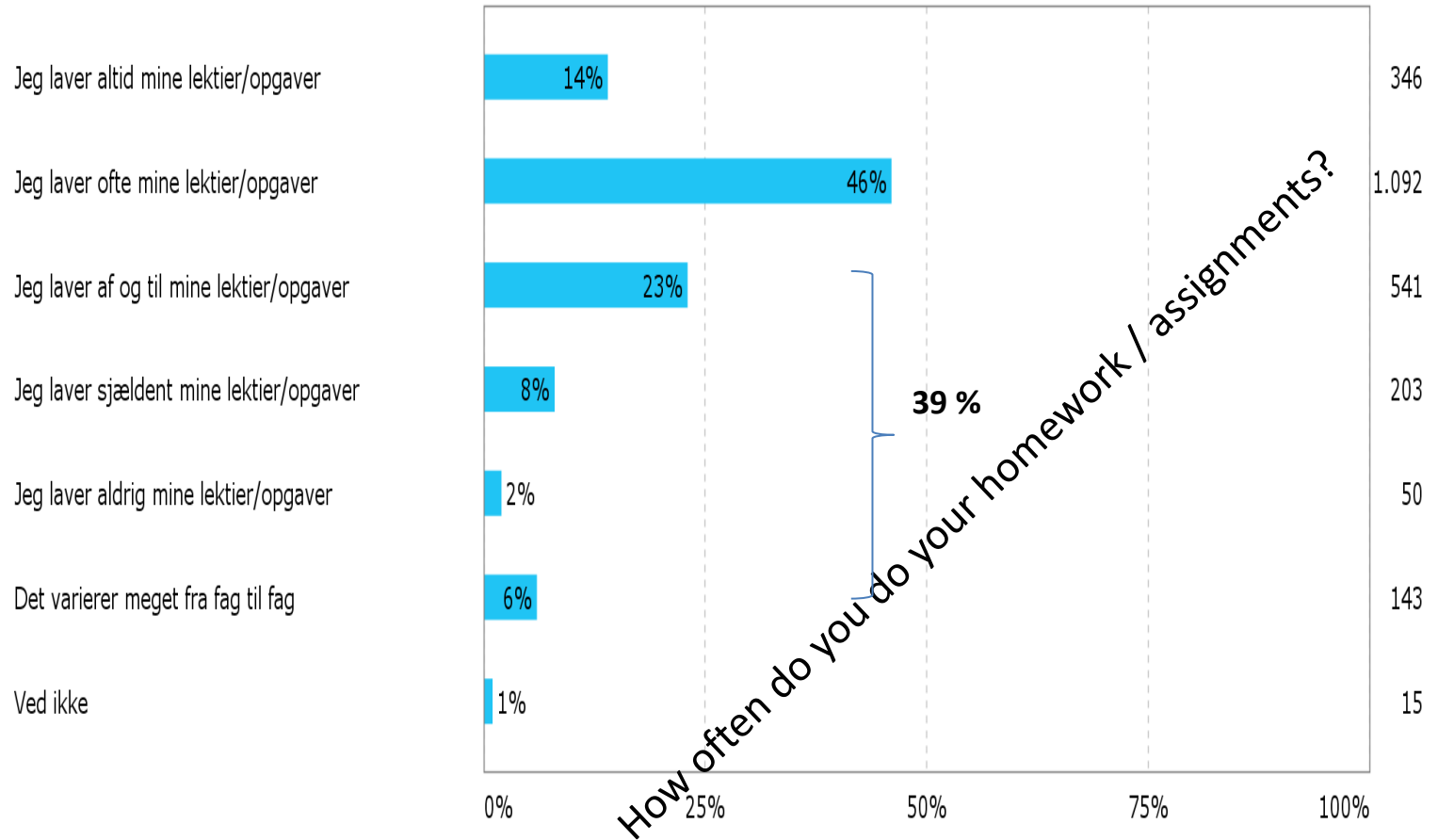**Net-mediated communication (lurking)**

Selective representation of the field of study

(qualitative analysis)

Questionnaire survey

"Full" representation of the field of study
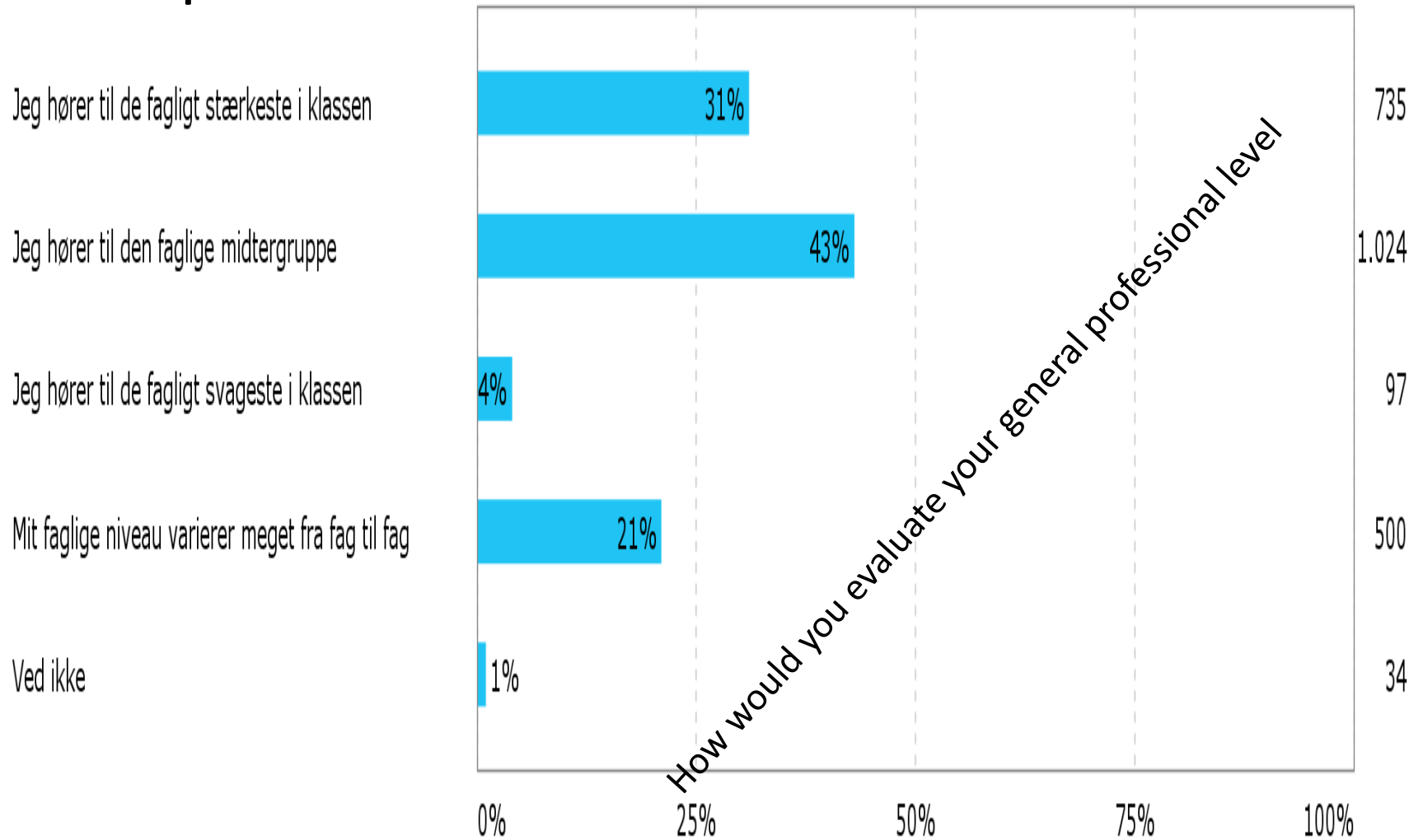
(quantitative analysis,
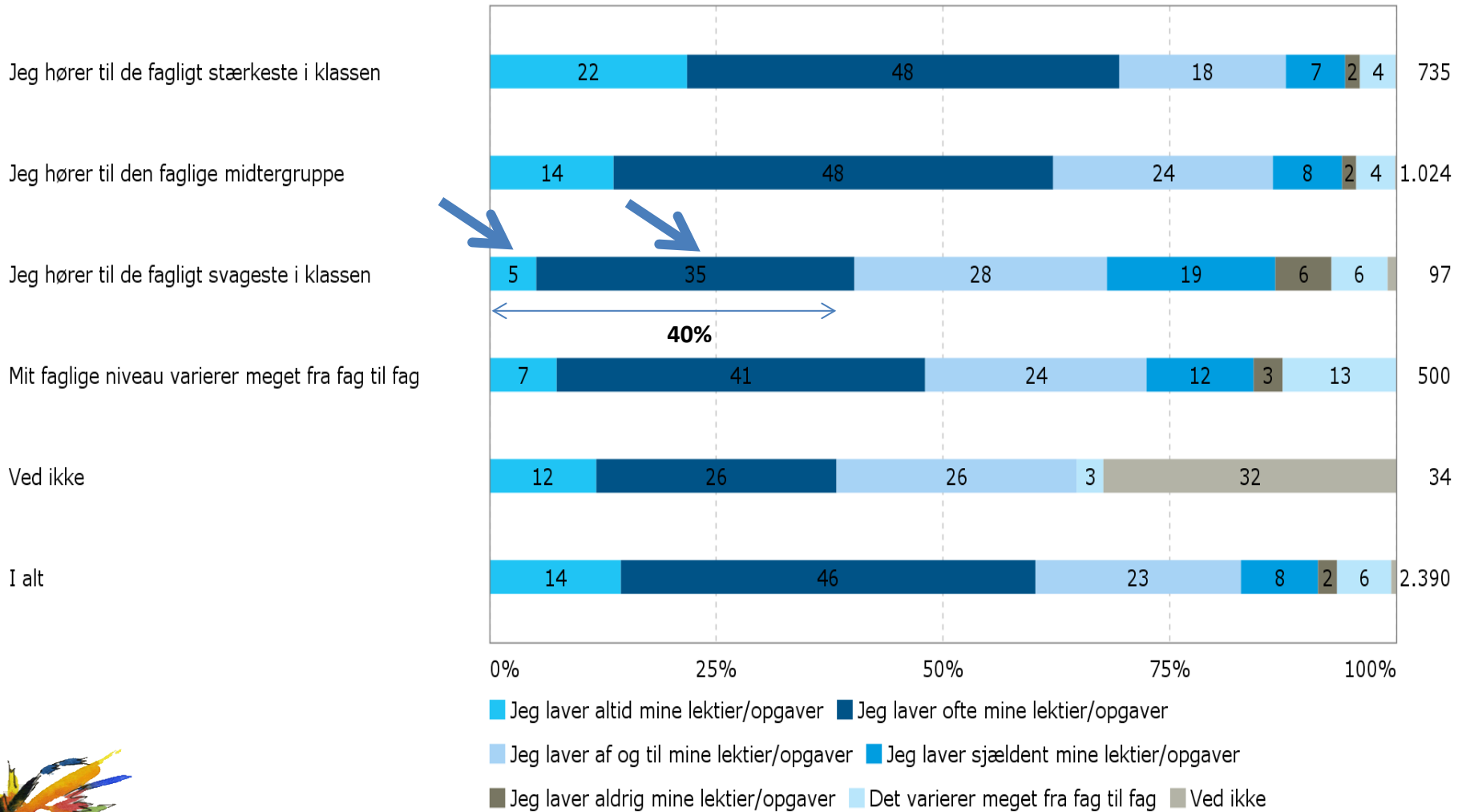
response rate about 80%)

Homework

Jeg laver altid mine lektier/opgaver — 14% — 346
Jeg laver ofte mine lektier/opgaver — 46% — 1.092
Jeg laver af og til mine lektier/opgaver — 23% — 541
Jeg laver sjældent mine lektier/opgaver — 8% — 203
Jeg laver aldrig mine lektier/opgaver — 2% — 50
Det varierer meget fra fag til fag — 6% — 143
Ved ikke — 1% — 15

39 %

How often do you do your homework / assignments?

General professional level

Jeg hører til de fagligt stærkeste i klassen	31%	735
Jeg hører til den faglige midtergruppe	43%	1.024
Jeg hører til de fagligt svageste i klassen	4%	97
Mit faglige niveau varierer meget fra fag til fag	21%	500
Ved ikke	1%	34

How would you evaluate your general professional level

0% 25% 50% 75% 100%

How often do you do your homework / assignments?
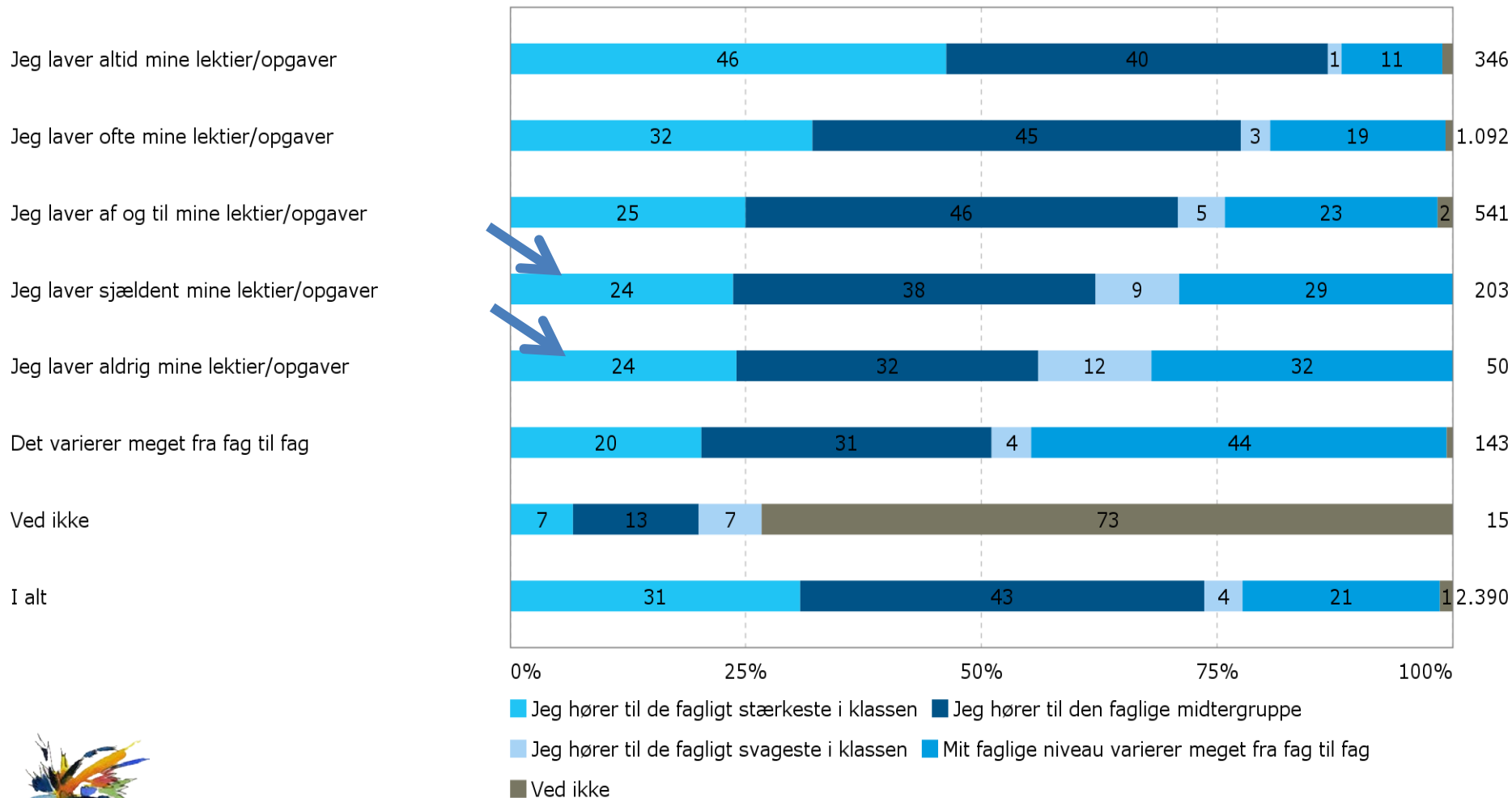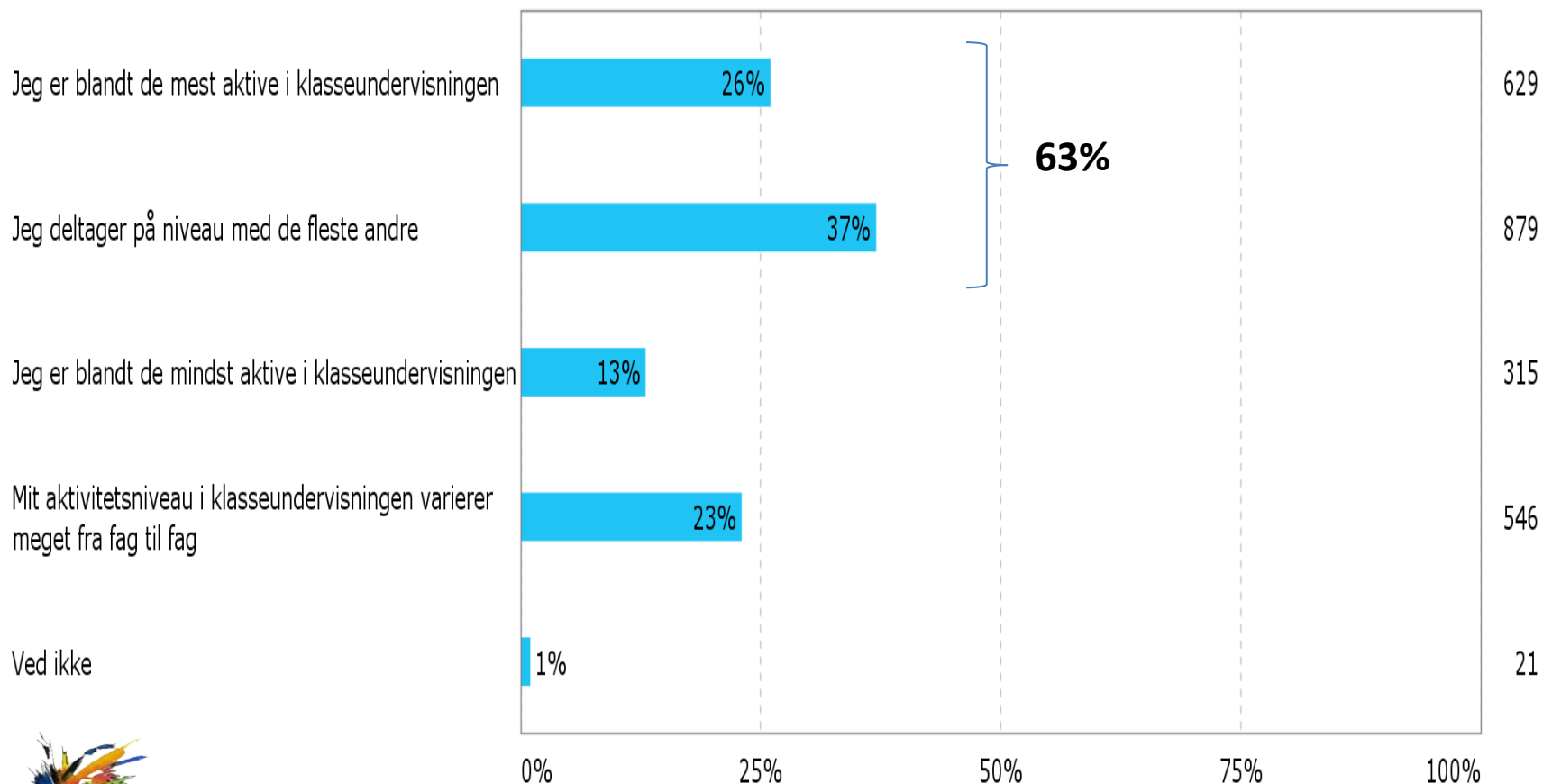And
How would you evaluate your general professional level?

How often do you do your homework / assignments?
And
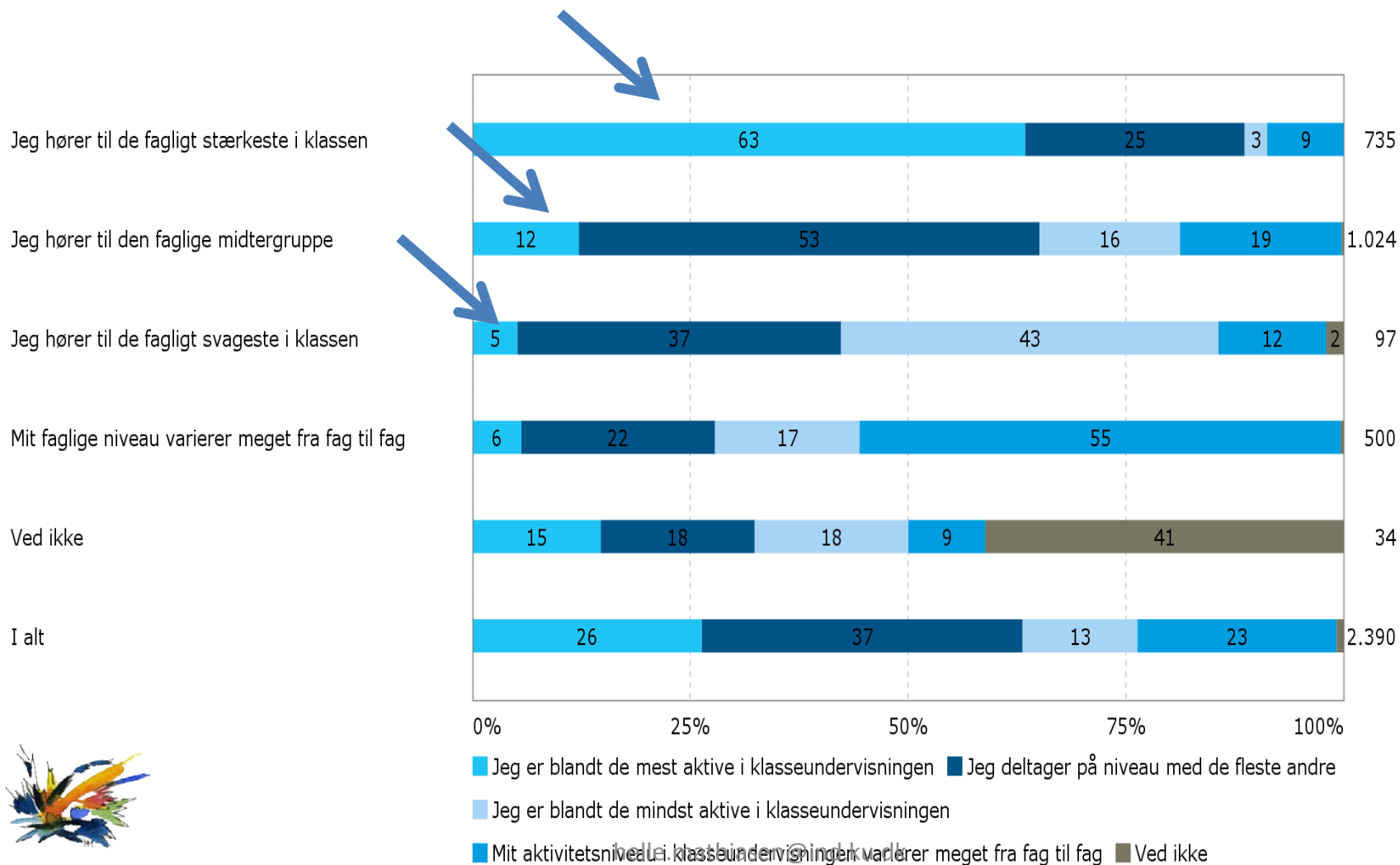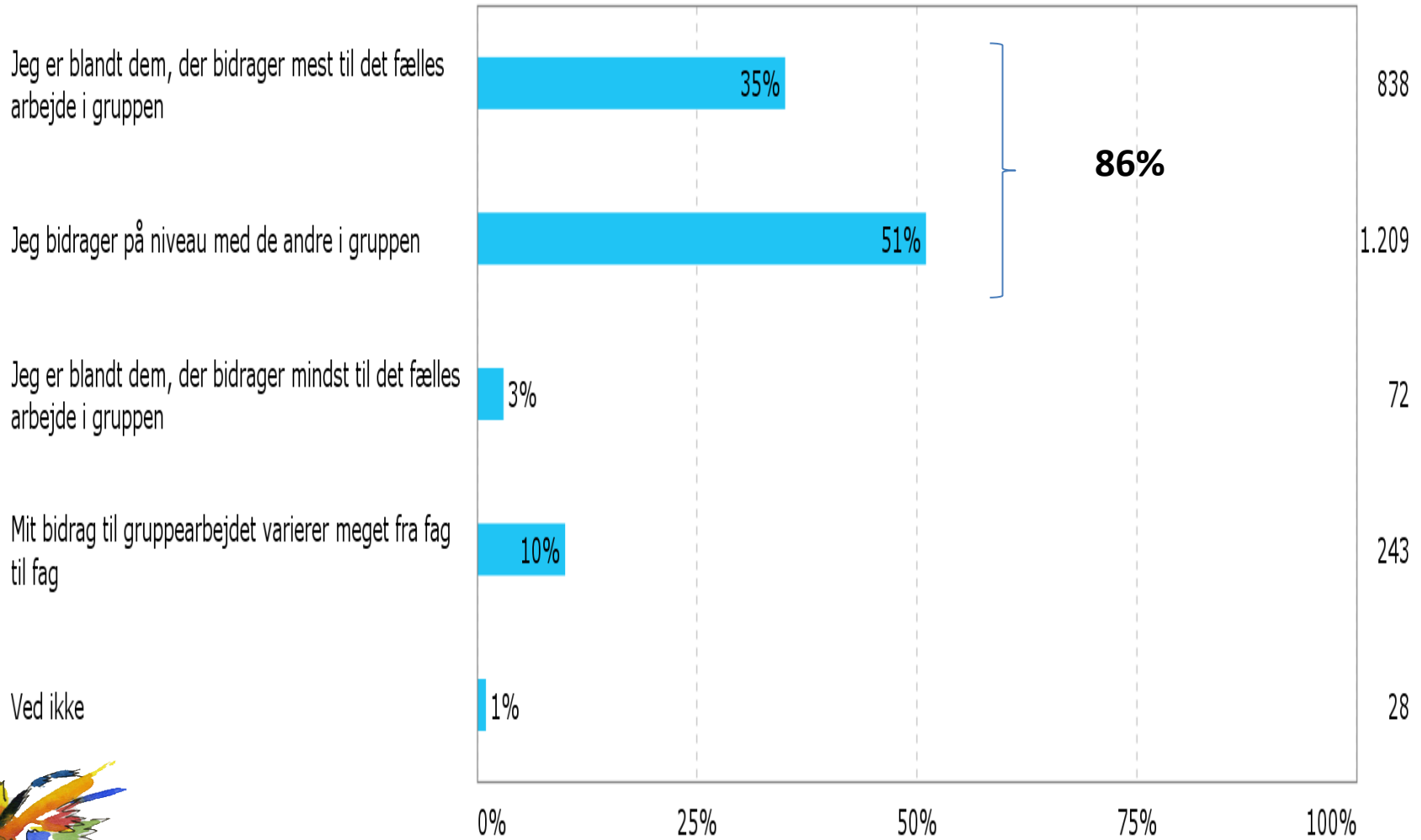# How would you evaluate your general professional level?

	Jeg hører til de fagligt stærkeste i klassen	Jeg hører til den faglige midtergruppe	Jeg hører til de fagligt svageste i klassen	Mit faglige niveau varierer meget fra fag til fag	Ved ikke	
Jeg laver altid mine lektier/opgaver	46	40	1	11		346
Jeg laver ofte mine lektier/opgaver	32	45	3	19		1.092
Jeg laver af og til mine lektier/opgaver	25	46	5	23	2	541
Jeg laver sjældent mine lektier/opgaver	24	38	9	29		203
Jeg laver aldrig mine lektier/opgaver	24	32	12	32		50
Det varierer meget fra fag til fag	20	31	4	44		143
Ved ikke	7	13	7		73	15
I alt	31	43	4	21	1	2.390

Legend:
- Jeg hører til de fagligt stærkeste i klassen
- Jeg hører til den faglige midtergruppe
- Jeg hører til de fagligt svageste i klassen
- Mit faglige niveau varierer meget fra fag til fag
- Ved ikke

How would you in general evaluate your activity level in class?

Jeg er blandt de mest aktive i klasseundervisningen	26% — 629
Jeg deltager på niveau med de fleste andre	37% — 879
(bracket)	**63%**
Jeg er blandt de mindst aktive i klasseundervisningen	13% — 315
Mit aktivitetsniveau i klasseundervisningen varierer meget fra fag til fag	23% — 546
Ved ikke	1% — 21

How would you in general evaluate your activity level in class?
And
How would you evaluate your general professional level?

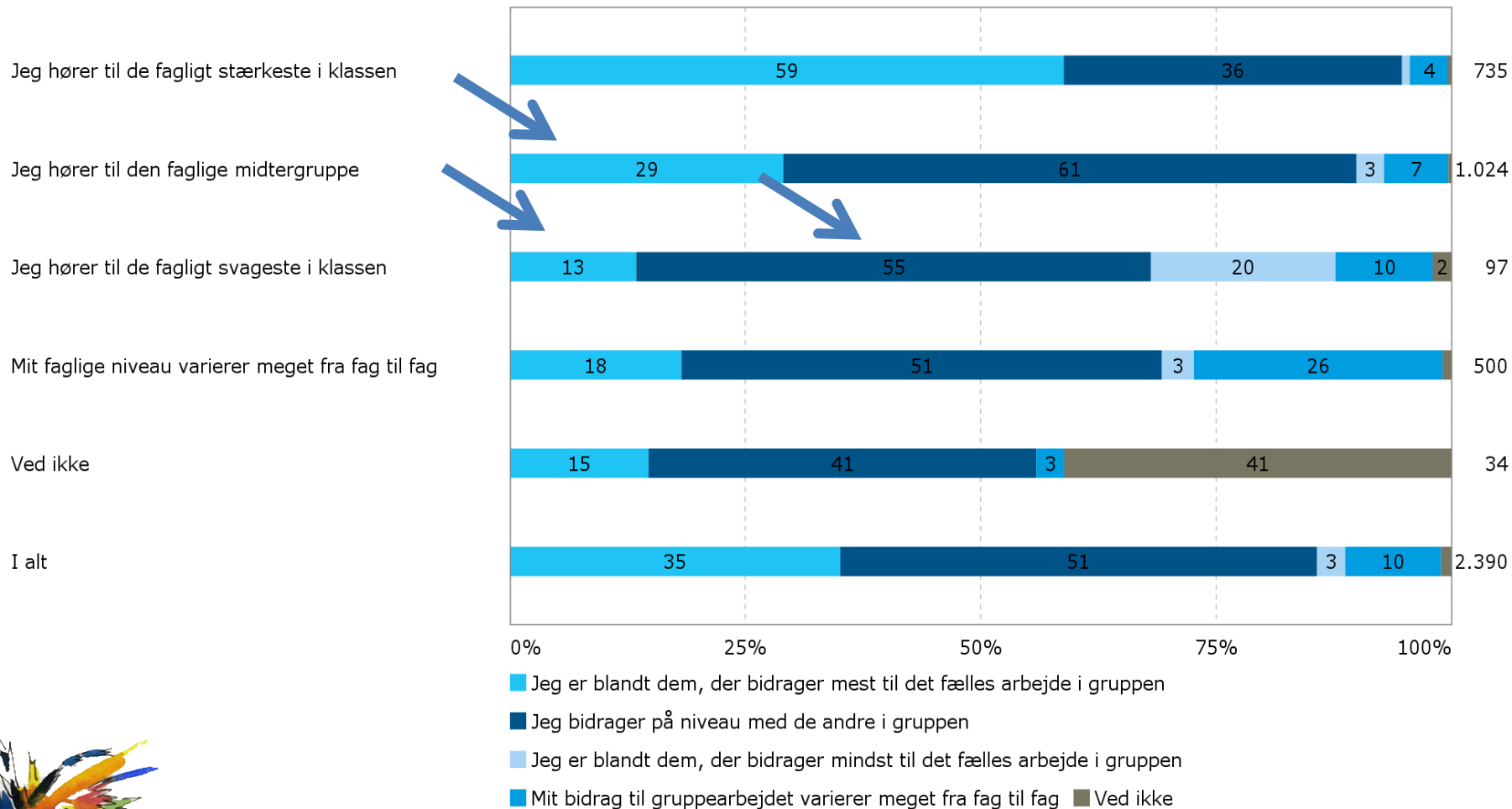|					
Jeg hører til de fagligt stærkeste i klassen	63	25	3	9	735
Jeg hører til den faglige midtergruppe	12	53	16	19	1.024
Jeg hører til de fagligt svageste i klassen	5	37	43	12	2	97
Mit faglige niveau varierer meget fra fag til fag	6	22	17	55	500
Ved ikke	15	18	18	9	41	34
I alt	26	37	13	23	2.390

0%   25%   50%   75%   100%

■ Jeg er blandt de mest aktive i klasseundervisningen   ■ Jeg deltager på niveau med de fleste andre
■ Jeg er blandt de mindst aktive i klasseundervisningen
■ Mit aktivitetsniveau i klasseundervisningen varierer meget fra fag til fag   ■ Ved ikke

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How would you in general evaluate your activity level in group work?

Jeg er blandt dem, der bidrager mest til det fælles arbejde i gruppen	35% — 838
Jeg bidrager på niveau med de andre i gruppen	51% — 1.209
Jeg er blandt dem, der bidrager mindst til det fælles arbejde i gruppen	3% — 72
Mit bidrag til gruppearbejdet varierer meget fra fag til fag	10% — 243
Ved ikke	1% — 28

86%

ut for Naturfagenes Didaktik

How would you in general evaluate your activity level in group work?

And

How would you evaluate your general professional level?

Jeg hører til de fagligt stærkeste i klassen	59 / 36 / 4	735
Jeg hører til den faglige midtergruppe	29 / 61 / 3 / 7	1.024
Jeg hører til de fagligt svageste i klassen	13 / 55 / 20 / 10 / 2	97
Mit faglige niveau varierer meget fra fag til fag	18 / 51 / 3 / 26	500
Ved ikke	15 / 41 / 3 / 41	34
I alt	35 / 51 / 3 / 10	2.390

Legend:
- Jeg er blandt dem, der bidrager mest til det fælles arbejde i gruppen
- Jeg bidrager på niveau med de andre i gruppen
- Jeg er blandt dem, der bidrager mindst til det fælles arbejde i gruppen
- Mit bidrag til gruppearbejdet varierer meget fra fag til fag
- Ved ikke

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Institut for Naturfagenes Didaktik

The students' written answers to the "open question":

If you could describe the perfect teaching environment in upper secondary education, what would that look like? What teaching materials, teaching forms/methods, it- tools etc. should/should not be included?

3605 student answers

5% of the answers – the short ones

"I don't know. It depends on my mood, my energy level and how much I have slept"

"Then it's not the same every time. Surprise me"

"success experiences"

"quick, simple and fun"

"quiet and peaceful"

"authoritarian pedagogy!"

"sports"

"fun"

"shorter days"

"practical"

"LoL"

"A happy and prepared teacher, an interested class. The teaching is varied."

"when I do well"

"physics"

"Good classmates"

"without a teacher"

"lots of smart teachers"

"when I am good"

"everyone is included"

"academic success"

"The teacher is hot"

"good atmosphere in class"

"[...]Facebook and computer removes the life energy and desire to learn in class , it sucks often all energy and concentration, and assign the class in a zoombie mode - quite seriously. It is deeply frustrating and problematic [...]"

"[...] my experience tells me that **about 20 of the 23 students in my class everyone is on facebook in the course of a day , many spend more time and focus on facebook than on teaching in the classroom** (And my class is one of the better in the school …) . I think that there is great potential in the idea, but I do not think that high school students have the **discipline and morale yet ..** [...]I am of the opinion that the student computers, at least in my class **, inhibits the general learning significantly .** [...] **it reduces the level of teaching very much and it is deeply discouraging for me and probably everyone else in a similar situation** "

Discussion in groups

Hands out: Student quotes

What do you think is important to note in the student quotes?

And

Why?

Post-it with your keywords

Rethinking own teaching?

Teaching forms?

Using/producing learning resources?

Students' activities?

Students' roles and functions?

Student-teacher relations?

In view of Students´ preferences and requirements

Thank you