



Distance Learning Classes in Tertiary Education Institutions in Kenya During School Closure

Introduction

This report covers results of a quick survey conducted in the month of May 2020 by UNESCO-IICBA on initiation of new distance learning classes in tertiary education institutions in Africa but focusing on survey data collected among university lecturers and college (or TVET) tutors in Kenya.

Specifically, the survey aimed at answering the following FIVE questions, with a view of identifying how best tertiary educators in Africa can be supported to initiate (or implement) distance learning classes during school closure following the outbreak of COVID-19 pandemic:

(a) What proportion of tertiary educators have initiated new distance learning classes following the outbreak of COVID-19 pandemic?

- (b) What methods (mechanisms) are being used by educators to deliver the new distance learning classes mentioned in (a) above?
- (c) What kind of supports are tertiary educators receiving from their governments, their institutions or any other sources to initiate or implement distance learning classes during the COVID-19 crisis?
- (d) What kind of support mechanisms are perceived by tertiary educators to be helpful to them to conduct distance learning classes?
- (e) How do tertiary educators rate their skills in basic ICT processes perceived as necessary for effective preparation and running of distance learning classes on e-platforms?

Method and data

The survey covered in this report was conducted online on a Google form platform. On 29 April 2020, email messages were sent to an initial group of tertiary educators inviting them to participate in the online survey, and encouraging them to share the survey webpage link with their colleagues who they thought might be interested in completing the survey. This initial group consisted of educators who participated in an IICBA's webinar focusing on use of ICT in distance learning at tertiary education institutions in Africa, which was held on 22 April 2020.

The data covered in this report involved 401 Kenyan educators comprising 234 (58.4%) males and 162 (41.4%) females with 5 (1.2%) of the educators preferring not to disclose their sex.

About one-third (35.2%) of these educators were teaching in universities, while about two-thirds (64.8%) were teaching in colleges or TVET institutions. In terms of courses, 182 (45.4%) of these educators were involved in teaching art-based courses, 188 (46.9%) in teaching science-based and technical courses, while 31 (7.7%) educators did not reveal their teaching courses. The survey did not collect any personal identifier data.

Results

- Slightly below one-half (46.1%) of the 401 tertiary educators involved in this survey have started new distance learning classes following the outbreak of the COVID-19 pandemic;
- Levels of new distance learning classes initiated are better among educators receiving support to initiate such classes, educators with higher ICT literacy levels, and those teaching in universities;

- Slightly above one-third (36.2%) of the educators have received at least one form of support to deliver distance learning classes either from their governments, their institutions, or any other sources.
- The main methods or mechanisms being used to deliver distance learning classes by educators include social media such as WhatsApp; internet communication platforms such as Skype and Zoom; and e-learning platforms such as Google classroom.

Limitations

The results presented in this report should be interpreted with some caution since they are based on a convenience sample, which might not reflect accurately the situation on the ground or what is actually happening in Kenya. At the bare-minimum, the educators who responded to the survey had the advantages of access to ICT devices, access to the internet, and had at least some basic ICT skills. There could be many educators out there in Kenya who could not respond to the online survey because they did not enjoy some (or all) of these advantages. If such educators were to be included in the survey, the results would most likely change markedly.

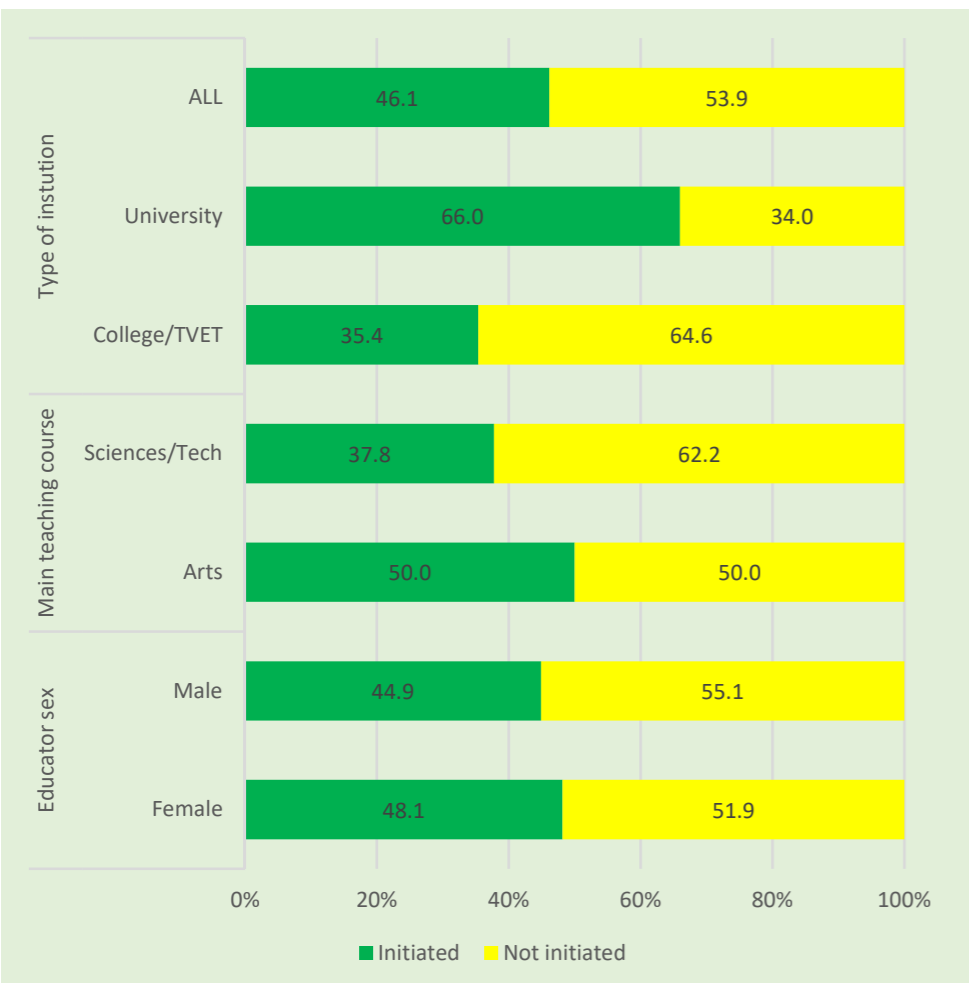
Nevertheless, these results should be of interest to the education authorities in Kenya (and elsewhere in Africa), those in charge of tertiary education institutions as well as other partners who might be interested in identifying mechanisms to support tertiary educators to initiate or implement distance learning classes using ICT or e-platforms.

In any case, if the educators without the bare-minimum advantages mentioned above were to be included in this survey, the results would most likely shift in less desirable directions. This is because such educators are unlikely, for example, to have initiated new ICT-based distance learning classes given the disadvantages they face. Thus, if anything, these results can be argued to portray the best-case-scenario of the situation on the ground in Kenya.

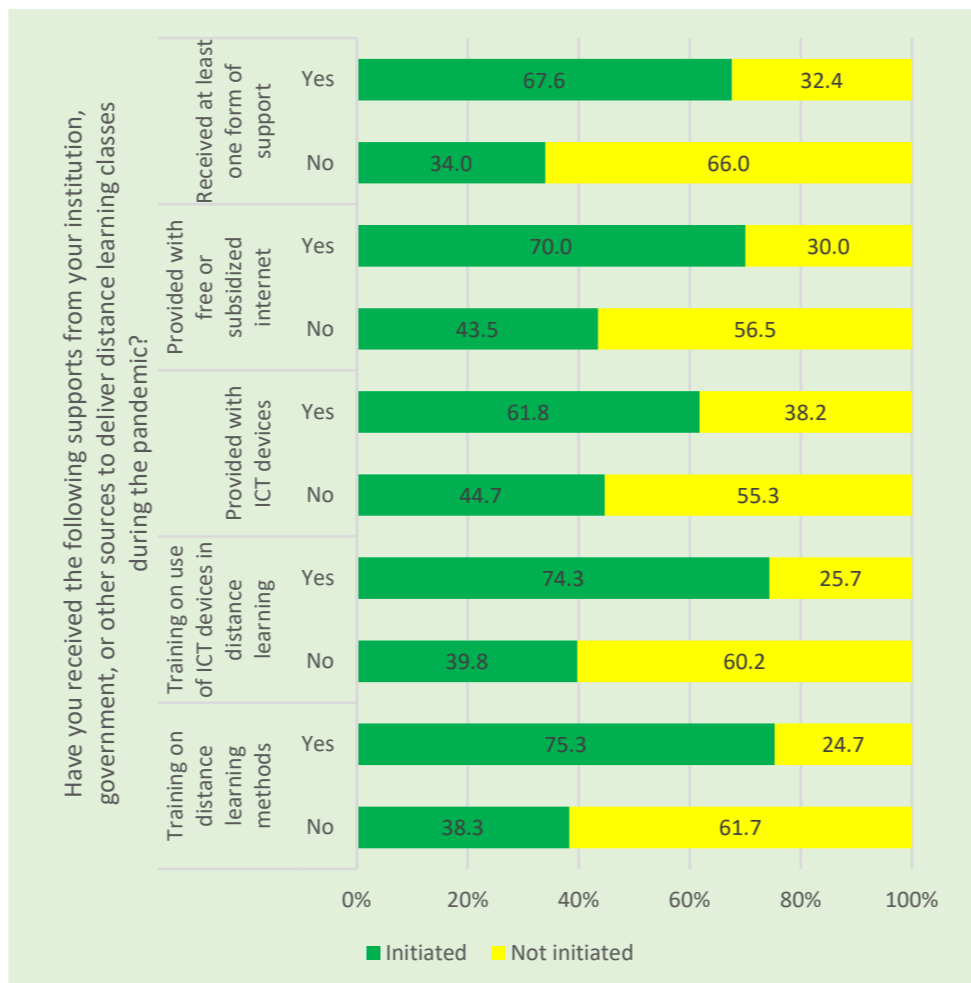
Recommendation

Develop the capacities of tertiary educators to deliver distance learning classes – this could include providing them with **Training on distance learning methods**, improving their access to **ICT devices** and **Free internet**. This could also involve provision of training on basic **ICT literacy skills** that are required to effectively develop and run distance learning classes on e-platforms, and improving **internet connectivity**, especially in rural or remote areas.

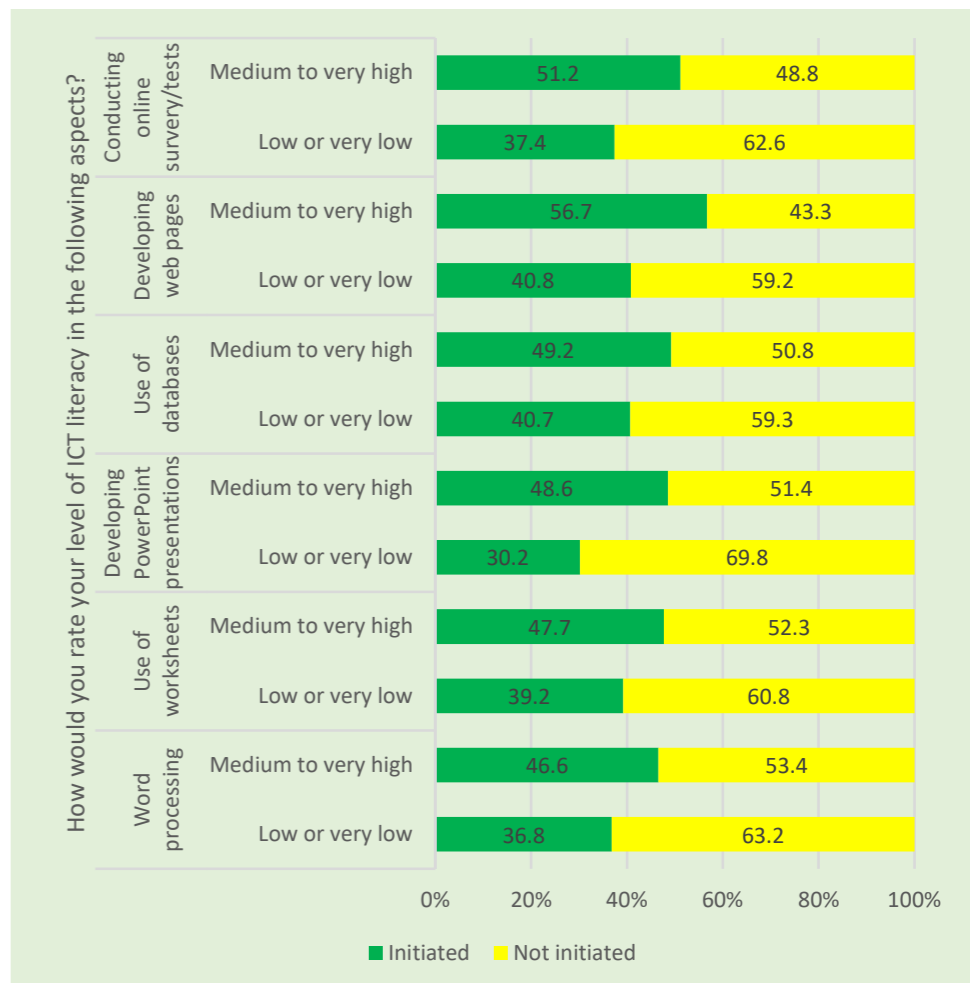
q1 Have you initiated any distance learning classes after university/college/TVET closure due to COVID-19? (n=401)



Only about one-half of the educators have started **new** distance learning classes following the outbreak of COVID-19 pandemic. The level is better in universities but about the same among female and male educators.

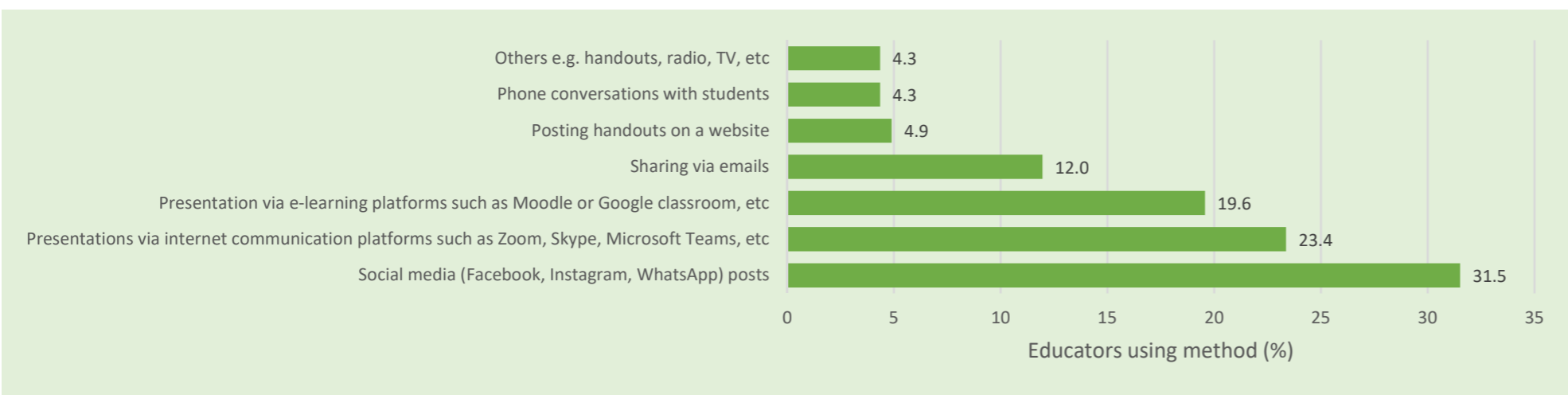


The levels of **new** distance learning classes are evidently much higher among educators receiving support to initiate such classes.



The levels of **new** distance learning classes initiated are consistently much higher among educators rating their ICT skills as medium to very high than otherwise.

q2 What is the MAIN method you are using to deliver the NEW distance learning classes mentioned above? (n=184)

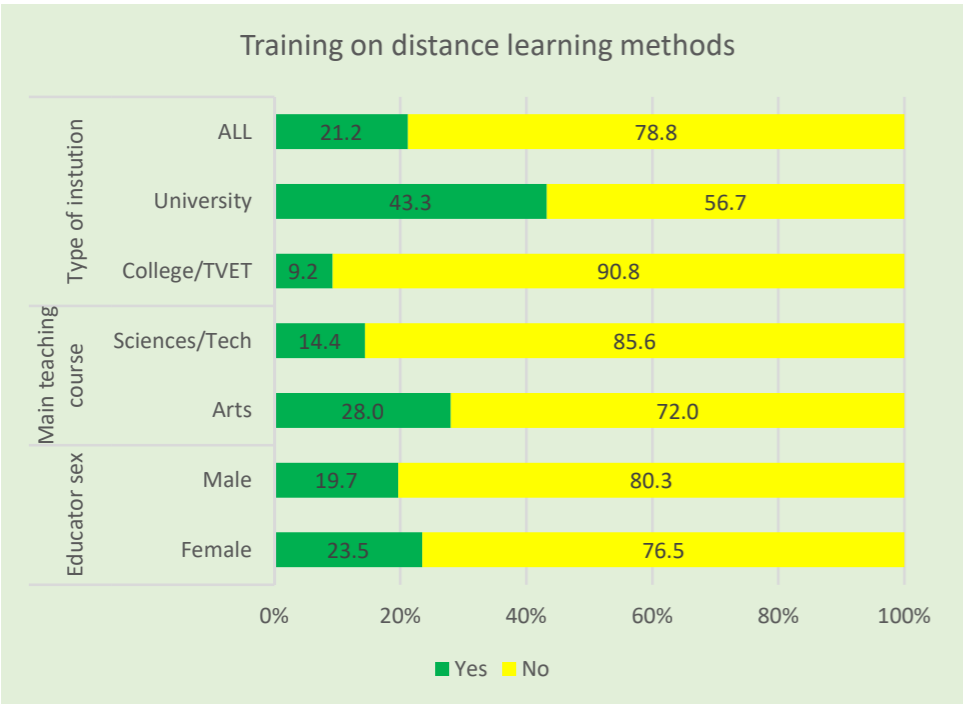


The **main** methods or mechanisms being used to deliver distance learning classes by tertiary educators includes social media, internet communication platforms, and e-learning platforms.

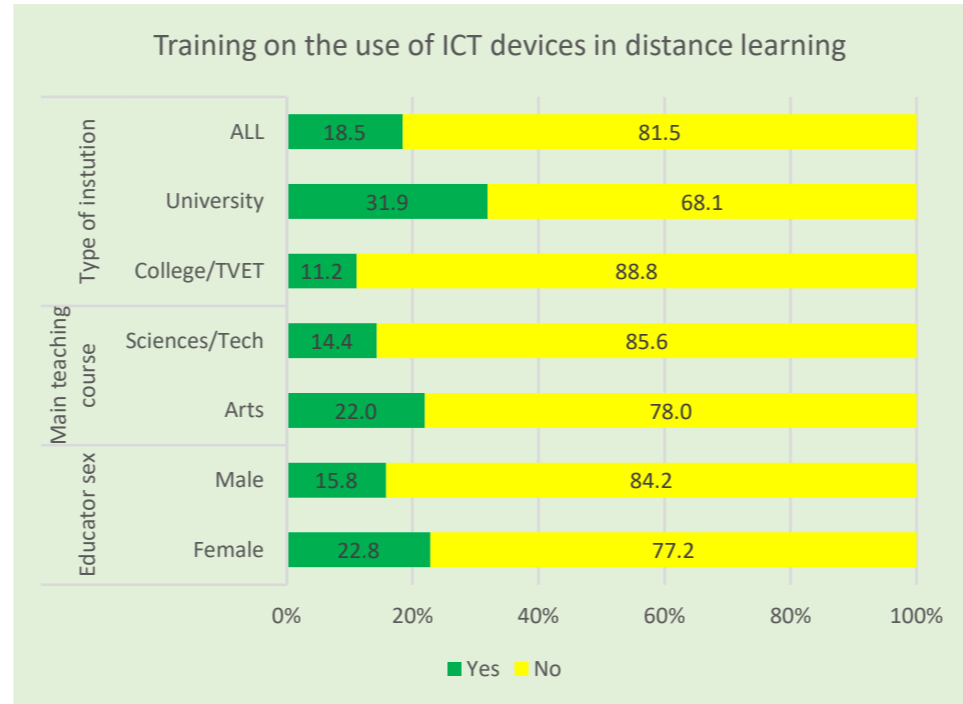
DISTANCE LEARNING CLASSES INITIATED AND METHODS USED TO DELIVER THEM

q3

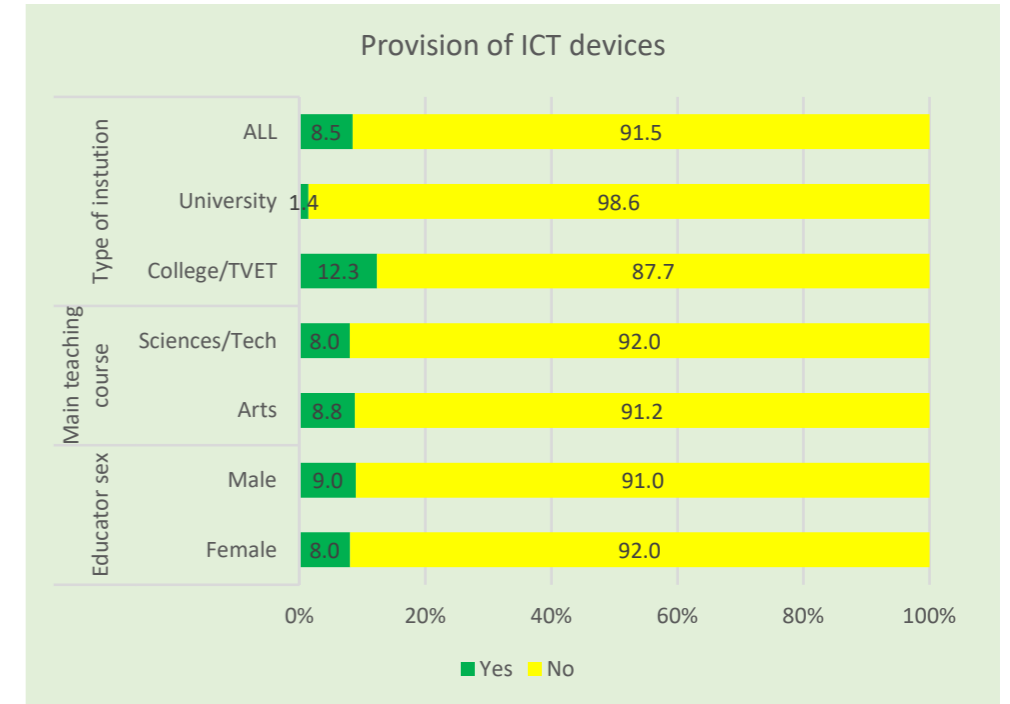
Have you received the following supports from your institution, government, or other sources to deliver distance learning classes during the pandemic? (n=401)



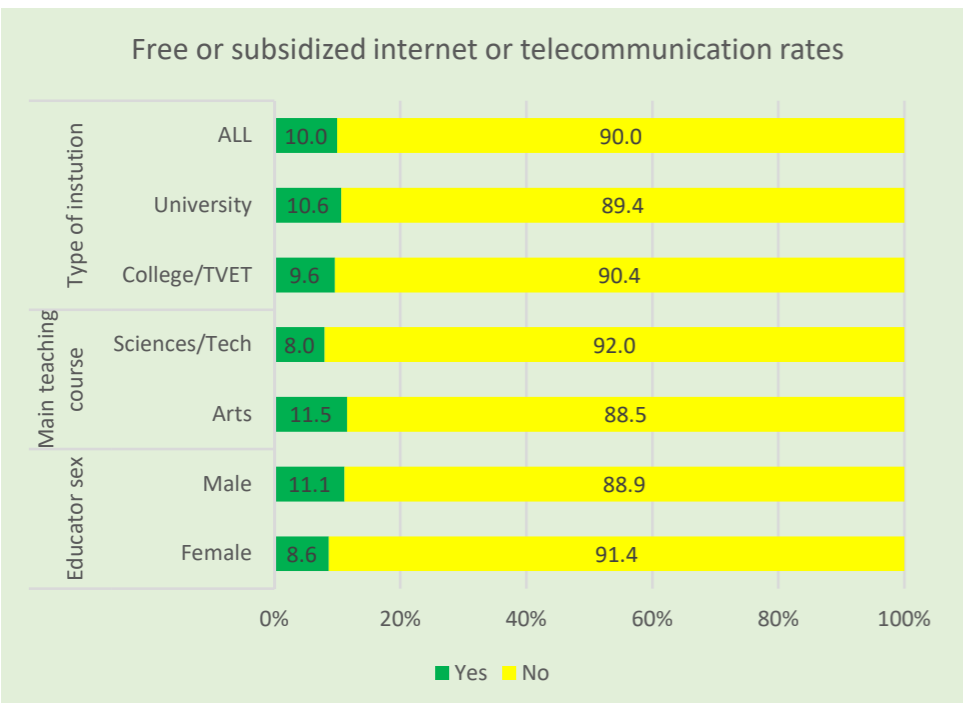
Two in every ten of the educators have received **training on distance learning methods** – but level is better in universities.



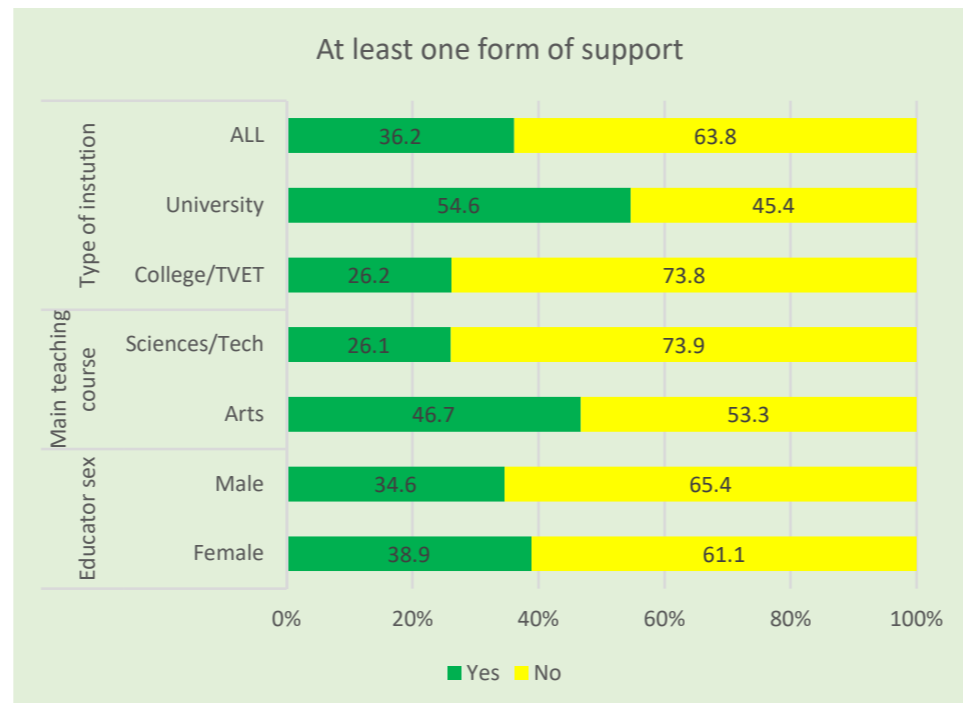
Likewise, the levels of training on the **use of ICT devices in distance learning** are mostly low – but better in universities.



Only a few educators have received **ICT devices for use in distance learning classes**, and more so in universities.



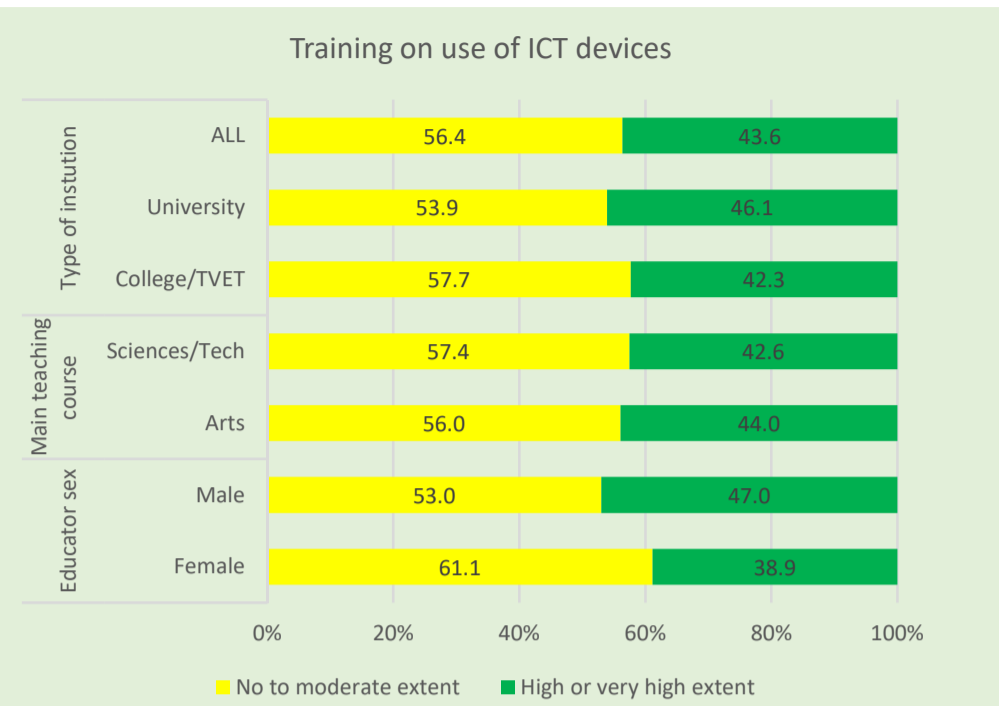
Only a few educators have received **free or subsidized internet or telecommunication rates** for use in their new distance learning classes



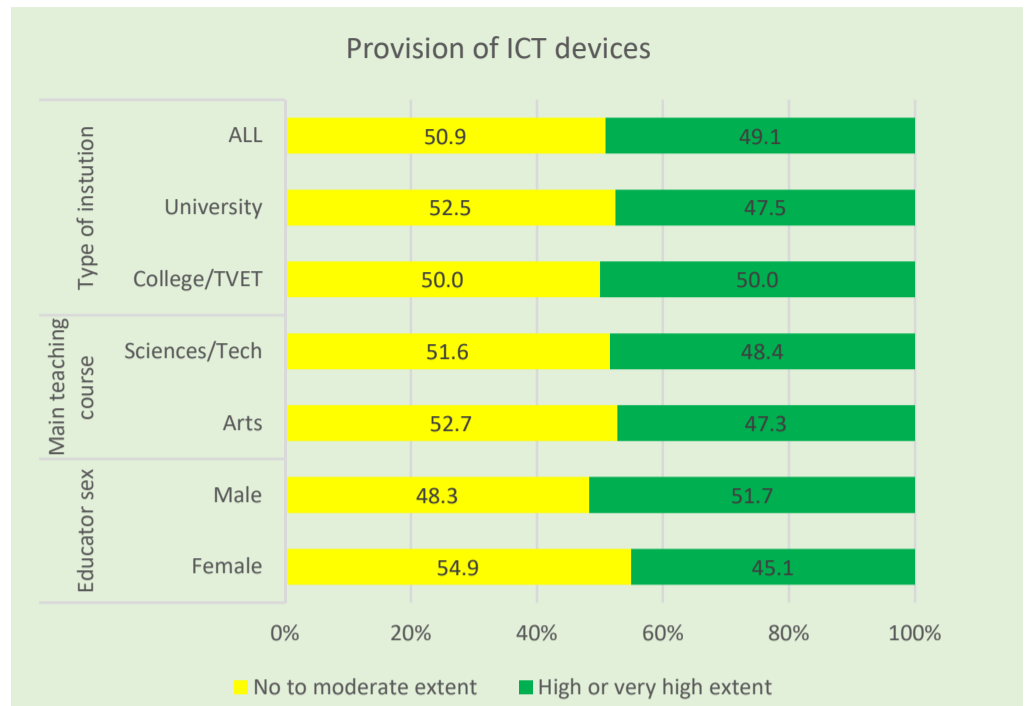
Slightly above one-third of the educators have received **at least one form of support** to deliver distance learning classes.

SUPPORT PROVIDED TO TERTIARY EDUCATORS TO INITIATE OR IMPLEMENT DISTANCE LEARNING CLASSES

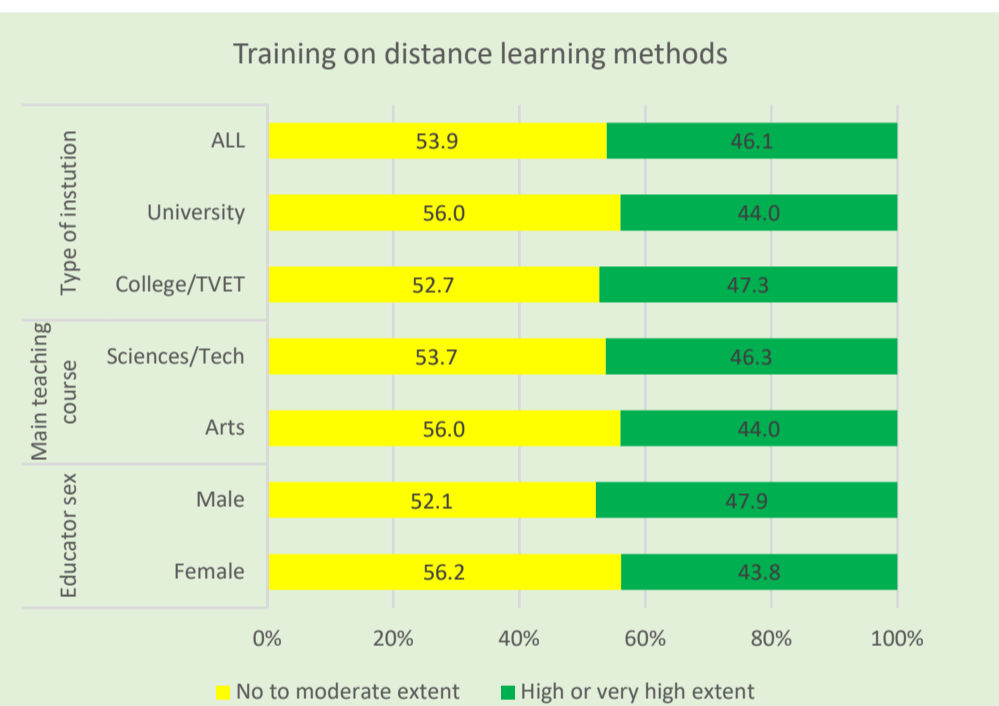
q4 To what extent would the following support mechanisms help you to conduct distance learning classes? (n=401)



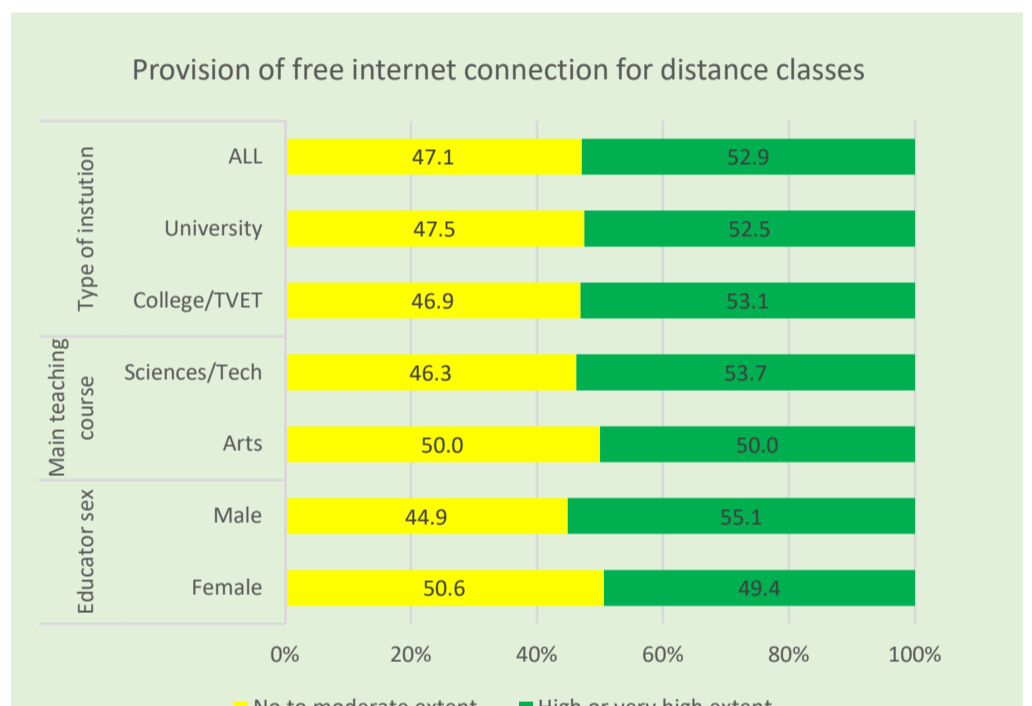
Overall, about four in every ten of the educators believe that **training on the use of ICT devices** would help them to conduct distance learning classes.



Nearly one-half of the educators perceive **provision of ICT devices** would be helpful to them to conduct distance learning classes.



Slightly below one-half of the educators think that **training on distance learning methods** would help them to conduct distance learning classes.

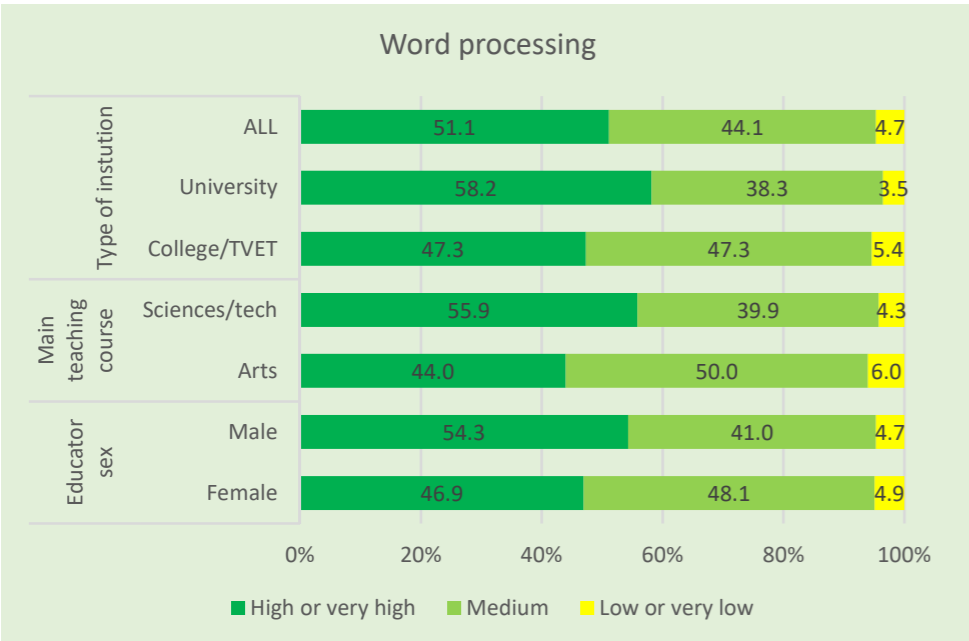


About five out of every ten educators are of the opinion that **provision of free internet connection** would be helpful in conducting distance learning classes.

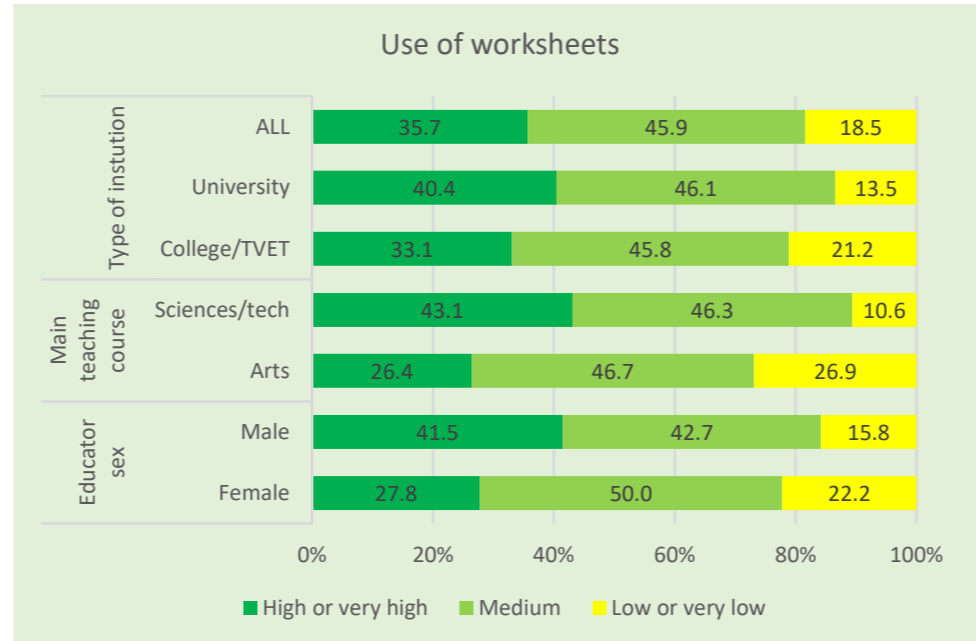
TERTIARY EDUCATORS' OPINIONS OF SUPPORT NEEDED TO CONDUCT DISTANCE LEARNING CLASSES



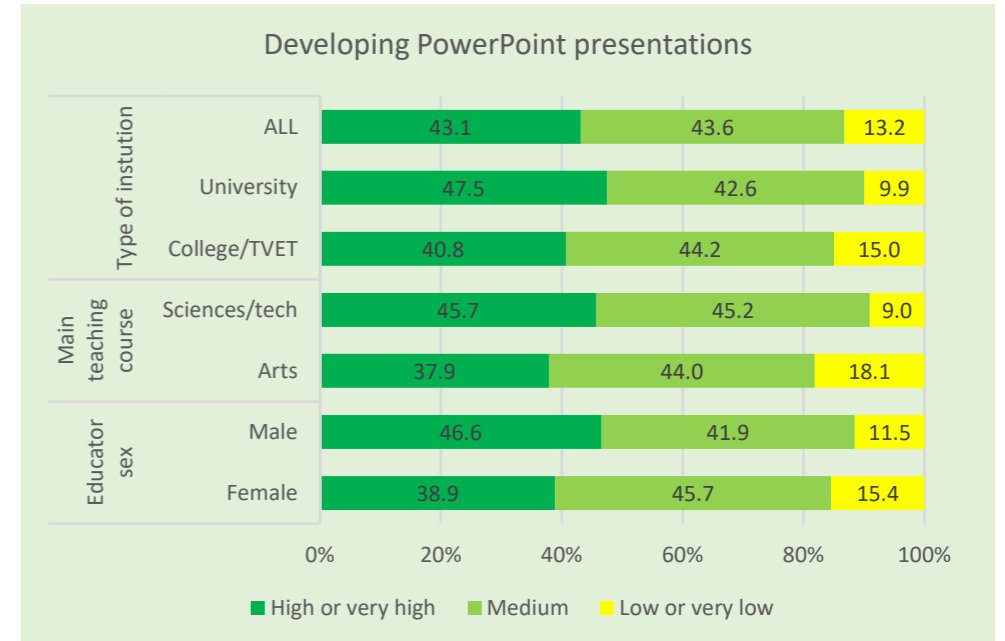
How would you rate your level of ICT literacy in the following processes? (n=401)



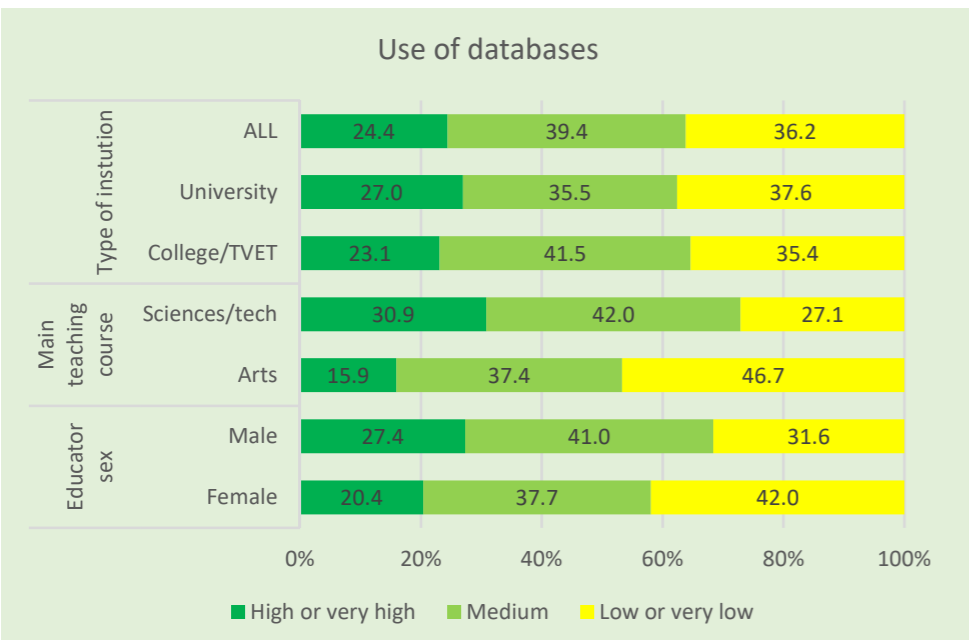
Nearly all the educators consider themselves to be medium to very highly skilled in **word processing**.



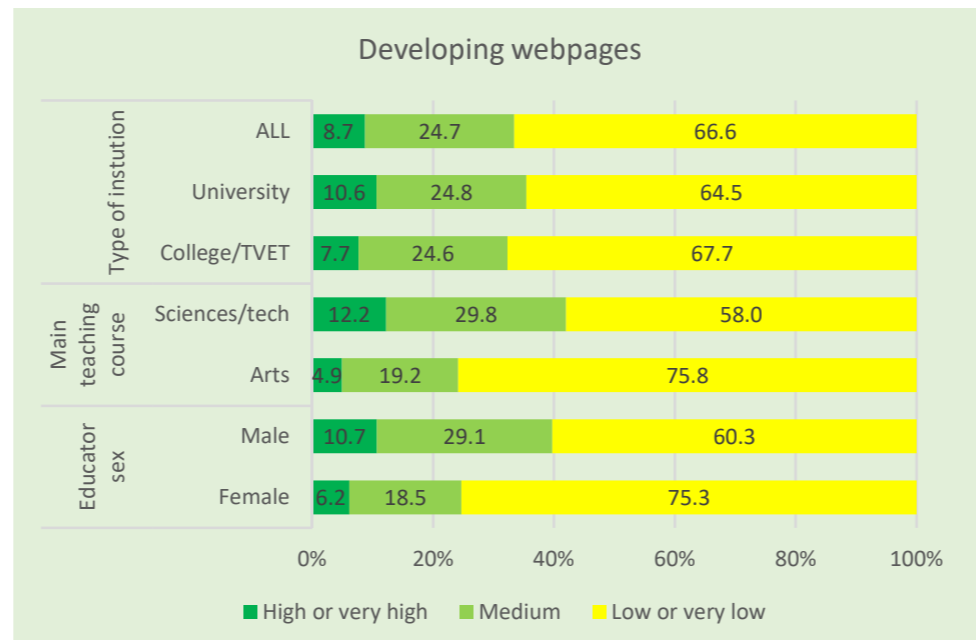
About eight in every ten of the educators say they have medium to very high skills in the **use of worksheets**.



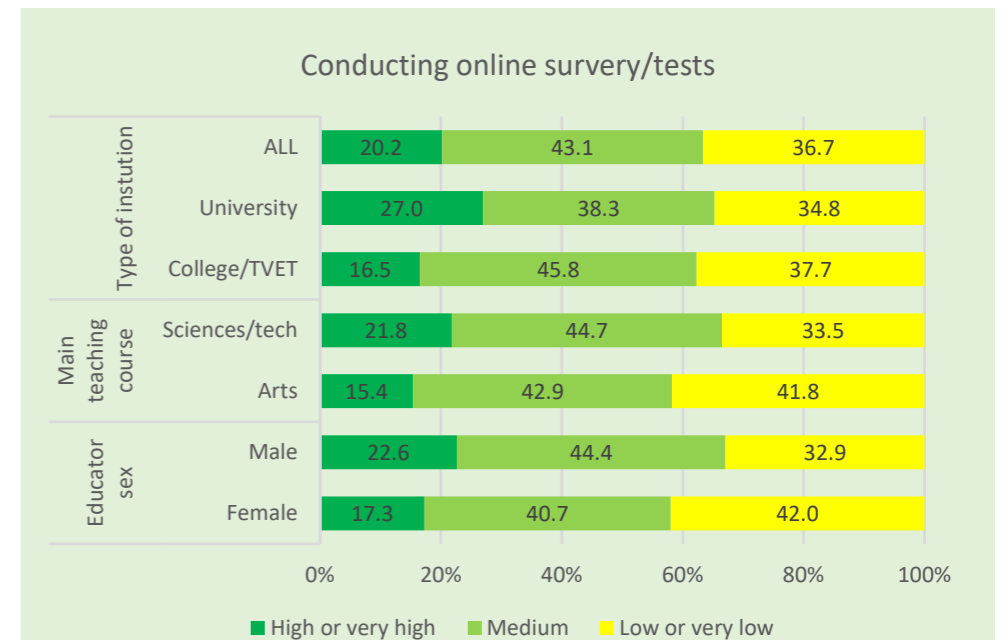
Almost nine out of every ten educators rate their **PowerPoint development** skills as medium to very high.



About two-thirds of the educators consider their skills in **use of databases** as medium to very high.



Only about one-third of the educators consider their skills in **development of webpages** to be at least medium.

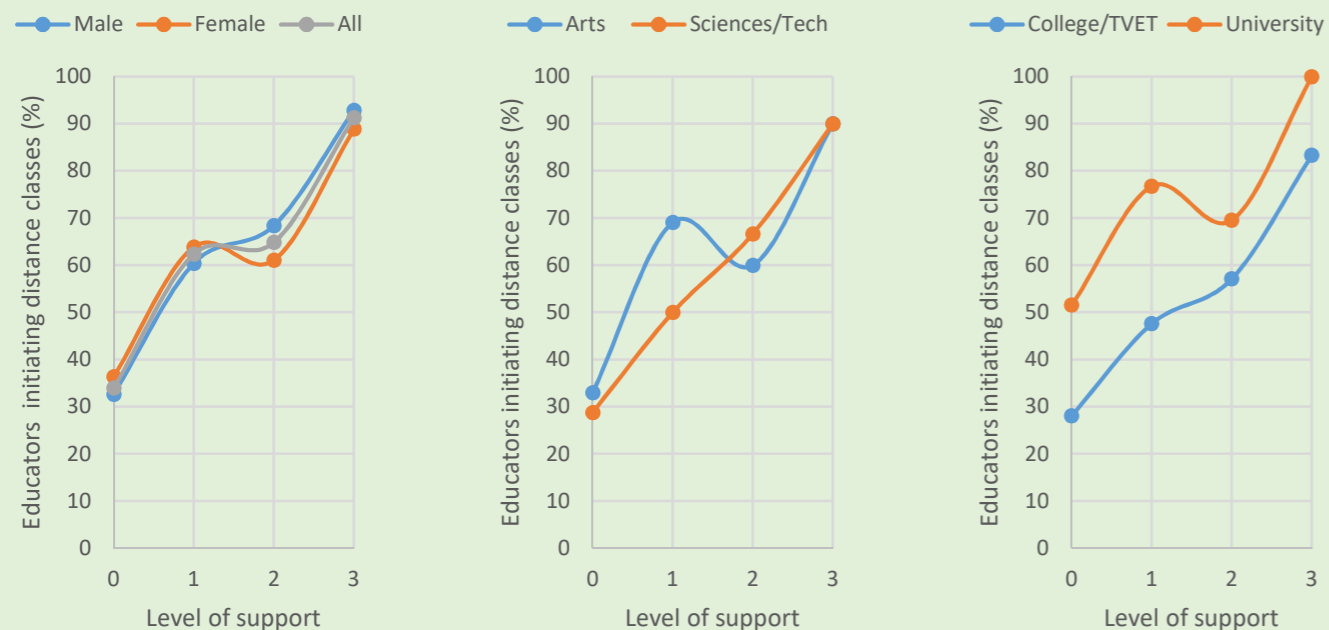


Slightly below two-thirds of the educators rate their skills in **conducting online surveys or tests** as medium to very high.

EDUCATORS SELF-RATING OF THEIR LEVELS OF ICT LITERACY IN VARIOUS ASPECTS

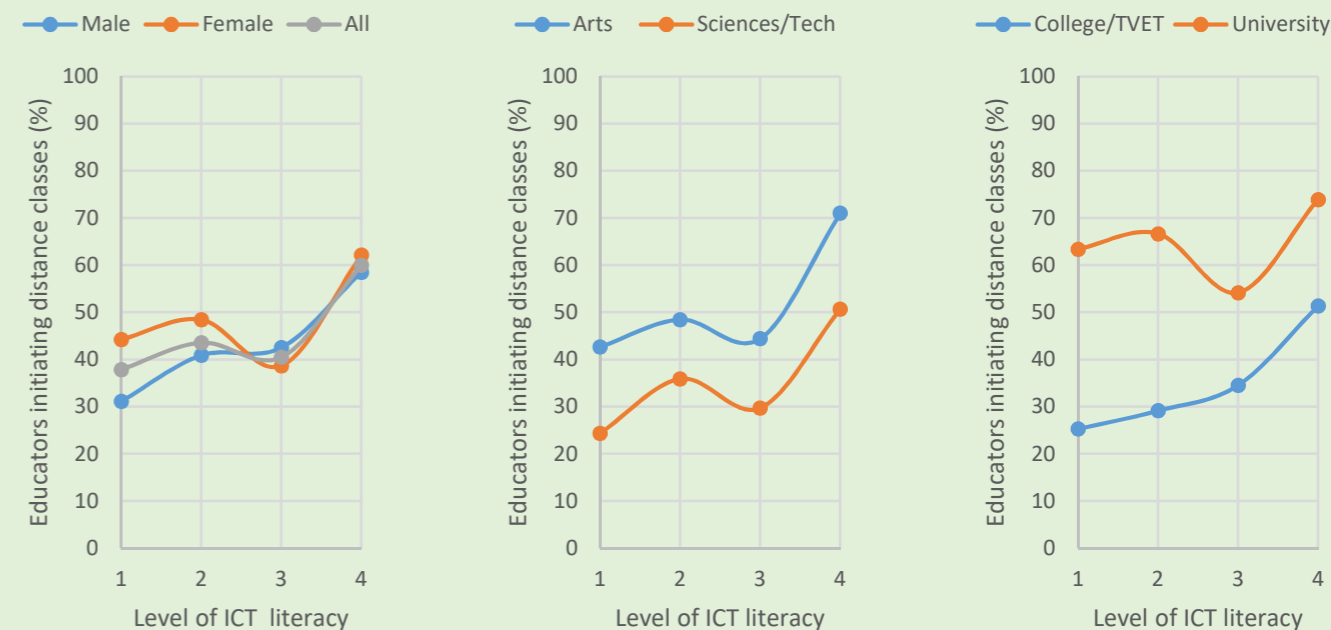
In general, many tertiary educators are doing well in Word processing, Use of worksheets and Developing PowerPoint presentations BUT many seem to be struggling with Use of databases, Developing webpages, and Conducting online surveys or tests.

The impact of educator level of support on initiation of distance learning classes (n=401)



Levels of **distance learning classes** initiated **increased** with the **levels of support** given to the educators regardless of educator sex, type of course taught, or type of institution.

The impact of educator level of ICT literacy on initiation of distance learning classes (n=401)



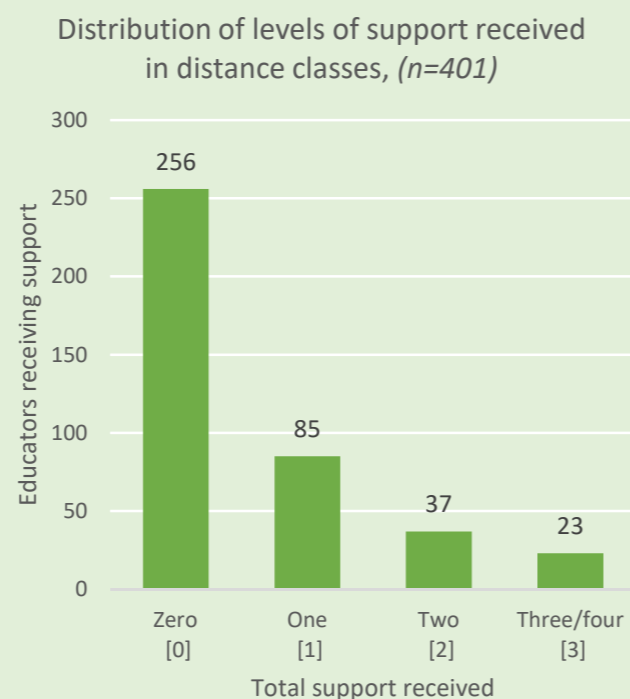
In general, levels of **distance learning classes** initiated **increased** with educator **ICT literacy levels**.

Box 1: Level of support index

This index was derived from the sum of presence of support to educator on each of following four aspects: (a) Training on distance learning; (b) Training on use of ICT devices in distance learning; (c) Provision of ICT devices; and (d) Free or subsidized internet connection.

Only a few (5) educators had received all the four supports, and therefore, their data were analyzed together with that of educators who had received three supports.

(0= no support; 1=one support; 2=Two supports; 3=Three or four supports).



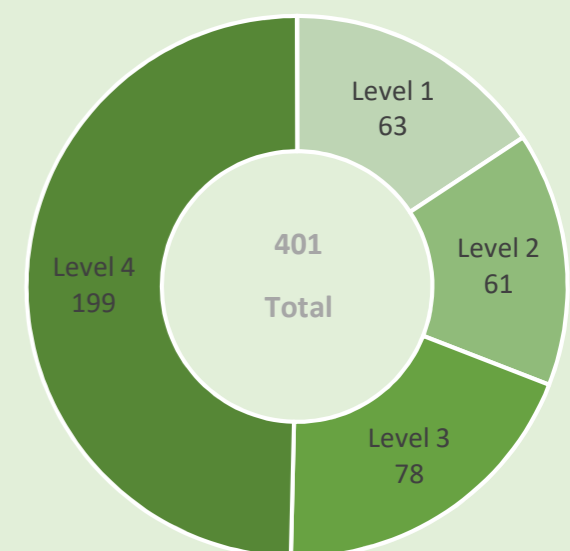
Box 2: Level of ICT literacy index

This index was derived from educators' rating of their level of ICT literacy on each of the following six aspects (a) Word processing (b) Use of worksheets (c) Developing PowerPoint presentations (d) Use of databases (e) Developing web pages, and (f) Conducting online surveys or tests.

Educators who rated their levels of ICT literacy on a particular aspect as "medium", "high" or "very high", their data were put under the same category – and coded as "1", while educators who rated their levels in an aspect as "low" or "very low", their data were put under the alternative category – and coded as '0'.

Thereafter, educator scores on each of the six aspects were added-up to compute a total score with seven categories (0, 1, 2, ..., 6). During data analyses, data for the first two categories (i.e. 0 and 1) were put together. Likewise, data for the last two categories (i.e. 5 and 6) were put together – thus, giving the four levels of ICT literacy used in the report.

Distribution of ICT literacy levels, (n=401)



Logistic regression: Predictors of initiating distance learning classes by tertiary educators

The data on initiation of distance classes were further analyzed using logistic regression model (results in the table below). The significant results in the logistic regression model are given in green font in this table.

Variable	B	S.E.	Wald	Sig.	Exp.(B)
Level of support index (Mean=0.57; Std. Dev=0.88)	0.75	0.15	24.98	0.0000	2.13
Level of ICT literacy index (Mean=2.03; Std. Dev=1.13)	0.22	0.11	4.33	0.0375	1.25
Educator sex (0=Female; 1=Male)	-0.11	0.25	0.19	0.6607	0.90
Type of institution (0=College/TVET; 1=University)	0.92	0.25	13.27	0.0003	2.52
Teaching course (0=Arts; 1=Sciences/Technology)	-0.20	0.26	0.61	0.4365	0.82
<i>Constant</i>	-1.27	0.30	18.18	0.0000	0.28

Thus, results from the logistic regression model show that initiation of new distance learning classes by tertiary educators was influenced significantly by the **Level of support** given to the educators to initiate such classes by their governments, their institutions, or support given by any other sources.

Results also show that the initiation of those classes was also significantly influenced by educator **Level of ICT literacy** – with ICT literate educators more likely to initiate distance classes; and **Type of institution** – with university educators more likely to initiate such classes compared to their counterparts teaching in colleges or TVET institutions. **Educator sex** and type of **Teaching course** were not significant in the model.

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