

Graduate Tracer Study of Uganda's National Instructors College Abilonino (NICA)

Report 1 – Findings from Cohorts 2016/17 and 2017/18 JULY2021





Acknowledgements

This report is based on data collected by Ipsos, with kind assistance from the National Instructors College Abilonino (NICA). The initial findings were discussed and validated by the Teacher Instructor Education and Training (TIET) department of the Ministry of Education and Sports (MoES) and NICA. This summarised final report has been prepared by the VVOB team.

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Suggested reference

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EXECUTIVE SUMMARY

This graduate tracer study of Uganda's National Instructors College Abilonino (NICA) is the very first of its kind. It was commissioned by VVOB and directly involved representatives from NICA and the Teacher Instructor Education and Training (TIET) department of the Ministry of Education and Sports (MoES). Its aim was to gain insights into the employment situation of NICA graduates with special focus on those who joined the BTVET teaching workforce, their self-assessment of skills acquired, and which improvements would be required.

Two key reports emerged from the study. This first report helps understand the path taken by NICA students that graduated in years 2016/17 and 2017/18. The second report will present the career trajectories of the graduates of the Agriculture department as a special interest group of VVOB's Teaching Agriculture Practically (TAP) programme.

The ensuing sections provide a snapshot of the path students take after graduation, highlighting their appreciation of the pre-service training (PRESET) enjoyed at NICA, the strategies they used to search for employment, the hurdles they encountered in joining the business, technical and vocational education and training (BTVET) teaching workforce, and the competences they believe they acquired at NICA and now need as a member of the BTVET teaching workforce.

Key findings from this study were as follows:

NICA has significant strengths and assets for delivering quality training in Uganda. This is evidenced by the:





For NICA to retain these strengths and assets, the study found that attention is required in:

Training graduates with dual professional identities where occupational and pedagogical expertise are combined.



Addressing administrative and financial challenges hindering registration of instructors with the MoES information system.



Accessing teaching and learning materials, especially for the practical courses, including the teaching staff. 4

Attending to the gendered nature of occupational choices resulting to fewer role models in BTVETs for female students.

Key Recommendations

For NICA	For TIET
Put the development of future BTVET instructors' dual professional identity at the core of its mission.	Put the development of a dual professional identity at the core of the competence profile for BTVET instructors.
Motivate and support students to enter the BTVET teaching workforce.	Assist in closing the information gap concerning available job openings for BTVET instructors.
Address barriers to female participation in the BTVET teaching workforce and promote female role models in 'male dominated' trades.	Address barriers to female participation in the BTVET teaching workforce and promote female role models in 'male- dominated' trades.
Optimise internal quality management system and capacity for data-informed decision-making.	Create an enabling environment for quality management of the pre- service instructor education and training.

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List of Acronyms

BTVET	Business, Technical and Vocational Education and Training
MoES	Ministry of Education and Sports
NICA	National Instructors College Abilonino
PRESET	Pre-service education and training
ТАР	Teaching Agriculture Practically
TIET	Teacher Instructor Education and Training (MoES department)
TMIS	Teacher Management Information System



1. INTRODUCTION

Background

This graduate tracer study of Uganda's National Instructors College (NICA) is the very first of its kind. The study was commissioned by VVOB as part of its Teaching Agriculture Practically (TAP) programme and was followed up together with staff from the Teacher Instructor Education and Training (TIET) department of the Ministry of Education and Sports (MoES), NICA and VVOB. Data were collected by Ipsos between June and September 2020 and analysed by VVOB.

The tracer study resulted in two reports. This first report focuses on graduates from all NICA's seven departments. It provides a snapshot of the path students take after graduation, highlighting their appreciation of the pre-service training (PRESET) enjoyed at NICA, the strategies they used to search for employment, the hurdles they encountered in joining the business, technical and vocational education and training (BTVET) teaching workforce and the competences they believe they acquired at NICA and now need as a member of the BTVET teaching workforce. The second report focuses on graduates from the Agriculture department – a group of special interest to the TAP programme that was therefore invited to respond to a longer questionnaire.

Importance of BTVET in Uganda

In a youthful country such as Uganda, it is crucial to ensure that young people have the competences needed to succeed in the world of work. The BTVET sub-sector plays a key part in this endeavour. Since the adoption of the BTVET Act in 2008 and the 10-year BTVET Strategic Plan "Skilling Uganda" in 2011, the Government of Uganda has made considerable efforts to expand access to BTVET and to increase the quality and relevance of the training provided. Enrolment in lower and upper BTVET more than quadrupled from 21,763 in 2007 to 95,841 in 2017 and the Education and Sports Sector Strategic Plan (ESSP) 2021/21-2024/25 wants to see a further increase to 118,500 by 2025. An expansion of the BTVET teaching workforce is clearly also needed to make this possible. Equally important is to make sure this workforce is well-prepared to teach effectively.

Size and quality of the BTVET teaching workforce

Recent data on the BTVET teaching workforce are not readily available in the public domain. The 2014 report² of the Teachers Initiative in Sub-Saharan Africa (TISSA) remains the most comprehensive account to date. Itself relying on data from two studies conducted in 2006 and 2007, the TISSA report put Uganda's total BTVET teaching workforce at 5,000. It was estimated that only 30 percent of them – 40 percent in public BTVET and 21 percent in private – met the minimum legal requirements to teach. In anticipation of the expansion of the sub-sector, the report also projected the number of new BTVET teachers to be recruited by 2025. To realise the then 'low' scenario of 137,590 students enrolled in 2025, about 158 new lower and 257 new upper BTVET teachers would need to be recruited each year. Though MoES has since lowered the target for expanded access, the recruitment challenge remains formidable. At least in theory, the challenge could be met if all NICA graduates – approximately 190 per year – would have the needed certification and subject specialisation to teach and proceed to effectively join the BTVET teaching workforce. But to what extent is that a reality?

² Teacher Issues in Uganda: A shared vision for an effective teachers' policy, Ugandan Ministry of Education and Sport, UNESCO - IIEP Pôle de Dakar, 2014



In 2014, MoES developed a competency profile for BTVET teachers or, rather, 'instructors' as they are called in Uganda. According to the profile, which sets the bar for NICA graduates, a BTVET instructor is a person who "has reached the proficient and expert levels of professional practice in his or her trade (area of specialisation), instructs or trains students in BTVET training institutions and maintains contact with the industry". An instructor is "also a mentor, a coach, counsellor, facilitator and support supervisor" to his/ her students. He/she "must first be an expert in his/her trade with additional qualification in professional education and pedagogy/andragogy courses." But to what extent do NICA graduates feel they fit the profile?

The objectives of the study were threefold:



For TIET, it was important to know to what extent existing projections about the number to be recruited as newly qualified BTVET instructors were actually being met and how the transition into the BTVET teaching workforce can be facilitated. For NICA and VVOB, it was important to find out to what extent the quality of the PRESET provided met the expectations of graduates and where there might be areas for improvement.

Research questions

For NICA, TIET and VVOB, the graduate tracer study provided answers to the following questions:





2. METHODOLOGY

Data collection

Structured individual telephone interviews were used to collect data from the graduates. Interviewers, recruited and trained by Ipsos, made use of Ipsos' computer-assisted personal interviews (CAPI) platform, iField, that allows routine quality checks such as skip routines and logics. As the project was a learning experience as well as a pilot for future NICA graduate surveys, staff from the TIET department, NICA and VVOB also participated in the training for interviewers.

The initial target population was all former students who graduated from NICA at the end of academic years 2016/17 and 2017/18. This report refers to them as cohorts 2016/17 and 2017/18. At the time of data collection, cohort 2018/19 was also already in the labour market. However, NICA, TIET and VVOB opted against including this cohort in the study, because it was expected that their entry into the world of work would be strongly influenced by the onset of the COVID-19 pandemic and more-than-usual administrative delays in the awarding of diplomas. Cohorts 2016/17 and 2017/18 were



To contact potential

considered more 'typical' and, in that sense, more suitable for a pilot study aiming to take a first look at how NICA students fare after graduation.

The questionnaire was drafted and tested by Ipsos in consultation with NICA, TIET and VVOB. The topics covered in the questionnaire include:

01	Demographic information
02	Graduates' retrospective assessment of their studies at NICA.
03	Graduates' current employment situation.
04	Graduates' transition into the BTVET workforce
05	Basic profile of those who joined the BTVET workforce.



In addition, the questionnaire included a set of questions directed specifically at graduates from the Agriculture Department. The findings from those questions are treated in a second report. Ipsos also carried out interviews with 23 principals of BTVET institutions that recently employed graduates from NICA's Agriculture department. Most of the findings from these interviews will also be treated in the second report.

Response rate

To contact potential respondents, the data collection team relied on administrative data provided by NICA. According to these, there were

173 graduates in 2016/17 and 205 in 2017/18. A total of 321 responses were collected through telephone interviews.

Since the aim was to gain insight into the situation of cohorts 2016/17 and 2017/18, 14 responses were considered invalid as the interviewees reported to have completed their studies in other academic years.

Two graduates – one from cohort 2016/17 and one from cohort 2017/18 – were deceased. This brought the total possible number of respondents down to 362.

Of these, 307 were reached, thus resulting to a response rate of 84.8%, which is similar to other tracer studies carried out in Uganda, such as the 2019 tracer study of graduates from the five

Ethical considerations

Respondents were informed of the voluntary nature of their participation and were advised to stop answering the questionnaire at any point they deemed necessary for them. They were also asked to consent to recording.

The questionnaire developed for the project was anonymous. Data was captured from the respondents without any identification details, and all personal details were processed in an anonymous manner to ensure confidentiality. Responses are reported as aggregated data in a group to ensure that the respondents cannot be identified by the readers of the report.



3. GRADUATES' DEMOGRAPHIC PROFILE

Civil and Building Engineering, the largest department

The study reached a total of 307 respondents: 116 from the cohort that graduated at the end of 2016/17 and 191 that graduated at the end of 2017/18. The respondents studied across NICA's seven departments, each of which focuses on a specific field of study or (set of) trade(s). As shown in <u>Table 1</u>, in both cohorts, the Civil and Building Engineering department is the largest and it delivered the highest number of graduates; followed by Agricultural Production; and Tailoring and Garments Design. Some departments, such as Leather Tanning and Metal Fabrication, attract only a handful of students and, hence, produce very few graduates to teach these subjects in lower or upper BTVET.

Gender stereotypical study profiles

Table 1 also shows that men represent the majority of NICA graduates. Taking the two cohorts together, their share amounts to 64.5 percent. Moreover, a closer look at the different departments reveals gender stereotypical patterns. For instance, in 2016/17 and 2017/18, no women graduated from Automotive Engineering and less than one in six graduates from Civil and Building Engineering were women. Tailoring and Garments Design, on the other hand, was heavily dominated by women in both cohorts. Of the larger departments, Agricultural Production scores best in terms of gender parity; about 44 percent of its graduates of cohorts 2016/17 and 2017/18 were women with Cohort 2017/18 having a 50-50 split. Men represent the majority of NICA graduates. Taking the two cohorts together, their share amounts to

b4.0% Moreover, a closer look at the different departments reveals gender stereotypical patterns.

		Cohort	2016/201	17	Cohort 2017/2018					
Field of study	All	F	Μ	Gender Parity Index⁴	All	F	Μ	Gender Parity Index		
Agricultural Production	29	10	19	0.53	44	22	22	1.00		
Automotive Engineering ¹	13	0	13	0.00	22	0	22	0.00		
Civil and Building Engineering	37	6	31	0.19	61	9	52	0.17		
Electrical Engineering ²	9	3	6	0.50	16	5	11	0.45		
Leather Tanning ³	2	0	2	0.00	2	1	1	1.00		
Metal Fabrication	1	0	1	0.00	3	0	3	0.00		
Tailoring and Garments Design	25	16	9	1.78	43	37	6	6.17		
All respondents	116	35	81	0 /13	191	74	117	0.63		
Πιτεορυπαεπιο	100%	30.2%	69.8%	0.45	100%	38.7%	61.3%	0.05		

Table 1: Study profile of graduate respondents by cohort and sex (N = 307)

¹ Full name = Automobile / Automotive Engineering; ² Full name = Electrical Engineering / Electrical Installation; ³ Full name = Leather Tanning and Leather Good Production / Shoe-Making and Leather Tanning; ⁴ Number of female graduates divided by number of male graduates. A GPI of less than 1 shows that women are less represented than men in the given field of study and a GPI of greater than 1 shows it is the other way around.



Average age at graduation is 26 – 27 years

The average age of the respondents was 29, with graduates from cohort 2016/17 being on average 30 years old and those from cohort 2017/18 on average 28. The youngest respondent (a woman) was 21 and the oldest (a man) was 45 years old. Given that most of these graduates (71%) finished their studies in two years and taking into account the year of graduation, we can estimate that most NICA students are 24-25 at entry and 26-27 at graduation. This also suggests that, typically, the transition into PRESET does not immediately follow graduation from the preceding studies.

NICA caters mostly for the Northern region

When it comes to NICA's geographical reach, <u>Table 2</u> indicates that the largest group of respondents was living in the Northern region (41%) at the time that data were collected, followed by the Eastern (23.5%), Western (21.2%) and Central (12.1%) regions. Of all districts, the biggest share lives in Lira (12.1%), which may not be very surprising given where NICA is located. Hardly any graduates live and, hence, work in the West Nile region (2.3%). For most graduates (60%), the region where they live is also the region where they have permanent residency.

	Age profile									Present region of residence										
Field of study		19-24		62-62		30-34	00 10	50-55	.07.07	40-40+	-	Central	L	Eastern	-	Northern	-	Western	West Nile	
Cohort graduated in 2016/2017	F	м	F	м	F	м	F	м	F	М	F	м	F	м	F	м	F	м	F	м
Agricultural Production	0	0	8	10	2	8	0	1	0	0	2	3	1	1	4	10	3	5	0	0
Automotive Engineering		0		9		3		1		0		0		4		4		5		0
Civil & Building Engineering	0	0	4	16	2	9	0	4	0	2	1	4	1	5	2	10	2	9	0	3
Electrical Engineering	0	0	3	4	0	2	0	0	0	0	0	1	1	3	1	0	1	2	0	0
Leather Tanning		0		1		1		0		0		1		0		0		1		0
Metal Fabrication		0		0		0		0		1		0		0		1		0		0
Tailoring and Garments Design	0	0	10	4	2	4	4	1	0	0	1	0	7	3	4	6	2	2	0	0
	0	0	25	44	6	27	4	7	0	3	4	9	10	16	11	31	8	24	0	3
All Cohort 16-17 respondents		0	6	9	3	3	1	1	3	3	1	.3	2	6	4	2	3	2	3	3
 	0	%	59	.5%	28.4%		9.5%		2.6%		11.2%		22.4%		36.2%		27.6%		2.6%	
Cohort graduated in 2017/2018	F	М	F	М	F	М	F	М	F	М	F	М	F	М	F	М	F	М	F	М
Agricultural Production	1	1	19	15	2	5	0	1	0	0	5	0	3	8	12	9	2	4	0	1
Automotive Engineering		0		15		5		1		1		1		7		10		3		1
Civil & Building Engineering	2	0	5	34	2	14	0	1	0	3	2	4	1	8	3	26	3	12	0	2
Electrical Engineering	2	0	2	4	1	7	0	0	0	0	2	2	1	3	1	3	1	3	0	0
Leather Tanning	0	0	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Metal Fabrication		0		3		0		0		0		0		3		0		0		0
Tailoring and Garments Design	2	0	28	4	7	2	0	0	0	0	6	1	9	3	17	2	5	0	0	0
	7	1	55	76	12	33	0	3	0	4	15	9	14	32	34	50	11	22	0	4
All Cohort 17-18 respondents		8	1	31	4	5	3	3	4	1	24		46		84		33		2	1
		2%	68	.6%	23.	6%	1.6	5%	2	%	12	.6%	24.	1%	44	1%	17.	.3%	2	%

Table 2: Age and geographical profile of graduate respondents by cohort, field of study and sex (N = 307)



4. APPRAISAL OF STUDIES AT NICA

NICA is rated positively ...

The questionnaire contained a number of questions to ascertain graduates' retroactive assessment of the studies they completed at NICA. One question required respondents to rate the PRESET received at NICA on a scale from 1 ('poor') to 4 ('good'). Close to three fourths of the 307 respondents gave NICA a score of 4, with cohort 2017/18 being most positive; 77% of this 191-person cohort gave NICA a score of 4; 69.8% of the 116-person cohort 2016/17 gave the same score. No graduates rated NICA as 'poor'.

... and is highly recommended

Similarly, the graduates responded very positively to another question that aimed at gauging their willingness to recommend NICA to people they know. Again, scoring on a scale from 1 ('definitely won't') to 4 ('definitely will'), no less than 83.7 percent of the respondents indicated that they were definitely willing to recommend NICA and an additional 14.7 percent said that they would probably do so. <u>Table 3</u> below provides additional detail.

	Rati	Rating of training received at NICA Willing									ess to recommend NICA							
Field of study	Good		Somewhat good		Somewhat poor		Poor		Definitely will		Probably will		Probably won't		Definitely won't			
Cohort graduated in 2016/2017	F	М	F	М	F	М	F	М	F	М	F	М	F	М	F	М		
Agricultural Production	5	16	5	2	0	1	0	0	7	16	3	3	0	0	0	0		
Automotive Engineering		8		4		1		0		13		0		0		0		
Civil and Building Engineering	4	23	2	7	0	1	0	0	5	26	1	4	0	1	0	0		
Electrical Engineering	1	5	2	1	0	0	0	0	2	4	1	2	0	0	0	0		
Leather Tanning		1		1		0		0		2		0		0		0		
Metal Fabrication		1		0		0		0		1		0		0		0		
Tailoring and Garments Design	11	6	5	3	0	0	0	0	11	8	4	1	0	0	1	0		
 	21	60	14	18	0	3	0	0	25	70	9	10	0	1	1	0		
All respondents of C16/17	8	81		32		3		0		95		9	1		1			
	69.	8%	27.6%		2.6%		0%		81.9%		16.3%		0.9%		0.9%			
Cohort graduated in 2017/2018	F	м	F	м	F	м	F	М	F	М	F	м	F	м	F	м		
Agricultural Production	18	17	4	4	0	1	0	0	19	18	3	4	0	0	0	0		
Automotive Engineering		15		7		0		0		20		2		0		0		
Civil and Building Engineering	8	40	1	12	0	0	0	0	9	48	0	4	0	0	0	0		
Electrical Engineering	4	9	1	2	0	0	0	0	4	9	0	2	0	0	1	0		
Leather Tanning	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0		
Metal Fabrication		3		0		0		0		1		2		0		0		
Tailoring and Garments Design	28	4	9	2	0	0	0	0	27	5	9	0	1	0	0	1		
	58	89	16	27	0	1	0	0	60	102	12	14	1	0	1	1		
All respondents of C17/18	14	47	4	3	1	1	()	162		26		1		2			
		7%	22.	5%	0.5	5%	0	%	84.	8%	13.6%		0.	5%	1.1	1%		

Table 3: Graduates' appraisal of training received at NICA, by cohort, field of study and sex (N = 307)



To find out why graduates rated the training they received as 'good', 'somewhat good' or 'somewhat poor', an open-ended follow-up question required respondents to explain the given rating. Up to three reasons could be given. The reasons were grouped into four categories: 1) teaching staff²; 2) training provided (both positive and negative)³; 3) learning environment (both positive and negative)⁴; and 4) other (only negative reasons given)⁵. To interpret the data, first a distinction was made between positive and negative reasons. For example, in the category of teaching staff, "NICA has professional lecturers" was counted as a positive reason, whereas "few lecturers" was counted as a negative reason. Then, the percentage of graduates who quoted positive and negative reasons was calculated for each category and the categories were ranked accordingly. Figure 1 gives an overview of the main reasons that graduates cited for the rating they gave. It shows that "training provided" was the category that elicited by far the most positive responses:

82.2 percent of the respondents have good things to say about the quality of the training they enjoyed at NICA. As a quality criterion in this category, graduates most often quote having "acquired a lot of knowledge and skills"; 76.2% of the respondents indicate that they learned a lot at NICA.

Figure 1: Graduates' main reasons for ratings given to NICA (N = 307)



- 82.2% of the respondents quote positive reasons related to the quality of training.
- "Acquired a lot of knowledge and skills" is the most mentioned reason. It is quoted by 76.2% of all respondents and by all who give NICA a score of 4 (i.e., "good").
- Only 1.3% of the respondents had negative feedback on the training provided.



2. Teaching staff

- 8.1% of the respondents give positive reasons related to NICA's teaching staff.
- The top quoted reason is "NICA has professional lecturers". It is mentioned by 3.3% of respondents.
- The 1% of respondents with negative feedback on the teaching staff refers to quantity – "few lecturers" – and not to quality.

- 4 Positive reasons related to the learning environment included NICA "hav[ing] enough space for research" and "hav[ing] a conducive environment for learning". Negative reasons related to the learning environment included a "lack of textbooks in library", "lack of training equipment" and "lack of infrastructure".
- 5 Other negative reasons included NICA being "expensive", a "insufficient transparency about certain information" and "expectations not [being] met".

² Positive reasons related to teaching staff including lecturers / trainers being "professional", "dedicated and hard-working" or "better" and there being "good relationship between students and lecturers". Negative reasons related to teaching staff including there being "few lecturers".

³ Positive reasons related to the quality of training included having "acquired a lot of knowledge and skills", "training [being] well facilitated", "all topics [being] covered", "lecturers giving enough time", "invit[ing] people for guidance and counselling", and "lessons tak[ing] place outside". Negative reasons related to the quality of training included the "learning period [being] short", "insufficient time to acquire practical skills", "not acquir[ing] computer skills" and a "lack of co-curricular activities".



3. Learning environment (general)

- 6.8% of the respondents make negative statements about the learning environment.
- Most often referred to is the "lack of (some) training equipment". It is mentioned by 5.9% of the respondents.
- Only 1% of the respondents refer to positive characteristics of the learning environment to explain why they attributed a score of 4 to NICA.

4. Other

- 1.6% of the respondents highlighted other critical points to explain the score they gave to NICA.
- In this category, "expensive" was quoted most often. It was mentioned by 0.7% of the respondents. The two respondents that referred to this gave NICA a score of 4.

Top challenges to completing studies at NICA

When asked to name the main challenges of completing their studies at NICA, the graduates became most critical in their assessment. The question was asked in an open-ended manner and respondents were invited to list their top three challenges. It yielded a broad range of answers, which were classified into nine categories of issues related to: 1) tuition⁶; 2) teaching and learning materials⁷; 3) teaching staff⁸; 4) boarding / living conditions⁹; 5) distance to NICA¹⁰; 6) the learning environment¹¹; 7) infrastructure¹²; 8) personal matters¹³; and 9) other¹⁴. To interpret the data, the answers were first counted and classified. Then, a weight was attributed, based on the assumption that the challenge mentioned first was indeed perceived as greater / more important than that mentioned second, and the second greater / more important than that mentioned second as core of 1*3; second mentioned challenges a score of 1*2; and third mentioned challenges a score of 1. These weights are our own as the respondents were simply asked to name their top three challenges and not to indicate how much heavier they found one vis-à-vis another. Based on the number of counts and these scores, the types of challenges were ranked. Figure 2 gives a summary overview of the top five challenges.

The main challenges that emerged from the tracer study, were high tuition fees (162 mentions, but top

- 6 The only tuition-related challenge mentioned was "high fees".
- 7 Challenges related to teaching and learning materials included "lack of training materials", "lack of textbooks" and "lack of resources for practical lessons".
- 8 Challenges related to teaching staff included absenteeism of lecturers/trainers, "incomplete syllabus", lack of instructors for some courses, lecturers did not give enough time to understand well, and teaching not being at the right level.
- 9 Challenges related to boarding/living conditions included "poor meals", "poor accommodation" and "there not [being] enough water".
- 10 The only distance-related challenge mentioned, was "long distance to NICA".
- 11 Challenges related to the learning environment (healthy, safe, supportive) included there being a lot of mosquitos, "tribalism", "sexual harassment", and getting "intimidated by fellow students".
- 12 Infrastructure-related challenges included "lack of classrooms", "poor network/internet" and "unreliable power supply".
- 13 Personal challenges included "sickness", "language barriers", own "lack of computer skills" and "the mathematics course".
- 14 Other challenges included "unfavourable climate conditions", "poor relations between students and neighbours of the college", "missing marks", "poor administration", "lack of proper timetable", "some people's papers were rejected", "lack of career guidance" and "no study trips".



challenge for many), lack of teaching and learning materials (180 mentions, especially for practical courses), issues related to the teaching staff (107 mentions, especially absenteeism among lecturers), the boarding conditions at NICA (72 mentions) and the long distance to the college (52 mentions).

In addition, there were 43 references to NICA not quite ensuring a healthy, safe and supportive learning environment for all students (predominantly mentions of tribalism). There were also 40 remarks about infrastructure, 22 about personal matters and 40 about various other issues (mostly unfavourable climate conditions).

Figure 2: Graduates' main challenges to completing studies at NICA (N = 307)

Tuition

- With 162 mentions, high tuition fees are graduates' most often quoted individual challenge to completing studies at NICA. It is also the highest rated.
- For 38.8% of graduates, it was the topmost challenge to completing; another 8.5% mention the issue second; and yet another 5.5% put the matter third.

Teaching and learning materials

- The lack of training materials, textbooks, and resources for practical courses are mentioned 180 times; especially the last item is high on the list.
- 24.1% of the graduates found the lack of teaching and learning materials their greatest challenge; 24.1% put the issue second; 10.4% put it third.

Teaching staff

- There were 107 references to challenges related to the teaching staff. Among these, absenteeism was the most mentioned.
- 11.7% of graduates indicated issues related to teaching staff as their greatest challenge to completing; 16.6% put the matter second; 6.5% put it third.

Boarding / living conditions

- Poor accommodation, poor meals, and lack of water were mentioned 72 times.
- In 6.2% of the cases, boarding / living conditions were considered the top challenge; in 7.8% of cases, the challenge was put second; in 9.4% of the cases, it came third.

Distance

- With 52 mentions, the distance to NICA takes fifth place among the challenges that graduates experienced in completing their studies at NICA.
- 5.9% of respondents ranked it first; 8.1% mentioned it as their second most important challenge; and 2.9% put it third.



Top motivators for completing studies at NICA

Along similar lines, the graduates were also asked to indicate the factors that motivated them to continue studying and complete their courses at NICA. Scoring and ranking was done in the same way as for the challenges that graduates faced. The motivating factors were grouped into eight categories: support in paying tuition¹⁵; teaching staff¹⁶; training provided¹⁷; learning environment¹⁸; intrinsic motivation¹⁹; prospect of employment²⁰; government sponsorship; and other²¹. As <u>Figure 3</u> highlights, respondents' intrinsic motivation, the training provided by NICA's teaching staff, (parents') support in paying tuition and the prospect of employment emerged as the top five motivators.

Figure 3: Graduates' main motivators for completing studies at NICA (N = 307)

 1. Teaching staff With 222 mentions, NICA's teaching staff are clearly the graduates' strongest motivators; especially their guidance and counselling are highly appreciated. For 36.2% of the graduates, teaching staff made the greatest positive difference; 26.7% mention their teachers second; and another 9.4% mention them third.
 2. Intrinsic motivation 198 mentions confirm that respondents would not have succeeded without intrinsic motivation. 30.6% of the graduates put it as the top reason for completing their studies; 21.2% mention it second; 12.7% put it third.
 3. Training provided With 98 mentions, the training provided ranked third as a motivator. Group discussions in class were especially found to be stimulating. 4.9% refer to the quality of training as their top motivator; 16.6% put the matter second; an additional 10.4% mention it third.

- 16 Motivators related to teaching staff included staff being "professional", "friendly and reachable" and "motivating through their guidance and counseling".
- 17 Motivators related to training provided included "opportunities for hands-on learning", "ample learning time", "group discussions during class", "change in curriculum", and "co-curricular activities".
- 18 Motivators related to the learning environment included "availability of resources", "well-stocked library", "free internet", "no tribalism", and a system for rewarding best-performing students.
- 19 Factors related to intrinsic motivation included "determination", "zeal for course", "desire to be an instructor", "need to acquire more knowledge", "desire for a good life", and "wanted to make my parents proud".
- 20 Motivators related to the prospect of employment included "demand for instructors", and "we were promised employment".
- 21 Other motivators included "balanced diet" and "affordable cost of living".

¹⁵ Tuition-related motivators included support from parents/relatives/friends as well as measures taken by NICA, such as being allowed to pay tuition in installments, being allowed to sit exams before paying all tuition, merit-based partial waivers. Also mentioned are student loans; and being "inspired by fellow students who get paid".

	 4. Support in paying tuition fees There were 86 references to help with tuition fees being an important motivator. Parents' help is mentioned most, but NICA's is also appreciated (e.g., allowing payment in installments; allowing to sit exams before paying all fees). 12.4% first motivator mentioned; 6.8 % second; 5.5% third.
JOBS	 5. Prospect of employment With 51 mentions, the prospect of employment proves to have been the fifth most important motivator for graduates to complete their studies at NICA. 7.2% of respondents ranked it first; 6.5% mentioned it as their second most important motivator; and 2.9% put it third.

A deeper dive shows that NICA is aware of the main challenges that students face and tries to ease the burden. For example, among the tuition-related motivators, there are various measures taken by the college to help students, such as allowing students to pay the tuition fees in installments and allowing them to sit exams before they have paid all their fees. Following this top five, the respondents next referred to the importance of a good learning environment. In this regard, the fact that NICA has a system in place to reward its best students by waiving (some) tuition fees deserves to be noted. In addition, some graduates also highlight the importance of government sponsorships (28 mentions) and a few other reasons, among which is the affordable cost of living at / around NICA.



5. SELF-ASSESSMENT OF COMPETENCES ACQUIRED DURING STUDIES AT NICA

Self-assessment based on 11 skills

Given that "acquired knowledge and skills" emerged as the main reason for so many graduates to positively rate the quality of training at NICA, it is useful to take a closer look at what exactly the respondents feel they learned. The questionnaire required graduates to self-assess 11 skills based on 11 topics. Ten of these were taken directly from the competency profile for BTVET instructors established by MoES: 1) Plan and prepare for teaching and learning; 2) Deliver learning activities; 3) Perform entrepreneurship tasks; 4) Assess learning; 5) Carry out guidance and counselling; 6) Carry out occupational safety, health and environmental conservation tasks; 7) Carry out co-curricular activities; 8) Manage equipment / tools / non-human resources; 9) Carry out administrative roles; and 10) Participate in continuous professional development. One competence was added at VVOB's request, because of its relevance to the TAP programme: 2B = Handling a subject in a practical, experiential, real-world manner. For each topic or set of competences, the respondents were asked to self-assess whether their studies had enabled them to acquire them ranging from: "good", "somewhat good", "somewhat poor" to "poor".





Figure 4: Graduates' self-assessment of competences acquired at NICA (N = 307)

Graduates' estimated level of competences acquired at NICA is quite high

In both cohorts and all fields of study, half or more of the respondents give themselves the highest score (4 – "good") for each competence. There are no significant differences between female and male graduates in this respect. For each competence, sex and self-assessment scores were found to be statistically independent (p-value > .05 for each competence). See Table 4.

High scores on self-assessments are, of course, not unusual, especially when no clear standard or operational definition is given by which respondents are to score themselves as was the case of the tracer study. It is interesting, therefore, to also pay attention to the areas where graduates feel somewhat less confident about the level of competence acquired during their studies at NICA, besides the ones where they give themselves a top score.

As Figure 4 above shows, planning and preparing for teaching and learning, assessing learning and carrying out guidance and counselling are the top three competences where, overall, the highest percentages of respondents give themselves a score of four (the highest): respectively 82 percent, 77 percent and 75 percent. On the other hand, carrying out administrative tasks, carrying out co-curricular activities and entrepreneurship activities attract comparatively fewer top scores: respectively 68 percent, 66 percent and 60 percent of respondent give themselves a score of four on these elements of the BTVET instructor competence profile. The fact that delivering learning activities – arguably the most important task an instructor can have – takes (only) sixth place with 69 percent top scores, is also noteworthy. For the TAP programme, the fifth place and 71 percent of handling a subject in a practical, experiential, real-world manner, also deserve attention.

Table 4: Graduate respondents' retrospective self-assessment of competences acquired at NICA, by cohort, field of study and sex (N = 307)

Cohort 2016/2017	Overall Rate		1	2		2E		m		4		Ŋ		9		7		∞		6		10	
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Somewhat poor	4.1%	0	0	0	0	0	0		7	0	0	0	2		0		2		0	0			2
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Poor	%0	0	1	0	1	- 0	0	1	0		- - 0	0	1	0	1	0	1	0		0
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Somewhat poor	2.2%	0	1	0	0	0	-	0	0	0	0	0		0	0	0	0	1	0	0
Poor	1.5%	0	0	1	0	0	0	0	0	0	1 0	1	0	0	0	1	0	0	0	0
Good		83.6%	71.	.6%	76.7%		62.9%	76.	7%	81%		68.9%	9	0.3%	72	.4%	9.69	3%	64.79	
Somewhat good		15.5%	24.	.1%	21.5%		30.2%	21.	2%	12.9%		20.7%	2	8.5%	20	.7%	25	%	32.79	
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Table 4: Continued

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Somewhat good	27.3%		-	1					2				0			- 7				0		
Somewhat poor	%0		0		0		0		0		0	 - 			 	0	; i ;	0	; ; ; ; ;	0		
Poor	%0		0		0		0		0		0	 			+	0	; ;	0	; i ;	0		
Tailoring and Garments Design			+	 	; +	+	; +			, , , , ,	; +		, , , , ,						, , , , ,	, , , , , ,	- - 	, , , +
Good	74%	32	4	28	<u></u>	27		25	ۍ د	31	4	27		2	ŝ	0 4	ß	С С	5	4	27	
Somewhat good	21.5%	2	. –	6	. –	7		7	0	9	2	∞	5	0		1	· ப)				10	+
Somewhat poor	3.2%	0		0	0	3	0	2		0	0		0	0		1	۲۹		2		0	
Poor	1.3%	0	0	0	0	0	0	ε	0	0	0			0		0				0	0	
Good		80.6	%	68%		68%		58.6%	<u>\</u> 0	76.3%		71.2%		69.6%		69.6%		74.3%		56.5%		71.7%
Somewhat good	Overall Rate	15.7	%	30%	+	24.4%	 	30.4%		20.2%		21.4%	+	25.2%	+	23.1%		17.8%	+	28.3%		24.1%
Somewhat poor		2.19	· · · ·	1%	• • •	4.6%	 	6.3%		1.5%	 	3.7%	, , , ,	2.6%		4.6%		4.7%	, , , , ,	4.2%	 	2.6%
Poor		1.6%		1%	+	3%	+	4.7%		2%	+	3.7%	+	2.6%	+	2.6%	+	3.2%	+	1%	+	1.6%



Need for technical, ICT and entrepreneurship skills

In addition to the self-assessment, the tracer study also asked all graduates about what they did not learn during their studies at NICA, but proves to be important in their job today. <u>Figure 5</u> shows that, for the 307 respondents, technical skills come on top (51 mentions in a total of 121), followed by ICT skills (15 mentions) and entrepreneurship skills (14 mentions). Pedagogical and classroom management skills are cited least frequently (8 mentions), which is definitely a feather in NICA's cap.

Focusing specifically on the 147 graduates who became BTVET instructors, they too cite technical skills most frequently (29 mentions). In this larger category, operating machinery is mentioned the most (14 times). In addition, newly qualified BTVET instructors indicate that they did not acquire the ICT skills (10 mentions) and entrepreneurship skills (9 mentions) that are key to doing their job well. These two categories are closely followed by Kiswahili, administrative and management skills (both 8 mentions), and pedagogical and classroom management skills (7 mentions). To be effective, BTVET instructors need to use the best blend of teaching practices and methods and they need to be skilled in a particular occupation to bridge learning and labour market needs. In a rapidly changing world, they are also expected to be early adapters of new technologies and constantly innovating ways for their students to grasp information. The findings suggest that NICA can improve on several of these fronts.

During selfassessment, graduates wished to have learned more technical skills, ICT skills, and entrepreneurship skills



Figure 5: Graduates' self-assessment of skills insufficiently acquired at NICA (N = 307)



6. GRADUATES' CURRENT EMPLOYMENT

Large majority of NICA graduates are (self-) employed

Three key messages are shown in <u>Table 5.</u> First, the large majority of the respondents was employed or selfemployed at the time of data collection; 90.2 percent of the respondents indicated that they were either employed or self-employed. Only 9.8 percent said they were unemployed suggesting that NICA graduates are slightly better off than the national average in their age bracket, as, in 2017, 10.3 percent of Ugandans between 25 and 29 years found themselves unemployed (ILOSTAT, online). No graduates were pursuing further studies.

Female graduates more likely unemployed

Secondly, when it comes to unemployment, the situation of the men and women that graduated at the end of academic years 2016/17 and 2017/18 is different. Whereas 6.1 percent of the men reported they were unemployed, the number of unemployed women was at 16.5 percent and the difference proved to be statistically significant (p-value = .0032).

Among the (self-)employed, just over half work as BTVET instructors

Thirdly, of the two cohorts that were examined, slightly over half – 53.1 percent – of the total employed or self-employed are now working as BTVET instructors. This share stands at 55.4 percent for the men and at 48.4 percent for the women, but the difference is not statistically significant. If all graduates are counted – i.e., including the unemployed – then just under half of the respondents work as BTVET instructors (47.9%).

Of those from cohort 2016/17 that are employed or self-employed, 61.9 percent work as BTVET instructors, while this is the case for only 47.7 percent of those from cohort 2017/18. The difference between cohorts 2016/17 and 2017/18 is significant (p-value = .021). As the next chapter will confirm, the transition into the BTVET teaching workforce can be quite long and strewn with financial and administrative hurdles. The employment situation of cohort 2017/18



may also already have been affected by the COVID-19 pandemic. For instance, at least 11 respondents from this cohort did not manage to collect their academic documents due to the lockdown and these documents are needed for one to apply for a job as BTVET instructor.

In addition, we noted that, in terms of absolute numbers, it is the Civil and Building Engineering department that delivers the most BTVET instructors – 52 of its graduates of cohorts 2016/17 and 2017/18 became BTVET instructors. Percentagewise, it is the only one of the three largest departments that sees a majority of its graduates move into the BTVET teaching workforce. The other two – Agricultural Production; and Tailoring and Garments Design – have the fewest entrants into the BTVET teaching workforce. Of the two cohorts, only 31.5 percent of the Agricultural Production and 44.1 percent of the Tailoring and Garments Design graduates became BTVET instructors.



Table 5: Current employme	ent by cohort, sex, and	field of study (N = 307)
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		Coł	ort	grad	luate	ed in	201	6/2	017			Coł	ort	grad	luate	ed in	201	.7/2	018	
Field of study	Joined BTVET teaching	workforce	Employed in educa-tion,	other function	Self- / Employed in	another sector	In further studies		Not employed		Joined BTVET teaching	workforce	Employed in educa-tion,	other function	Self- / Employed in	another sector	In further studies		Not employed	
	F	М	F	М	F	М	F	Μ	F	М	F	М	F	М	F	М	F	М	F	М
Agricultural Production	2	9	4	3	2	7	0	0	2	0	4	8	0	2	10	9	0	0	8	3
Automotive Engineering		10		1		0		0		2		12		5		5		0		0
Civil and Building Engineering	4	18	0	4	2	6	0	0	0	3	5	25	0	12	2	13	0	0	2	2
Electrical Engineering	3	4	0	0	0	1	0	0	0	1	4	4	0	2	0	5	0	0	1	0
Leather Tanning		1		0		1		0		0	0	1	1	0	0	0	0	0	0	0
Metal Fabrication		1		0		0		0		0		2		1		0		0		0
Tailoring and Garments Design	7	6	2	0	5	2	0	0	2	1	15	2	9	0	10	4	0	0	3	0
	16	49	6	8	9	17	0	0	4	7	28	54	10	22	22	36	0	0	14	5
All respondents	6	5	1	.4	2	6	()	1	1	8	32	3	2	5	8	()	1	9
	56	5%	12	2%	22.	5%	0	%	9.5	5%	42	.9%	16.	.8%	30.	4%	0	%	9.9	9%



7. TRANSITION INTO THE BTVET TEACHING WORKFORCE

From 307 students to 147 work force entrants

NICA students who want to join the BTVET teaching workforce after successfully completing all the coursework and examinations must navigate through three phases: graduation; registration with Teacher Management Information System (TMIS) of the MoES; and job hunting. <u>Figure 6</u> represents the seven steps that constitute these phases. It is a long road from being a successful student at NICA to becoming a BTVET instructor and at each step, the numbers reduce.

Figure 6: Process of joining BTVET teaching workforce





of respondents

successfully registered

on TMIS but did

not enter **BTVET**

workforce. They opted

for (self-) employment outside education

sector'

Neither a funnel nor a linear path

At a quick glance, <u>Figure 6</u> and <u>Table 6</u> may create the impression of a funnel, whereby from the 307 potential BTVET instructors, several were eliminated at each step and in the end, 147 fully qualified and registered NICA graduates entered the BTVET workforce. The reality, however, is not quite so neat: 62 of the 147 (42.2 percent) of the BTVET instructors that came out of cohorts 2016/17 and 2017/18 had some kind of "irregularity" in landing an instructor job. For instance, 45 never attempted to register in the TMIS; 10 tried to register but were unsuccessful (to date); and seven were successful but did not (yet) obtained their registration certificate at the time of data collection.

Yet, officially, registration is a key component of teacher/instructor/tutor qualification in Uganda, with Section 13 of the Pre-Primary, Primary and

qualification in Uganda, with Section 13 of the Pre-Primary, Primary and Post-primary Act 2008 stating that "no person shall teach in any public or private school of any description unless he or she is registered as a teacher or licensed to teach under this Act." Besides enabling the MoES to better follow up on the education workforce at all levels, registration on TMIS also has advantages for teachers/ instructors/ tutors themselves. For instance, registration helps speed up the processing of benefits, leave application and transfers and provides the MoES with information that is useful for planning the provision of continuous professional development. But clearly, it is still quite possible to skip a few steps in getting hired and remaining employed as a BTVET instructor.

Vice versa, there are also quite a few NICA graduates that register on TMIS and succeed in obtaining their registration certificate, but then do not enter the BTVET teaching workforce. The tracer study found 53 – 17.3 percent – of the respondents in this situation; 36 of them – 11.7 percent of the respondents – opted for employment or self-employment altogether outside the education sector. In the next section, we take a closer look at the reasons why individual pathways turn out to be not so linear.

		Coł	ort	grad	luate	e <mark>d i</mark> n	201	6/2	017			Coł	nort	grad	luate	ed in	201	7/2	018	
Field of study	Received academ-	ic transcript	Received diploma	certificate	Attempted to reg-	ister	Successfully reg-	istered	Obtained registra-	tion certificate	Received academ-	ic transcript	Received diploma	certificate	Attempted to reg-	ister	Successfully reg-	istered	Obtained registra-	tion certificate
	F	м	F	м	F	м	F	М	F	М	F	м	F	М	F	м	F	М	F	М
Agricultural Production	10	18	9	19	9	17	7	17	7	15	17	19	16	19	16	14	10	11	9	10
Automotive Engineering		9		9		9		8		8		16		14		11		9		8
Civil & Building Engineering	6	30	6	29	6	27	6	25	5	25	6	41	8	41	3	30	3	22	3	20
Electrical Engineering	3	5	3	5	3	5	3	4	3	4	4	10	4	10	3	7	2	6	2	6
Leather Tanning		2		2		2		2		2	1	1	1	1	1	1	1	1	1	1
Metal Fabrication		1		1		1		1		0		2		2		3		2		2
Tailoring & Garments Design	14	8	13	7	10	6	8	6	7	5	20	4	20	4	13	1	8	1	7	1
	33	73	31	71	28	67	24	63	22	59	48	93	49	91	36	70	24	52	22	48
All respondents	1	06	1()3	9	5	8	7	8	1	14	11	14	10	10)3	7	6	7	0
	91	.4%	88.	.8%	81.	.9%	75	%	69.	8%	73.	8%	73.	3%	53.	9%	39.	8%	36.	6%

Table 6: Getting through graduation and registration process, by cohort, sex, and field of study (N = 307)



Financial and administrative hurdles

At each step of the graduation and registration process, the questionnaire asked respondents who did not continue to the seemingly logical next step for the (one) principal reason why this happened. At all steps of the way financial and administrative problems were named as the most formidable obstacles. For instance, of the **60 respondents** who did not obtain their academic transcript, **27 said** that this was because they still had outstanding debts to clear (e.g., overdue tuition and examination fees) and **14 spoke** of various administrative problems, such as transcripts (still) not being ready or containing errors.

Similarly – and there is, of course, some overlap with the previous set of respondents – of the 64 respondents who did not receive their diploma certificate, **26 referred** to outstanding debts. Administrative issues, such as diploma certificates not yet being released, spelling errors and missing marks, were quoted by **17 respondents**. For **11 respondents**, COVID-19 was throwing spanners in the works as the lockdown kept them from picking up their documents.

At the next stage – registration – failure to obtain these two academic documents then becomes a problem in and of itself. Of the **109 respondents** who decided against registering on TMIS, **73 saw** their attempt crippled in advance by their lack of documents and seven could not afford the cost of transport or had other financial problems that kept them registering. **Twelve** who had gone ahead with the registration anyway despite not yet receiving their academic transcript and / or diploma certificate, then found themselves unsuccessful in completing that step. **Another 15** who were unable to register successfully are unsure as to why: they "don't know", received no or unclear feedback from the MoES and a few are simply "still waiting".

While there are certainly other factors at play as well, the challenge of officially graduating with the necessary documents to show for it looms large in the explanations given for not entering the profession. For some respondents there are far-reaching effects. For instance, for **15 of the 46 graduates** employed in the education sector, but not as BTVET instructor, issues related to the graduation and, to a lesser extent, the registration process, are the main reason for not entering the function they actually trained for. Similarly, **27 of the 84 graduates** (self-)employed in another sector attribute this to delays in graduating and not obtaining academic documents. And, sadly, of the **13 unemployed** who tried but failed to land a BTVET instructor job, five quote these same reasons.

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Table 7:	

			ပိ	hort g	radua	ted in	2016/	2017 (N	I = 65					S	hort g	radua	ed in 2	017/2	018 (N	= 82)			
Field of study	Started before	graduation	E-I nidtiW	notteuberg	9-4 nidtiW	Reduction	9-7 nittiW 9ffe sdfnom	noitenberg	Within 10-12 months after	notieuberg	More than 1 year after	פומתממוסוו	Started before graduation	E-I nidtiW	notreuberg	Within 4-6 Mithin 4-6	notieuberg	9-7 nittiW Pfte shtnom	uotieuberg	wunn 10-12	nonseusers	1 year after £	
	L	Σ	ш	Σ	L	Σ	Ŀ	Σ	- -	5	2	Ľ	Σ	ш	Σ	Ľ	Σ	— ш	5		L L	Σ	1111
Agricultural Production	0	0	0	£	7	0	0	0	0	2	1	0	£	7	2	7	ц.	-	-		0	0	
Automotive Engineering	۲ ۱	Ч	I	£	I	-	ł	0	1	2	(1) 		ы	ł	с	I	2		' 	-		-1	
Civil and Building Engineering	0	9	2	ŝ	0	4	0	1	Ч	ŝ	1	2	11	7	9	1	4	Ч	1	 	0	1	
Electrical Engineering	0	Ч	-	Ч	0	-	0	-	0	0	2	0	-	2	1	0	0	0	-	_) 1	-1	
Leather Tanning	T	0	I	0	I	0	ł	0	1	0	-	0	0	0	7	0	0	0	0	- -	0	0	
Metal Fabrication	ł	0	I	Ч	ł	0	ł	0		0			0	1	1	ł	0		' 0			0	
Tailoring and Garments Design	4	m	2	Ч	0	0	0	0	Ч	0	0	~	-	2	0	1	-	m	0		0	0	
All respondents	4	11	ъ	12	7	9	0	7	2	2	4 1	1 9	21	9	14	m	∞	ы	4	` +	1	ε	
	H	ы	Ŧ	7	7		2		6		15		30	2	0	11		6		∞		4	
	23.	.1%	26	2%	10.5	%	3.19		13.9%		23.1%	,	86.6%	24.	4%	13.4	%	11%		9.8%		4.9%	
Not applicable: No women graduated fron	n this fi	eld of s	study.																				





Transition is shorter than six months for most of those who join BTVET teaching workforce

The data in <u>Table 7</u> above shows that, of the 147 NICA graduates who obtained a job as BTVET instructor, 68.3 percent did so within six months after graduation. A sizable proportion of 30.6 percent of these 147 were already working as a BTVET instructor before graduation. In the next round of the tracer study, it

would be interesting to find out to what extent this sub-set started working as an instructor for the first time while still completing their studies, and to what extent NICA is catering to in-service instructors who take up studies at the college in order to be fully qualified for the job they already have.

Looking at the fields of study, the graduates from Civil & Building Engineering transition the fastest into the BTVET teaching workforce, with 76.9 percent of those who obtained employment as a BTVET instructor doing so within less than six months after graduation. Among the graduates from the three large departments, those from Agricultural Production experience the longest transition. Only 52.2 percent of Agriculture Production graduates who obtained a job as BTVET instructor did so within half a year after graduation.

Transitioning to jobs as BTVET instructor is longer for graduates of agriculture production department, with 52,2% taking six months

Graduates and BTVET principals use multiple recruitment strategies, but may have somewhat different preferences

The tracer study asked the 147 NICA graduates who entered the BTVET teaching workforce about how they got recruited. Many relied on multiple strategies²², among which submitting a direct application, using personal contacts and responding to job adverts in public media were the three most popular, with respectively 91, 48 and 43 mentions. The fact that so many of the graduates who found employment as a BTVET instructor attribute their success to their own 'speculative' applications and personal relations, suggests that pinning one's hopes on fully 'by the book' public procedures may not be sufficient.

This interpretation is confirmed by the fact that the 130 NICA graduates who are (self-) employed in another sector cite the lack of information about available BTVET instructor jobs as a major obstacle to entering the BTVET teaching workforce, on par with (what they perceive as) a lack of demand and job openings for BTVET instructors. More generally, such a reading would make sense because most BTVET institutions are small to medium-sized employers, who may well find that fully formal recruitment processes are not always feasible, even if they might be in favor of them.

As <u>Figure 7</u> shows, however, the 23 BTVET principals interviewed by Ipsos are not quite ready to confirm this explanation. When asked about their recruitment procedures, they express a distinct preference for formal channels. With 30 mentions out of a total of 55 responses, job adverts disseminated through a range of public channels (various media as well as the Education Services Commission) clearly emerge as principals' preferred way of filling vacant BTVET instructor positions. In addition, the principals confirm that they rely on direct applications, but this solution is much less commonly quoted (10 mentions). Personal connections are only their fourth choice, after internal recruitment (8 mentions).

The questionnaire directed at BTVET principals enquired about: online adverts; newspaper adverts; radio adverts; posters; opening up vacancies internally; direct applications; private employment agencies; placement services of training institutes; the Education Services Commission; and personal contacts. They were not asked to volunteer additional strategies.

To make the comparison across the two groups easier, all types of public adverts were taken together in one category, as were all types of placement services. "Posters" were understood to be in the same category as "job boards".

²² The graduate questionnaire enquired about the use of following recruitment strategies: personal contacts; online adverts; newspaper adverts; direct application; school practice (internship); a private employment agency; and NICA's placement service. The graduates volunteered following additional strategies: job boards (at schools and district education offices); and radio and television adverts.



Placement services are rarely used, especially by graduates

Overall, it is encouraging to see BTVET principals strive for proper procedures as opposed to employing personal contacts. But other factors then also become quite important, such as accessible and attractive channels for publishing and disseminating job vacancies and well-functioning placement services. For instance, seven of the 23 BTVET principals refer to the Education Services Commission as part of their array of recruitment strategies, but none of the 147 graduates hired as BTVET instructors do so. Similarly, NICA's placement service does not seem to be running at full speed: only five graduates and one employer mentioned them. To smoothen the transition, it would be useful to follow-up on the experiences that graduates and BTVET employers have with these intermediary services and what kind of support they would be interested in most.



Figure 7: Recruitment strategies used by graduates (N = 147) and BTVET employers (N = 23)

Graduates and BTVET principals assess importance of key factors for obtaining a job as a BTVET instructor somewhat differently

The last element with regards to the process of joining the BTVET teaching workforce that the tracer study looked into, is graduates' and BTVET principals' assessment of the factors that are decisive when it comes to recruiting or being recruited as a BTVET instructor²³. This question was answered by the 147 graduates who

²³ The graduate questionnaire enquired about following factors: reference from NICA, personal contacts, past experience, competence demonstrated during interview, additional qualifications and NICA's reputation. It also asked for additional explanations, which yielded the following "other": high demand; little competition; and 'favour from God'. It also yielded two factors that were counted into the category "attitude / impression made": discipline and dress code.

The questionnaire for employers asked about the following: excellent academic grades; previous work experience; previous experience as an instructor; vocational expertise; teaching skills; communication skills; the reputation of the training institution attended; enthusiasm / motivation; additional qualifications; being in possession of the teaching registration certificate; and references from the institution of study, current employer or other trusted sources.

To make comparison across the two groups easier, the following factors in the principals' questionnaire were counted as "demonstrated competence": previous work experience; previous experience as an instructor; vocational expertise; teaching skills; and communication skills. In the graduates' questionnaire, "past experience" and "competence demonstrated during interview" were put in this category. For the principals, the category "qualifications" includes excellent academic grades, and additional qualifications.



indeed obtained a job as BTVET instructor as well as by 23 BTVET principals who recently hired graduates from NICA's Department of Agricultural Production. This sample does not allow for strong claims, but as a first step towards further research it is interesting nevertheless to compare the answers of the two groups. <u>Figure 8</u> gives a visual comparison.

There was agreement on two of the top three factors that are key to landing a job as BTVET instructor: having the necessary qualifications (ranked first by graduates and third by employers); and demonstrating the necessary competence, either during the interview or through past experience (ranked third by graduates and second by employers). After that, there is a striking discrepancy about the importance attached to attitudes. For BTVET principals, seeing candidates enthusiastic and motivated to take on a job as BTVET instructor is very important. The interviewed NICA graduates, however, put attitudes only in fifth place and instead mention discipline rather than motivation.

A second point where the graduates and employers make a different assessment, is on the importance of having one's paperwork in order.

During selfassessment, graduates wished to have learned more technical skills, ICT skills, and entrepreneurship skills

For the graduates, it is hardly an issue (lowest in rank), whereas the BTVET principals attribute a (shared) third place to it. In this case, the graduates' appraisal of the situation seems more realistic, as the tracer study found that 62 of the 147 - 42.2 percent - of the BTVET instructors from cohorts 2016/17 and 2017/18 have some kind of administrative "irregularity". Finally, the interviewed graduates also estimate the importance of strong references differently than the principals. They put this factor second, whereas the employers attribute only a fifth place to it.



Figure 8: Key factors in obtaining employment as a BTVET instructor according to graduates (N = 147) and BTVET employers (N = 23)

8. EMPLOYMENT SITUATION FOR A BTVET INSTRUCTOR

Just over half employed in public BTVET institutions

The tracer study gives more insight into the employment situation of the 147 graduates of cohorts 2016/17 and 2017/18 who joined the BTVET teaching workforce. It shows that 51 percent are now teaching in public BTVET institutions. Cohort 2016/17 is the driver behind this outcome, as 61.5 percent of this group found employment in a public institution compared to only 42.7 percent of those in cohort 2017/18 who became BTVET instructors. The difference between the two cohorts is statistically significant (p = .02).

Female graduates more likely employed in private BTVET institutions

However, when it comes to the type of BTVET institution that they joined, the situation of male and female graduates is different. While 56.3 percent of the men report that they are teaching at a public BTVET institution, only 38.6 percent of the women are employed there; and this difference proved to be statistically significant (p-value = .049). Given the importance of having female teachers as role models, it would be interesting to investigate more broadly whether this is indicative of public BTVET institutions' recruitment practices.

		Coho	rt gra	duat	ed in	201	6 <mark>/20</mark> 1	17	C	ohor	t gra	duate	ed in	2017	/201	.8
Field of study		Public	ć	Private		Church-owned	Community-	owned		Public	4	Private		Church-owned	Community-	owned
	F	м	F	м	F	м	F	м	F	м	F	м	F	м	F	м
Agricultural Production	1	6	1	3	0	0	0	0	2	4	2	4	0	0	0	0
Automotive Engineering		9		1		0		0		6		5		1		0
Civil and Building Engineering	4	11	0	6	0	0	0	1	2	11	3	14	0	0	0	0
Electrical Engineering	1	2	2	2	0	0	0	0	2	2	2	1	0	1	0	0
Leather Tanning		0		0		1		0	0	1	0	0	0	0	0	0
Metal Fabrication		1		0		0		0		1		1		0		0
Tailoring and Garments Design	2	3	5	2	0	1	0	0	3	1	12	1	0	0	0	0
	8	32	8	14	0	2	0	1	9	26	19	26	0	2	0	0
All respondents	4	0	2	2	2	2		1	3	5	4	5	2	2		0
	61.	.5%	33.	8%	3.2	2%	1.	5%	42.	7%	54.	9%	2.4	1%	0	%

Table 8: Ownership of BTVET institution by cohort, sex, and field of study (N = 147)



Almost all teach courses they studied at NICA

On the plus side, the tracer study found that almost all the graduates now employed as BTVET instructors teach courses that they were prepared for during their initial teacher education. All the graduates from Agricultural Production; Electrical Engineering; Leather Tanning; Metal Fabrication; and Tailoring and Garments Design were recruited to teach those respective courses. Of the 147 respondents, only three were delivering courses that are not fully aligned with their teacher training. Graduates from Civil and Building Engineering take on the widest range of BTVET courses: construction; plumbing; and carpentry and joinery (and two of them also teach automobile).

The fact that there is such a good match suggests that NICA caters for real demand, without underdelivering certain profiles, as BTVET principals might then find themselves settling for mismatches in order to fill vacant positions. Alternatively, it could be the case that BTVET principals have to leave positions open while looking for a match. But this is not confirmed by the 23 interviewed principals. Only three mention shortages of certain profiles as a challenge for recruitment.



9. CONCLUSIONS AND RECOMMENDATIONS

NICA's strengths and assets

This first-ever graduate tracer study brought to light several important strengths and assets of the National Instructors College Abilonino. The study made the following key findings:

The vast majority of the graduates of cohorts 2016/17 and 2017/18 found employment of some form **(90%)**. Slightly over half of the graduates of cohorts 2016/17 and 2017/18 who found employment, effectively entered the BTVET teaching workforce **(53.1%)** – most of them within six months after graduation (68.3%). Almost all the graduates now employed as BTVET instructors teach courses which they studied at NICA **(98%)**, which further points to a strong match between the profiles delivered by NICA and those needed in the BTVET sector.

Cohorts 2016/17 and 2017/18 hold NICA in high regard. More than of the interviewed graduates were definitely willing to recommend NICA to people they know.

Graduates cite the training provided as the top reason for their positive appraisal. This is also reflected by the fact that, when asked to self-assess on 11 competences acquired at NICA, **b** % of cohorts 2016/17 and 2017/18 award themselves the highest score across the board.

The training provided, teaching staff, and the prospect of employment are three of the five top motivators that graduates cite for completing their studies at NICA.



Besides the strengths and assets, the tracer study also shed light on the following attention points:

Newly qualified BTVET instructors indicate that during their studies at NICA they did not acquire all the technical, ICT and entrepreneurship skills that they need for their job. Technical skills gaps were, by far, mentioned most often. This suggests that, in order to train BTVET instructors with dual professional identities, where occupational and pedagogy expertise is combined, greater emphasis on developing occupational skills and knowledge is needed. In contrast with what the NICA graduates indicate, the existing competence profile for BTVET instructors does not include the practical knowledge of the subject and/or vocational area or the ability to promote the benefits of technology and supporting learners in its use.

Lack of teaching and learning materials, especially for practical courses, and issues relating to teaching staff, especially absenteeism, are two of the five top challenges that graduates cite when it comes to completing their studies at NICA.



Given the importance of instructors as role models for adolescent learners, there are several indications that the gendered nature of the future BTVET workforce deserves further attention – for instance, the gender stereotypical choices made with regard to the field of study at entry into NICA; the fact that female NICA graduates are significantly more likely to remain unemployed for a longer period of time after graduation; and the difference that emerged between public and private BTVET institutions in terms of recruiting female NICA graduates.



Recommendations

To further optimise the pre-service instructor education and training and smoothen the transition of NICA graduates to the BTVET teaching workforce, the study makes some recommendations.

NICA should:



Put the development of future BTVET instructors' dual professional identity at the core of its mission.

On the one hand, this includes a stronger emphasis on developing the occupational skills and knowledge of student-instructors by providing ample opportunities to engage in high quality industrial training and in entrepreneurial activities. On the other hand, attention for building student-instructors' expertise in teaching and learning should not wane. To ensure that graduates can deliver and assess practical, real-world learning activities should be a key point of focus for school practice.

Motivate and support its students to enter the BTVET teaching workforce.



Low-threshold measures to achieve this include providing students and recent graduates with specific and timely information about job opportunities; inviting NICA graduates who entered the BTVET teaching workforce back for career talks; writing letters of recommendation for graduates; providing provisional results in anticipation of official academic transcripts and diploma certificates. In parallel, NICA should invest in strengthening its alumni network and placement service.



Address barriers to female participation in the BTVET teaching workforce and promote female role models in 'male-dominated' trades.

This can start with assessing the share of male and female student-instructors and collecting data on the specific barriers that female student-instructors may be experiencing. This exercise should be used to raise awareness and form the basis for a strategy for NICA to become a gender-responsive learning environment.



Optimise its internal quality management system and capacity for data-informed decision-making.

As a starting point, the process may focus on internal evaluation, consisting of the systematic collection of data and the questioning of students (including continuing questioning of graduates), lecturers and other staff, resulting in a quality improvement action plan and report to be submitted to TIET. Ensuring quality and presence of NICA teaching staff and availability of teaching and learning materials should be a top priority for NICA's leadership.



TIET should:

Put the development of a dual professional identity at the core of the competence profile for BTVET instructors.

Important steps, going forward, would include unpacking and, where needed, enriching the existing competence profiles; strengthening the entry requirements to NICA with regard to prior occupational competence; updating the curricula for pre-service instructor education and training; and linking performance to the competence profile, qualification requirements and opportunities for continuous professional development.

Assist in closing the information gap concerning available job openings for BTVET instructors.

This would depend on improvement of the BTVET instructor information management system and close collaboration with the Education Service Commission, public and private BTVET institutions, and the NICA placement service.

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Address barriers to female participation in the BTVET teaching workforce and promote female role models in 'maledominated' trades.

This can start with assessing the share of male and female instructors by course of study in order to raise awareness; and with the development of a gender-responsiveness strategy for BTVET. This would require working hand in hand with the relevant directorate at the MoES.

Create an enabling environment for quality management of the pre-service instructor education and training.

The development of official guidelines for internal evaluation should be feasible in the short run. Necessary, but requiring considerably more time, is the establishment of an external body for the accreditation and / or evaluation of all pre-service institutions, including NICA.

NATIONAL INSTRUCTORS' COLLEGE ABILONINO

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