



## Exploration of Enhanced Technical Skills for Integration into the Office Technology and Management Curriculum in Nigerian Polytechnics

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### ABSTRACT

Office Technology and Management (OTM) is a prominent academic program offered in Nigerian Polytechnics, designed to equip students with the knowledge and skills needed for effective secretarial roles. However, the evolving landscape of office technologies, continuous innovations, changes in office equipment, and the lack of curriculum updates since 2004 have contributed to a significant employability skills gap, leading to ineffective job performance and increased unemployment among OTM graduates. Many OTM students face challenges securing employment due to the dearth of technical skills acquisition. The primary objective of this study is to explore advanced technical skills that can be seamlessly integrated into the current OTM curriculum offered in Nigerian polytechnics. The research utilized a mixed-method design, specifically employing a sequential exploratory approach. Data was collected through both qualitative and quantitative methods, including Focus Group Discussions (FGD) and questionnaires. Six respondents were purposively selected to participate in the FGD, while 154 Heads of Personnel and 157 OTM Lecturers responded to the questionnaires. Qualitative data collected from the FGD was meticulously analyzed using coding and thematic analysis techniques, while the quantitative aspect involved the use of descriptive statistics, such as mean and standard deviation. An independent sample t-test was conducted to test the hypothesis. The findings of the study revealed three distinct clusters of enhanced technical skills that are crucial for incorporation into the OTM curriculum to better prepare students for future success. These clusters encompass additional information and communication technology skills, entrepreneurship skills, and comprehensive record management skills. As a result, this study recommends, among other important actions, a comprehensive review of the OTM curriculum to seamlessly integrate these vital skills. Doing so will not only enhance skills acquisition among OTM students but also significantly improve the employability prospects of OTM graduates in today's dynamic job market.

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### INTRODUCTION

The necessity for polytechnics to provide their students of Office Technology and Management (OTM) with the necessary skills to remain competitive has become important in today's globalized world, when competition for

employment and post-educational prospects transcends national lines. No doubt, the workplace of today is dynamic and difficult to cope with because modern organizations around the world are being swiftly transformed by technological advancements, which have also had a significant

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impact on all aspects of office work. As such professional secretaries must enhance their professional competencies to function well in the modern office as the conventional office advances toward automation (Fasae, 2022).

Besides, OTM is a course that provides essential training to students in order to prepare them with knowledge and skills to carry out secretarial duties, managerial and other administrative functions in both government and non-governmental organisations. The course prepares students for a wide range of employment opportunities to work as typists, data processors, receptionist secretaries, administrative assistants, customer service representatives, medical secretaries, legal secretaries, executive secretaries, office managers, medical or legal transcriptionists (Erwat & Akasi, 2021). The graduates of the course are expected to acquire skills that enable them to perform the day-to-day activities of an office such as typing, taking dictation and transcribing it, taking minutes of a meeting, preparing and filing documents, public relations and distributing information National Board for Technical Education (NBTE, 2004).

The OTM program has been running for a while, but according to Okoye and Iro (2018), there is a mismatch between the training polytechnics offer and the skills that employers of labor demand. This is because the world is dynamic and a lot have changed in terms of the kinds of skills that are required, the equipment that are used, the training facilities, and employment trends.

Also, in Nigeria, there has been a recent change in the demands of the labour market in terms of skills. The labour market wants graduates who already have up-to-date technical and non-technical skills combined together to meet the changes in the nature of work (Pitan, 2015). Unfortunately, due to certain impediments such as poor funding, inadequate modern tools and equipment, up to date curriculum in institutions of learning hinders the acquisition of requisite technical and soft skills by most OTM graduates compared with the demands of the labour market and technological advancement (Magnus, 2014).

Today's office employers need to communicate by interoffice, outer-office or global e-mail, instant messaging, virtual chats, and video conferences. Therefore, the on-going evolution of the office environment has directly affected and continues to influence the types of skills office employees need. This affects and changes the training that OTM students required to be adequately prepared for the 21<sup>st</sup> century office and beyond (Ellis *et al.*, 2014). The inclusion of emerging technical skills in OTM curriculum is imperative due to the continuing and growing importance of these skills in the labour market.

### **Statement of the Problem**

In the rapidly evolving landscape of modern businesses and job markets, it has become imperative to identify the essential employability skills that Office Technology and Management (OTM) students need for seamless integration into the curriculum. This adjustment is crucial to meet the growing challenges presented by contemporary office environments and to enhance the employability of OTM graduates (Azih & Ejeka, 2015). The demands of employers have evolved over time, requiring a broader skill set from OTM graduates to meet their expectations (Masaruf, 2015). Onojoife (2020) highlights the need for improved coordination among government, lecturers, and employers in the development, regular review, and update of the OTM curriculum to bridge this skills gap effectively.

### **Objectives of the Study**

The general objective of this study is to explore the enhanced technical skills required for incorporation into the OTM curriculum of polytechnics in Nigeria. Specifically, the study sought to achieve the following objectives:

1. Explore the enhanced information and communication technology skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria.
2. Examine the enhanced Entrepreneurship skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria.

- Determine the enhanced record management skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria.

**Research Questions**

- What are the enhanced information and communication technology skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria?
- What are the enhanced Entrepreneurship skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria?
- What are the enhanced record management skills required for incorporation into the OTM curriculum of Polytechnics in Nigeria?

**Hypotheses**

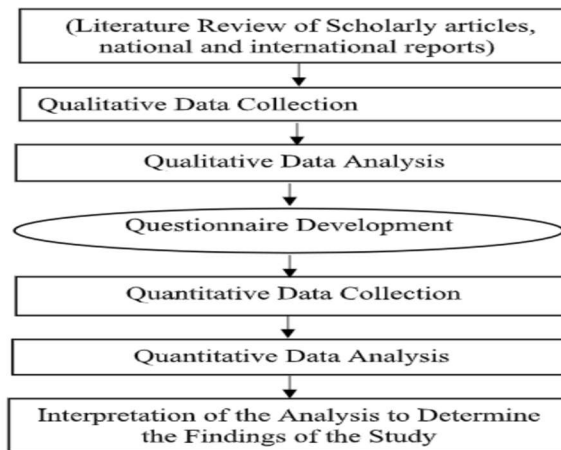
- H<sub>03</sub>**: There is no significant difference between the mean responses of Heads of Personnel and Lecturers of OTM on the information and communication technology skills required for integration into the OTM curriculum of Polytechnics in Nigeria.
- H<sub>05</sub>**: There is no significant difference between the mean responses of Heads of Personnel and Lecturers of OTM on the entrepreneurship skills required for integration into the OTM curriculum of Polytechnics in Nigeria.
- H<sub>08</sub>**: There is no significant difference between the mean responses of Heads of

Personnel and Lecturers of OTM on the records management skills required for integration into the OTM curriculum of Polytechnics in Nigeria.

**METHODOLOGY**

The study adopts exploratory sequential mixed methods design which consists of two different phases of qualitative and quantitative (Creswell, 2014). In the first phase, the qualitative data was collected through Focus Group Discussion (FGD) and analysis followed with a second phase of development, validation and pilot testing of the questionnaires as well as analyses of the quantitative data. The rationale for this approach is to help in the development of valid and reliable instrument for data collection. Besides, sometimes only single method of data collection of either qualitative or quantitative may not be adequate to provide substantial information required (Creswell, 2014).

Ramesh and Rao (2018) stated that collection of qualitative data is used to get an in-depth information from the respondents while quantitative data is a formalized and structured way of gathering data and is used with a large amount of respondents to obtain numerical values from their responses. Figure 1 depicts the graphical representation of the methodology of the study.



**Figure 1:** Exploratory Sequential Mixed Methods Design

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The study was conducted in South-West, South-South and Northern Nigeria. The population of the qualitative study was six while that of the quantitative was 728 which consist of 351 Heads of personnel of state ministries and 377 Lecturers of OTM who teach in public polytechnics offering OTM programme. The sample size of the qualitative study were six (6) respondents while that of the quantitative study was three hundred and eighty-eight (388) which consists of one hundred and ninety-two (192) Heads of personnel from 351 and one hundred and ninety-six (196) Lecturers of OTM out of 377 based on Cohen, Manion and Marrison (2012). The instruments used for data collection were focus group discussion guide which aids in collecting qualitative data and two sets of structured questionnaires titled: "Employability Skills Labour Market Questionnaire" (ESLMQ) and "Employability Skill Components for OTM Curriculum Questionnaire" (ESCOTMCQ). The instruments were face and content validated by five experts in OTM. The experts comprised of one Associate Professor in OTM from the Department of Vocational and Technology Education, Ahmadu Bello University, Zaria, one Senior Lecturer in OTM from Vocational Education Department, Modibbo Adama University, Yola and three Principal Lecturers in OTM from Federal Polytechnic, Bauchi. The reliability of the qualitative results (FGD), two procedures were employed which consist of member checking and peer debriefing. The reliability of the quantitative instruments (two sets of questionnaires) were determined through a pilot study which was carried out by the researcher with the help of two staff each of the two polytechnics visited in Osun and Edo states in Nigeria. The reliability results

yielded a coefficient of 0.78 for the Heads of Personnel and 0.86 for the Lecturers of OTM. In the first phase of the analysis (Qualitative aspect), the data collected from the respondents were thematically analysed using themes and specific statements from individuals that support the themes (Creswell, 2014). In the second phase (Quantitative aspect) the data collected were analysed using descriptive statistics (frequency and percentage of the respondents as well as mean and standard deviation) to answer the research questions. The null hypothesis was tested at 0.05 level of significance using independent sample t-test because the study involved two groups (Creswell, 2014). All the computations were done using the Statistical Package for Social Sciences (SPSS) version 21. To determine the required level of the items of the research questions, the mean ratings of the respondents were interpreted using real limits. To indicate the required level of any item in the enhanced skill required for incorporation into the OTM curriculum, the item should have a mean score of 2.50 and above. Real limits are boundaries located exactly halfway between adjacent categories used to define continuous variables in research (Foster *et al.*, 2018).

## RESULTS

The data collected for the study were collected and analysed in two phases (qualitative and quantitative). For the first phase which is qualitative, the data was analysed thematically while for the second phase which is quantitative, the data was analysed using descriptive statistics, exploratory factor analysis and inferential statistics.

## QUALITATIVE RESULTS

**Table 1:** Demographic Characteristics of the Respondents for the Qualitative Phase

Respondents	Gender	Rank	Institution/Ministry
Respondent 1	Female	Chief Lecturer	Polytechnic
Respondent 2	Male	Chief Lecturer	Polytechnic
Respondent 3	Female	Chief Lecturer	Polytechnic
Respondent 4	Male	Heads of Personnel	Ministry
Respondent 5	Male	Heads of Personnel	Ministry
Respondent 6	Female	Heads of Personnel	Ministry

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### Results of the FGD

After obtaining permission, all the responses were recorded. The recordings were then transcribed. Verbalization for main questions were literally transcribed. Observations such as sounds, pauses, or audible behavior were not transcribed. (The low

value of those observations were not worth the additional time required to create them.) Direct content analysis approach was used where initial coding was based on the research questions and the items succeeding them. Hence thematic analysis was used.

**Table 2:** Sorting and Grouping of FGD responses on Enhanced Technical Skills

Respondents	Statement	Theme
Respondent 1	<i>“Well, this is an important aspect of it all, because all is moving digital so ICT has taken over almost everything so at least ahhh..... the kind of integrated have an internet skills and also apart from the internet skills need to have some computer applications skills like a computer application like word processing skills and other power presentation skills and the publishing skills and so on and so forth .</i>	<b>Information and Communication Technology Skills</b>
Respondent 2	<i>Knowledge of e-commerce where you can be able to and kind of advertise and sell your product online and it will go a long way in solving these kind of problems”.</i>	
Respondent 3	<i>“Risk taking skills are very vital”.</i>	<b>Entrepreneurship Skills</b>
Respondent 4	<i>“Yes, I saw conduct effective advertisement but if they don't know how to prepare this advertisement effectively then it will be an issue so ability to prepare effective advertisement is there then they should be able to learn it”.</i>	
Respondent 5	<i>“We want to see ability to identify documents that will never be destroyed because it's not every record that can be destroyed, there are some fundamental statutory documents that should not be destroyed, so ability to recognise documents that cannot be destroyed or eliminated is also essential”.</i>	<b>Record Management Skills</b>
Respondent 6	<i>“Ability to know the importance of data storage and be able to store data on the cloud, even in case of any unfortunate situation they can be able to retrieve their data”.</i>	

#### Theme One: Information and Communication Technology Skills

The information gathered from the FGD confirmed that all the thirty items under the theme (Information and Communication Technology Skills) were corroborated by the respondents with additional skills which some respondents found important to be included in the theme, these are power point presentation skills and e-commerce.

In their response to the question, all the six respondents concur with including power point presentation skills and e-commerce:

**R1:** *“Well, this is an important aspect of it all, because all is moving digital so ICT has taken over almost everything so at least ahhh..... the kind of integrated have an internet skills and also apart from the internet skills need to have some computer applications skills like a computer application like word processing skills and other power presentation skills and the publishing skills and so on and so forth.*

**R2:** *Knowledge of e-commerce where you can be able to and kind of advertise and sell your product online and it will go a long way in solving these kind of problems”.*

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When provided with the suggestion of respondent three, four, five and six respondents, responded in affirmative to inclusion of the items under the theme (Information and Communication Technology Skills). Hence based on the analysis made, thirty-two items were included in the Information and Communication Technology Skills and they are:

- i. Use flash drives, CDs and USBs to receive, save and send information
- ii. Install and update anti-virus in computers
- iii. Clean virus in computers
- iv. Convert word and other documents to PDF document or vice versa
- v. Import graphics and documents
- vi. Send and download documents via e-mail
- vii. Insert graphics in documents
- viii. Handle HDMI Technology
- ix. Know the basic of HTML and fix issues on a website quickly
- x. Use Microsoft Publisher to design cards, logos etcetera
- xi. Use Microsoft Access to store data
- xii. Use Corel Draw for graphics design
- xiii. Use different types of photocopying machines to reproduce documents
- xiv. Use social media platforms to perform office tasks
- xv. Use browsers to access and navigate World Wide Web
- xvi. Use digital cameras to capture official occasions
- xvii. Set and manage of Webex meeting
- xviii. Manage video conferencing
- xix. Manage audio conferencing
- xx. Manage virtual conference and meeting
- xxi. Manage Skype conversation
- xxii. Manage Zoom meeting
- xxiii. Use Xender app to send and receive information

- xxiv. Use Bluetooth app to send and receive information
- xxv. Manage Webinars
- xxvi. Handle Google apps
- xxvii. Use different applications in mobile phones
- xxviii. Set Webcam and magnification
- xxix. Protect document using password
- xxx. Use different televisions for presentations
- xxxi. Power point presentation
- xxxii. E-commerce

### Theme Two: Entrepreneurship Skills

The information gathered from the FGD confirmed that all the twenty items under the theme (Entrepreneurship Skills) were corroborated by the respondents with additional skill which some respondents found important to be included in the theme, this is risk taking skill.

In their response to the question, all the six respondents concur with including risk taking skill:

**R3:** "Risk taking skills are very vital".

**R4:** "Yes, I saw conduct effective advertisement but if they don't know how to prepare this advertisement effectively then it will be an issue so ability to prepare effective advertisement is there then they should be able to learn it".

When provided with the suggestion of respondent three and four, all the four respondents responded in affirmative to inclusion of the item under the theme (entrepreneurship Skills). Hence based on the analysis made, twenty-one items were included in the Information and Communication Technology Skills and they are:

- i. Initiate business ideas
- ii. Prepare/write business plans



- iii. Identify investment opportunities with commercial values within and outside the environment
- iv. Demonstrate business skills
- v. Monitor and evaluate business performance
- vi. Identify potential competitors and alternative course of action.
- vii. Take long and short term risks of going into a business
- viii. Be resilient even in difficult times and take good decision
- ix. Plan staff needs and training
- x. Set strategic goals for the business
- xi. Organise resources (human and materials) for goals attainment
- xii. Make adequate financial plans
- xiii. Take decision on the form of products/services
- xiv. Conduct market survey to determine customers' needs
- xv. Determine information needs of the market
- xvi. Promote and sell organizational products
- xvii. Conduct effective advertisement
- xviii. Analyse demand and supply situation
- xix. Retain customer loyalty and capture their attention
- xx. Identify and utilise government support facilities for business
- xxi. Risk taking skills

### Theme Three: Record Management Skills

The information gathered from the FGD confirmed that all the fourteen items under the theme (Record management skills) were corroborated by the respondents with additional skills which some respondents found important to be included in the theme, this is fundamental statutory documents identification skill.

In their response to the question, all the six respondents concur with including fundamental statutory documents identification skill:

**R5:** "We want to see ability to identify documents that will never be destroyed because it's not every record that can be destroyed, there are some fundamental statutory documents that should not be destroyed, so ability to recognise documents that cannot be destroyed or eliminated is also essential".

**R6:** "Ability to know the importance of data storage and be able to store data on the cloud, even in case of any unfortunate situation they can be able to retrieve their data".

When provided with the suggestion of respondent 5 and 6, all the four respondents responded in affirmative to inclusion of the item under the theme (Record management Skills). Hence based on the analysis made fifteen items were included in the record management skills and they are:

- i. Store documents and files on cloud (Back-ups)
- ii. Organize and save documents in folder
- iii. Organize and manage routine files in an office
- iv. Organize and manage confidential files in an organisation
- v. Keep financial records of a business
- vi. Prepare folders and labels for filing documents
- vii. Save templates and graphics for office use
- viii. Copy files and documents to external drives for safe keeping
- ix. Store data on database application software
- x. Save data on digital cameras and other storage devices
- xi. Store and retrieve records from various sources such as flash drives, compact discs, memory cards etc.
- xii. Know when documents are due for disposal and or destruction
- xiii. Know how to utilise microfiches
- xiv. Know how to reproduce documents
- xv. Fundamental statutory documents identification skill

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### QUANTITATIVE RESULTS

Through the use of SPSS, mean and standard deviation were computed to determine the item scores to show the enhanced technical skills required based on the predetermine decision rule.

The results presented in Table 3 show the mean, standard deviation, ranking and remarks of the responses of Heads of Personnel on the Information and Communication Technology skills for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 2.55 to 4.66 and

corresponding standard deviations ranging from 0.525 to 1.413 respectively. This means that the ratings of the respondents on all the items fall within the acceptable benchmark of 2.50 and above. The grand mean of 4.05 implies that the cluster meets the benchmark of 2.50 which indicated that all the information and communication technology skills items are required for integration into the OTM curriculum of Polytechnics in Nigeria. Besides, the overall standard deviation value of 0.776 shows that the items were clustered around the mean.

**Table 3:** Mean, Standard Deviation and Ranking of Heads of Personnel on the Information and Communication Technology Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Use Microsoft Publisher to design cards, logos etcetera	4.66	0.525	1	Very Highly Required
2.	Use different types of photocopying machines to reproduce documents	4.63	0.655	2	Very Highly Required
3.	Use Corel Draw for graphics design	4.62	0.590	3	Very Highly Required
4.	Manage audio conferencing	4.61	0.612	4	Very Highly Required
5.	Insert graphics in documents	4.60	0.542	5	Very Highly Required
6.	Manage Skype conversation	4.59	0.615	6	Very Highly Required
7.	Use different applications on mobile phones	4.58	0.558	7	Very Highly Required
8.	Protect documents using a password	4.57	0.566	8	Very Highly Required
9.	Use Microsoft Access to store data	4.56	0.635	9	Very Highly Required
10.	Know the basics of HTML and fix issues on a website quickly	4.55	0.557	10	Very Highly Required
11.	Use digital cameras to capture official occasions	4.53	0.615	11	Very Highly Required
12.	Convert word and other documents to PDF documents or vice versa	4.52	0.553	12	Very Highly Required
13.	Use the Bluetooth app to send and receive information	4.51	0.563	13	Very Highly Required
14.	Handle HDMI Technology	4.29	0.609	14	Highly Required
15.	Make Powerpoint presentation	4.28	0.761	15	Highly Required
16.	Use the Xender app to send and receive information	4.22	0.516	16	Highly Required
17.	Set Webcam and magnification	4.20	0.575	17	Highly Required
18.	Handle Google apps	4.16	0.606	18	Highly Required
19.	Send and download documents via e-mail	4.15	0.570	19	Highly Required
20.	Use browsers to access and navigate World Wide Web	4.08	0.607	20	Highly Required

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21. Clean virus in computers	4.07	0.485	21	Highly Required
22. Use different televisions for presentations	4.06	0.641	22	Highly Required
23. Manage video conferencing	3.96	0.546	23	Highly Required
24. Use flash drives, CDs and USBs to receive, save and send information	3.67	0.672	24	Highly Required
25. Manage Zoom meeting	3.46	1.376	25	Highly Required
26. Use social media platforms to perform office tasks	3.43	1.271	26	Highly Required
27. Install and update anti-virus in computers	3.38	1.357	27	Highly Required
28. Handle e-commerce	3.33	1.387	28	Highly Required
29. Manage Webinars	3.25	1.378	29	Highly Required
30. Import graphics and documents	3.07	1.413	30	Highly Required
31. Set and manage Webex meeting	2.63	1.286	31	Moderately Required
32. Manage virtual conference and meeting	2.55	1.208	32	Moderately Required
<b>Grand Mean</b>	<b>4.05</b>	<b>0.776</b>		<b>Highly Required</b>

The results presented in Table 4 show the mean, standard deviation, ranking and remarks of the responses of Lecturers of OTM on the Information and Communication Technology skills required for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 2.59 to 4.63 and corresponding standard deviations ranging from 0.548 to 1.389 respectively. This means that the ratings of the respondents on all the items fall

within the acceptable benchmark of 2.50 and above. The grand mean of 4.00 implies that the cluster meets the benchmark of 2.50 which indicated that all the Information and Communication Technology skills items are required for integration into the OTM curriculum of Polytechnics in Nigeria. Besides, the overall standard deviation value of 0.824 shows that the items were clustered around the mean.

**Table 4:** Mean, Standard Deviation and Ranking of Lecturers of OTM on the Information and Communication Technology Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Use Corel Draw for graphics design	4.63	0.611	1	Very Highly Required
2.	Manage audio conferencing	4.58	0.634	2	Very Highly Required
3.	Manage Skype conversation	4.57	0.616	3	Very Highly Required
4.	Use different applications on mobile phones	4.54	0.598	4	Very Highly Required
5.	Use Microsoft Access to store data	4.53	0.663	5	Very Highly Required
6.	Protect documents using a password	4.52	0.620	6	Very Highly Required
7.	Use Microsoft Publisher to design cards, logos etcetera	4.51	0.803	7	Very Highly Required
8.	Use digital cameras to capture official occasions	4.50	0.634	8	Very Highly Required
9.	Use the Bluetooth app to send and receive information	4.49	0.569	9	Highly Required
10.	Use different types of photocopying machines to reproduce documents	4.46	0.787	10	Highly Required

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11. Know the basics of HTML and fix issues on a website quickly	4.42	0.732	11	Highly Required
12. Convert word and other documents to PDF documents or vice versa	4.40	0.651	12	Highly Required
13. Insert graphics in documents	4.36	0.805	13	Highly Required
14. Handle HDMI Technology	4.25	0.625	14	Highly Required
15. Make Powerpoint presentation	4.23	0.780	15	Highly Required
16. Send and download documents via e-mail	4.20	0.566	16	Highly Required
17. Set Webcam and magnification	4.18	0.596	17	Highly Required
18. Handle Google apps	4.14	0.624	18	Highly Required
19. Use browsers to access and navigate the World Wide Web	4.06	0.619	19	Highly Required
20. Use different televisions for presentations	4.03	0.673	20	Highly Required
21. Use the Xender app to send and receive information	4.01	0.728	21	Highly Required
22. Clean viruses in computers	3.98	0.596	22	Highly Required
23. Manage video conferencing	3.94	0.548	23	Highly Required
24. Use flash drives, CDs and USBs to receive, save and send information	3.63	0.725	24	Highly Required
25. Manage Zoom meeting	3.45	1.360	25	Moderately Required
26. Use social media platforms to perform office tasks	3.42	1.257	26	Moderately Required
27. Install and update anti-virus on computers	3.33	1.336	27	Moderately Required
28. Handle e-commerce	3.30	1.362	28	Moderately Required
29. Manage Webinars	3.24	1.364	29	Moderately Required
30. Import graphics and documents	3.06	1.389	30	Moderately Required
31. Set and manage Webex meeting	2.69	1.303	31	Moderately Required
32. Manage virtual conferences and meeting	2.59	1.212	32	Moderately Required
<b>Grand Mean</b>	<b>4.00</b>	<b>0.824</b>		<b>Highly Required</b>

The results presented in Table 5 show the mean, standard deviation, ranking and remarks of the responses of Heads of Personnel on the entrepreneurship skills required for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 2.60 to 4.67 and corresponding standard deviations ranging from 0.497 to 1.425 respectively. This means that the ratings of the

respondents on all the items fall within the acceptable benchmark of 2.50 and above. The grand mean of 4.07 implies that the cluster meets the benchmark of 2.50 which indicated that all the entrepreneurship skills items are required for integration into the OTM curriculum of Polytechnics in Nigeria. Besides, the overall standard deviation value of 0.763 shows that the items were clustered around the mean.

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**Table 5:** Mean, Standard Deviation and Ranking of Heads of Personnel on the Entrepreneurship Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Set strategic goals for the business	4.67	0.523	1	Very Highly Required
2.	Retain customer loyalty and capture their attention	4.66	0.574	2	Very Highly Required
3.	Take decisions on the form of products/services	4.65	0.648	3	Very Highly Required
4.	Make adequate financial plans	4.63	0.589	4	Very Highly Required
5.	Take long and short-term risks of going into a business	4.61	0.542	5	Very Highly Required
6.	Take risks	4.60	0.614	6	Very Highly Required
7.	Organise resources (human and materials) for goals attainment	4.58	0.620	7	Very Highly Required
8.	Plan staff needs and training	4.56	0.556	8	Very Highly Required
9.	Promote and sell organizational products	4.54	0.615	9	Very Highly Required
10.	Demonstrate business skills	4.50	0.584	10	Very Highly Required
11.	Be resilient even in difficult times and take a good decision	4.30	0.614	11	Highly Required
12.	Identify potential competitors and alternative courses of action.	4.16	0.578	12	Highly Required
13.	Determine the information needs of the market	4.10	0.615	13	Highly Required
14.	Identify investment opportunities with commercial values within and outside the environment	4.08	0.497	14	Highly Required
15.	Analyse demand and supply situation	3.97	0.558	15	Highly Required
16.	Initiate business ideas	3.70	0.685	16	Highly Required
17.	Conduct a market survey to determine customers' needs	3.44	1.282	17	Moderately Required
18.	Prepare/write business plans	3.40	1.369	18	Moderately Required
19.	Monitor and evaluate business performance	3.11	1.425	19	Moderately Required
20.	Conduct effective advertisement	2.67	1.311	20	Moderately Required
21.	Identify and utilise government support facilities for business	2.60	1.226	21	Moderately Required
<b>Grand Mean</b>		<b>4.07</b>	<b>0.763</b>		<b>Highly Required</b>

The results presented in Table 6 show the mean, standard deviation, ranking and remarks of the responses of Lecturers of OTM on the entrepreneurship skills required for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 2.66 to 4.66 and corresponding standard deviations ranging from 0.552 to 1.413 respectively. This

means that the ratings of the respondents on all the items fall within the acceptable benchmark of 2.50 and above. The grand mean of 4.02 implies that the cluster meets the benchmark of 2.50 which indicated that all the entrepreneurship skills items are required for integration into the OTM curriculum of Polytechnics in Nigeria. Besides, the

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overall standard deviation value of 0.822 shows that the items were clustered around the mean.

**Table 6:** Mean, Standard Deviation and Ranking of Lecturers of OTM on the Entrepreneurship Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Make adequate financial plans	4.66	0.584	1	Very Highly Required
2.	Retain customer loyalty and capture their attention	4.60	0.621	2	Very Highly Required
3.	Take risks	4.59	0.615	3	Very Highly Required
4.	Organise resources (human and materials) for goals attainment	4.56	0.636	4	Very Highly Required
5.	Promote and sell organizational products	4.53	0.614	5	Very Highly Required
6.	Set strategic goals for the business	4.51	0.790	6	Very Highly Required
7.	Take decisions on the form of products/services	4.48	0.772	7	Highly Required
8.	Demonstrate business skills	4.45	0.619	8	Highly Required
9.	Take long and short-term risks of going into a business	4.40	0.763	9	Highly Required
10.	Be resilient even in difficult times and take a good decision	4.28	0.616	10	Highly Required
11.	Identify potential competitors and alternative courses of action.	4.17	0.576	11	Highly Required
12.	Plan staff needs and training	4.14	0.994	12	Highly Required
13.	Determine the information needs of the market	4.08	0.627	13	Highly Required
14.	Identify investment opportunities with commercial values within and outside the environment	4.04	0.552	14	Highly Required
15.	Analyse demand and supply situation	3.97	0.561	15	Highly Required
16.	Initiate business ideas	3.68	0.723	16	Highly Required
17.	Conduct a market survey to determine customers' needs	3.45	1.274	17	Moderately Required
18.	Prepare/write business plans	3.38	1.352	18	Moderately Required
19.	Monitor and evaluate business performance	3.12	1.413	19	Moderately Required
20.	Conduct effective advertisement	2.74	1.329	20	Moderately Required
21.	Identify and utilise government support facilities for business	2.66	1.236	21	Moderately Required
<b>Grand Mean</b>		<b>4.02</b>	<b>0.822</b>		<b>Highly Required</b>

The results presented in Table 7 show the mean, standard deviation, ranking and remarks of the responses of Heads of Personnel on the records management skills required for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 2.71 to 4.67 and corresponding

standard deviations ranging from 0.552 to 1.475 respectively. This means that the ratings of the respondents on all the items fall within the acceptable benchmark of 2.50 and above. The grand mean of 4.00 implies that the cluster meets the benchmark of 2.50 which indicated that all the records management skills items are required for

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integration into the OTM curriculum of polytechnics in Nigeria. Besides, the overall

standard deviation value of 0.883 shows that the items were clustered around the mean.

**Table 7:** Mean, Standard Deviation and Ranking of Heads of Personnel on the Records Management Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Copy files and documents to external drives for safekeeping	4.67	0.553	1	Very Highly Required
2.	Store data on database application	4.65	0.552	2	Very Highly Required
3.	Know how to utilise microfiches	4.61	0.661	3	Very Highly Required
4.	Store documents and files in the cloud (Back-ups)	4.57	0.768	4	Very Highly Required
5.	Organize and manage confidential files in an organization	4.54	0.575	5	Very Highly Required
6.	Save templates and graphics for office use	4.49	0.655	6	Highly Required
7.	Identify fundamental statutory documents	4.18	0.677	7	Highly Required
8.	Organize and manage routine files in an office	3.96	0.629	8	Highly Required
9.	Store and retrieve records from various sources such as flash drives, compact discs, memory cards etcetera	3.95	0.932	9	Highly Required
10.	Save data on digital cameras and other storage devices	3.87	0.830	10	Highly Required
11.	Prepare folders and labels for filing documents	3.80	0.923	11	Highly Required
12.	Organize and save documents in a folder	3.62	1.475	12	Highly Required
13.	Know how to reproduce documents	3.53	1.347	13	Highly Required
14.	Know when documents are due for disposal and or destruction	2.97	1.291	14	Moderately Required
15.	Keep financial records of a business	2.71	1.390	15	Moderately Required
<b>Grand Mean</b>		<b>4.00</b>	<b>0.883</b>		<b>Highly Required</b>

The results presented in Table 8 show the mean, standard deviation, ranking and remarks of the responses of Lecturers of OTM on the records management skills required for integration into the OTM curriculum. The results revealed that all the items had mean values ranging from 3.27 to 4.61 and corresponding standard deviations ranging from 0.519 to 1.403 respectively. This means that the ratings of the

respondents on all the items fall within the acceptable benchmark of 2.50 and above. The grand mean of 4.09 implies that the cluster meets the benchmark of 2.50 which indicated that all the records management skills items are required for integration into the OTM curriculum of Polytechnics in Nigeria. Besides, the overall standard deviation value of 0.822 shows that the items were clustered around the mean.

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**Table 8:** Mean, Standard Deviation and Ranking of Lecturers of OTM on the Records Management Skills Required

S/No.	Items	Mean	Std. Deviation	Ranking	Remarks
1.	Store data on database application	4.61	0.555	1	Very Highly Required
2.	Save templates and graphics for office use	4.60	0.543	2	Very Highly Required
3.	Organize and manage confidential files in an organization	4.57	0.544	3	Very Highly Required
4.	Store documents and files in the cloud (Back-ups)	4.54	0.639	4	Very Highly Required
5.	Know how to utilise microfiches	4.38	0.802	5	Highly Required
6.	Store and retrieve records from various sources such as flash drives, compact discs, memory cards etcetera	4.28	0.772	6	Highly Required
7.	Organize and manage routine files in an office	4.22	0.519	7	Highly Required
8.	Copy files and documents to external drives for safekeeping	4.20	0.596	8	Highly Required
9.	Prepare folders and labels for filing documents	4.19	0.599	9	Highly Required
10.	Identify fundamental statutory documents	4.18	0.629	10	Highly Required
11.	Save data on digital cameras and other storage devices	4.10	0.655	11	Highly Required
12.	Know how to reproduce documents	3.52	1.316	12	Highly Required
13.	Organize and save documents in a folder	3.49	1.380	13	Moderately Required
14.	Know when documents are due for disposal and or destruction	3.34	1.383	14	Moderately Required
15.	Keep financial records of a business	3.27	1.403	15	Moderately Required
<b>Grand Mean</b>		<b>4.09</b>	<b>0.822</b>		<b>Highly Required</b>

### RESULTS OF HYPOTHESIS TESTING

The null hypotheses were tested using independent samples t-test at 0.05 level of

significance. The decision is that a null hypothesis is accepted if its p-value is  $>0.05$  and rejected if  $\leq 0.05$  (Creswell, 2014).

**Table 9:** t-test Results on the Difference in Mean Responses between Heads of Personnel and Lecturers of OTM on the Information and Communication Technology Skills Required

Variable	Groups	N	Mean	SD	$\alpha$	t	df	p-value	Mean Difference	Dec.
Information and communication technology skills	Heads of Personnel	154	4.05	.608	0.05	0.602	309	0.548	0.04	NS
	Lecturers of OTM	157	4.01	.574						

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**Table 10:** t-test Results on the Difference in Mean Responses between Heads of Personnel and Lecturers of OTM on the Entrepreneurship Skills Required

Variable	Groups	N	Mean	SD	$\alpha$	t	df	p-value	Mean Difference	Dec.
Entrepreneurship skills	Heads of Personnel	154	4.06	.649	0.05	0.619	309	0.537	0.04	NS
	Lecturers of OTM	157	4.02	.597						

**Table 11:** t-test Results on the Difference in Mean Responses between Heads of Personnel and Lecturers of OTM on the Records Management Skills Required

Variable	Groups	N	Mean	SD	$\alpha$	t	df	p-value	Mean Difference	Dec.
Records management skills	Heads of Personnel	154	4.01	.591	0.05	-1.473	309	0.142	-0.09	NS
	Lecturers of OTM	157	4.10	.454						

### DISCUSSION OF FINDINGS

Information and communication technology skills is one of the important enhanced technical skills cluster found required in this study for integration into the OTM curriculum for students to possess. Chucks *et al.* (2020) found that the OTM curriculum needs to be enriched to enable the OTM graduates to fit into modern offices and be self-employed. This is also in line with the findings of Raximova (2020); Barau and Zubairu (2021) who noted the importance of Information and Communication Technology in terms of software, modern office machines, information technology resources and internet development which prepare graduates to work in the organization effectively and efficiently. They expressed that the new ways of doing office work require the review of the current OTM curriculum to meet employers' needs. Also, the test of null hypothesis one further affirmed the decision of the two groups of the respondents on the categories of the information and communication technology skills required for integration into the OTM curriculum of Polytechnics in Nigeria

Esene (2015) identified entrepreneurship skills development as one of the skills that secretaries must possess to guide their

organization quickly in response to changing market needs. The finding also concurred with Udemba (2020) who found that entrepreneurship skills are essential skills needed to perform today's secretary's role. Furthermore, the acquisition of the skills can enable graduates to maximise the resources around them within the limits of their capabilities and be self-reliant without waiting for government jobs to come. The test of the null hypothesis which is number two further affirmed the decision of the two groups of the respondents on the categories of the entrepreneurship skills required for integration into the OTM curriculum of Polytechnics in Nigeria.

The study also found that records management skills are among the employability skills required for integration into the OTM curriculum and the students are also expected to possess them. This is in agreement with Olugbemi (2018) who stressed the importance of record management and observed that almost all correspondences that were hitherto manually processed and filed are now carried out with office technologies, ICT equipment and office information system. This finding also goes to support the findings of Ayodele and Adeoye, (2010) that, records management skills are

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required to organise and properly manage all correspondences. Also for the graduates of OTM to cope with the 21<sup>st</sup>-century world of work, they must possess all the necessary knowledge and skills required for records management either manual or computerised. In addition, the test of null hypothesis three further affirmed the decision of the two groups of the respondents on the categories of the records management skills required for integration into the OTM curriculum of Polytechnics in Nigeria.

### CONCLUSION

The extensive review of existing literature has clearly illustrated that the ever-evolving landscape of office technologies, constant innovations, advancements in office equipment, and the limited curriculum updates have collectively contributed to a noticeable skills gap among graduates specializing in Office Technology and Management (OTM). This concerning issue serves as the catalyst for the undertaking of this comprehensive study. The study, in particular, was designed to address the conspicuous skills deficit highlighted in the literature. This deficiency encompasses a vital set of advanced technical proficiencies within the realms of information and communication technology, entrepreneurship, and record management. By honing and inculcating these enhanced skills, the research endeavors to bridge this formidable skills gap, equipping OTM students with the competencies necessary for success in the contemporary professional landscape.

### RECOMMENDATIONS

The study recommended the followings:

1. The incorporation of the explored enhanced information and communication technology skills into the OTM curriculum of polytechnics in Nigeria in order to enhance students' skills and employability.
2. The integration of the enhanced entrepreneurship skills into the OTM curriculum of polytechnics in Nigeria
3. The incorporation of the enhanced record management skills into the OTM curriculum

of polytechnics in Nigeria for employability and self-reliance.

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