

## **The Executive Secretary In The Disruptive Industrial Revolution 4.0: A Comparative Analysis By Industry And Academe**

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### **Abstrak**

The objective of the study is to find out the gap between professional's perception and the academe to square up the secretarial curriculum and classroom learning as well as the roles of lecturers in nurturing students' competencies to cope with the requirement of the industrial revolution 4.0. The study concluded that all three components of secretary competency are important, and found that the professionals' rating is higher than the academe in all competency components with difference of 0.24 for attitude and skill, and 0.17 for knowledge. At the critical value of  $t = -3.32 < -2.02$ , the study concludes that there is a significant difference between the professional and the academe perception. The respondents' opinion is divided in two in their perception of components of attitude, half components are rated higher by professionals with difference of 0.09-0.30 are *Social Orientation, Initiative, Analytical Thinking, Innovation, Leadership, Achievement/ Effort, Independence, Persistence*, and another half are rated higher by the academe with the difference of 0.06-0.70 are *Attention to Detail, Concern for Others, Self-control, Adaptability/Flexibility, Dependability, Integrity, Stress Tolerance, Cooperation*. Both professionals and academe perceived skill-based form of secretarial training are important skill. All component of skills were rating higher by the professional except *Service orientation* which is rated higher by the academe with  $d=0.05$ . All knowledge components are considered important by the respondents except for *Mathematics* rated as fairly important. Four knowledge components rated higher  $\geq 0.30$  by professionals are *English* ( $d=0.51$ ), *Computer application* and *Business administration* ( $d=0.31$ ) and *Clerical administrative procedure* ( $d=0.30$ ).

**Keywords:** executive secretary, secretary competency, professional assistant, secretary education

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## **INTRODUCTION**

Technological advancement and inventions have transformed all aspects of business and office management. Business and office management have evolved their

functions to rely on more different types of digital technological equipment and resources. Research studies and findings over the years show that the introduction of artificial intelligence (AI) technologies in today's office pose enormous challenges to secretaries because of their involvement in the different aspects of complex office information processing to replace some of the repetitive secretarial jobs (Ezenwafor & Nwankwo, 2019). A professional secretary must have theoretical and practical knowledge of the new technologies to be competent enough in the usage of those technological tools/program that are necessary to perform efficiently and productively in the digital AI work place (Abiola, 2022). Moreover, the impact of Industry 4.0 has also pushed companies to collaborate and share data among customers, manufacturers, suppliers, and other parties in supply chain in order to improve productivity and competitiveness, which enable the transition to a digital economy, and provides opportunities to achieve economic growth and sustainability (Musty, 2023).

Therefore, it is also necessary that a professional secretary to possess managerial skills such as exercise of management functions, since these professionals have a solid grip on planning, organization, control and direction and the ability to deal with innovative management models and capacity maximization and optimization of technological resources (Oliveira, Gomes, Sousa, Lopes, & Santos, 2021).

The study will find out what kind of professional secretary's competencies need to be emphasized and strengthened, specifically in the areas of the digitalization and automation of secretarial administrative tasks (Brilhante, Portela, Costa, Fernandes, Fontenele, Diniz & Martins, 2022; Musty 2023). The objective of this research work is to find out the gap between professional's perception and the academe to square up ASMIK curriculum and classroom learning as well as the roles of ASMIK lecturers in nurturing, injecting, polishing, mentoring and building the students competencies to cope with the industry requirements.

### **The characteristic of 21<sup>st</sup> century secretarial competency**

Entering the disruptive era of industrial revolution 4.0, a job for a corporate secretary has evolved into a broader career category such as a manager of office administration. A job that requires more than just routine clerical activities such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings, but more emphasizes performing administrative functions that includes handling information requests and preparing reports, train and supervise lower-level clerical staff, provide high-level administrative support by conducting research, and prepares statistical reports (Adebiyi, 2018; Erwat & Akasi, 2021; Lesi, 2020; Xu, 2020)

Mymajors.com a prominent US based career development and assistance website for college students formulates the following required knowledge, skills and attitude as the crucial requirement for the secretarial profession in the 4.0 industrial revolution (<https://www.Mymajors.com/career/corporate-secretary/skills>).

Eight criteria was formulated for *Knowledge* which consist of *Clerical* - Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology; *English Language* - Knowledge of the structure and content of the English language including the meaning and spelling

of words, rules of composition, and grammar; *Customer and Personal Service* - Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction; *Computers and Electronics* - Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming; *Administration and Management* - Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources; *Personnel and Human Resources* - Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems; *Communications and Media* - Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media; and *Mathematics* - Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

**Skills** was defined as practical ability to perform well and effective in all office administrative job was formulated in sixteen criteria, *Reading Comprehension* - Understanding written sentences and paragraphs in work related documents; *Active Listening* - Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times; *Speaking* - Talking to others to convey information effectively; *Writing* - Communicating effectively in writing as appropriate for the needs of the audience; *Service Orientation* - Actively looking for ways to help people; *Coordination* - Adjusting actions in relation to others' actions; *Critical Thinking* - Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems; *Social Perceptiveness* - Being aware of others' reactions and understanding why they react as they do; *Time Management* - Managing one's own time and the time of others; *Monitoring* - Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action; *Active Learning* - Understanding the implications of new information for both current and future problem-solving and decision-making; *Judgment and Decision Making* - Considering the relative costs and benefits of potential actions to choose the most appropriate one; *Negotiation* - Bringing others together and trying to reconcile differences; *Instructing* - Teaching others how to do something; *Persuasion* - Persuading others to change their minds or behavior; *Complex Problem Solving* - Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions; *Learning Strategies* - Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things; *Systems Analysis* - Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes; and *Systems Evaluation* - Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

**Attitude** as a set of moral value and behavior required for the secretarial profession are *Attention to Detail* - Job requires being careful about detail and thorough in completing work tasks; *Integrity* - Job requires being honest and ethical; *Dependability* - Job requires being reliable, responsible, and dependable, and fulfilling obligations; *Cooperation* - Job requires being pleasant with others on the job and

displaying a good-natured, cooperative attitude; *Adaptability/Flexibility* - Job requires being open to change (positive or negative) and to considerable variety in the workplace; *Concern for Others* - Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job; *Self-Control* - Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations; *Initiative* - Job requires a willingness to take on responsibilities and challenges; *Independence* - Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done; *Persistence* - Job requires persistence in the face of obstacles; *Social Orientation* - Job requires preferring to work with others rather than alone, and being personally connected with others on the job; *Stress Tolerance* - Job requires accepting criticism and dealing calmly and effectively with high stress situations; *Achievement/Effort* - Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks; *Leadership* - Job requires a willingness to lead, take charge, and offer opinions and direction; *Analytical Thinking* - Job requires analyzing information and using logic to address work-related issues and problems; and *Innovation* - Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems,

## METHODS

A questionnaire was formulated and modified based on the above criteria for "Knowledge, Skills, and Attitude of professional executive assistant" which then distributed to a group of professional secretaries and academe personnels to collect their rated ideas and opinions using Likert scale 1 (not important), 2 (less important), 3 (fairly important), 4 (important) and 5 (very important). The questioner has been piloted and finalized before being rated by the chosen two groups of randomly selected thirty samples respectively.

A t-test was conducted to determine if there is a significant difference between the mean of professionals and academe. Assuming equal variances, with a two-sample t-test to compare the means. Here are the steps to perform the t-test:

The null hypothesis ( $H_0$ ): There is no significant difference between the mean heights of professional secretaries (A) and academe (B)

The alternative hypothesis ( $H_a$ ): There is a significant difference between the mean heights of Group A and Group B.

The level of significance ( $\alpha$ ) to 0.05.  $t = (x_1 - x_2) / (s\sqrt{2/n})$

Where  $x_1$  is the sample mean of Group A,  $x_2$  is the sample mean of Group B,  $s$  is the pooled standard deviation, and  $n$  is the sample size and  $df = n_1 + n_2 - 2$ .

Where  $n_1$  is the sample size of Group professional secretary and  $n_2$  is the sample size of Group academe.

Analysis of mean and standard deviations was used to analyzed the difference between the two samples and the results also were further discussed with experienced executives for final conclusions.

## RESULTS AND DISCUSSION

The general objective of the study is to find out the gap between the required secretarial knowledge, skill and attitude as perceived by professional secretaries as compared to the current classroom practices being taught by the academe of the ASMIK Secretarial education in order to develop and adjust the curriculum, classroom learning and teaching method.

The disruptive industrial revolution 4.0 has required the training of secretary as professional assistance to actively involves the process of guiding and initiating the learners to acquire the necessary skills, facts, knowledge, skill and attitudes that will make them co-exist with others as useful and productive members of the business society. Furthermore, noted that it is a program of instruction designed to equip its recipients with knowledge and skills for gainful employment (Erwart & Akasi, 2021).

Table 1 shows attitude is the most important aspect of an office secretarial competency, followed by skill, then knowledge. However, the result also showed that the professionals has rated higher in all the three competency aspects compare to the academe with difference in mean of 0,24 for attitude and skill, and 0.17 for knowledge. Smaller standard deviation of the professionals also showed that they are more consistent in their opinions compare to the academes'.

**Table 1 The comparative perception about secretarial competency**

	Academe		Professionals		difference
	mean	stdev	mean	stdev	
Attitude	4.18	1.01	4.42	0.90	-0.24
Skill	4.16	1.02	4.40	0.91	-0.24
Knowledge	4.08	1.00	4.25	0.96	-0.17

Using the critical value from the t-distribution table with  $df = df$  and  $\alpha = 0.05$  (two-tailed test), then compare the t-test statistic to the critical value. If the t-test statistic is greater than the critical value or less than the negative critical value, reject the null hypothesis. If it falls within the range of the critical values, fail to reject the null hypothesis.

$$H_0: \mu_1 = \mu_2$$

$$H_a: \mu_1 \neq \mu_2$$

$$\alpha = 0.05$$

Group	Sample Size	Sample Mean	Sample Standard Deviation
A	30	68.3	3.1
B	30	70.1	2.8

$$t = (68.3 - 70.1) / (2.97\sqrt{(2/30+30)}) = -3.320$$

$$df = 30 + 30 - 2 = 58$$

The critical value at  $\alpha = 0.05$  with 58 degrees of freedom is  $\pm 2.02$ . And the  $t = -3.32 < -2.02$ , so the null hypothesis was rejected.

Therefore, we can conclude that there is a significant difference between the mean heights of Group A and Group B at the 0.05 level of significance.

### The Knowledge

Table 2 summarizes the difference of the components of knowledge rated higher  $\geq 0.30$  by professionals: English ( $d=0.51$ ), Computer application and Business

administration (d=31) and Clerical administrative procedure (d=0.30). while component Mathematics is the only aspect of knowledge rated as fairly important by all respondent, where academe rating (M=3.61) is slightly higher (d=0.03) than the professionals (M=3.59).

**Table 2 The comparative perception about component of knowledge**

Knowledge	Academe		Professionals		difference
	mean	stdev	mean	stdev	
English	4.18	0.94	4.69	0.83	-0.51
Computer application	4.21	1.18	4.52	0.82	-0.31
Business administration	4.06	1.12	4.37	0.93	-0.31
Clerical administrative procedure	4.33	1.02	4.63	0.87	-0.30
Human resources management	4.02	1.11	4.31	0.95	-0.29
Media communication	4.29	0.99	4.45	0.91	-0.16
Customer service	4.55	0.82	4.62	0.82	-0.07
Mathematics	3.61	0.98	3.59	1.17	0.03

A range of standard deviation about less than 1 from the professionals also indicate that this group is more consistent in their opinion compare to the academe, where their standard deviation is about 1.00, except for component Mathematics where professional's standard deviation-1.17 is higher than the academe's standard deviation - 0.98.

### The Skill

The findings shows that both professionals and academe perceived skill-based form of secretarial training to meet the demand of 4.0 industrial revolution is important skill. Five components showed difference of more than 0.30: Persuasion (d=0.66), Critical thinking (d=0.40), Active listening (d=0.38), Negotiation (d=0.34) and Writing (d=0.33). All are rated higher by the professionals. Four skill components showed difference  $\geq 0.20$ : Instructing, Active learning, Time management (d=0.23), and System analysis (d=0.20), where professionals ratings are also higher than the academe ratings. The rest of skill components were rated higher by professionals with difference between 0.09-0.18. Service orientation is the only component rated higher by the academe with d=0.05.

Five skill components where the professional rating is higher  $\geq 0.30$  than academe are: Persuasion, Critical thinking, Active listening, Negotiation and Writing.

**Table 3 The comparative perception about component of skill**

Skill	Academe		Professionals		difference
	mean	stdev	mean	stdev	
Persuasion	4.00	1.08	4.66	0.81	-0.66
Critical thinking	4.39	0.83	4.79	0.79	-0.40
Active Listening	4.46	0.87	4.84	0.76	-0.38
Negotiation	4.45	0.89	4.79	0.86	-0.34
Writing	4.43	0.82	4.76	0.80	-0.33
Instructing	4.30	0.92	4.53	0.87	-0.23
Active Learning	4.42	0.87	4.65	0.83	-0.23

Time Management	4.53	0.86	4.76	0.79	-0.23
Systems Analysis	4.33	0.93	4.53	0.82	-0.20
Speaking	4.63	0.89	4.81	0.79	-0.18
Judgment & Decision Making	4.47	0.84	4.62	0.83	-0.15
Monitoring	4.53	0.73	4.68	0.84	-0.14
Coordination	4.55	0.91	4.69	0.85	-0.14
Social Perceptiveness	4.42	0.82	4.55	0.79	-0.14
Reading Comprehension	4.50	0.78	4.59	0.81	-0.09
Service Orientation	4.63	0.89	4.59	0.81	0.05

The analysis of standard deviation showed that the respondents' perceptions are more consistent in their opinion with all standard deviation is less than 1.00, except for Persuasion where academe standard deviation is 1.08.

### The Attitude

Table 4 is the sixteen components of attitude, which shows that the respondents' opinion are divided in two different perceptions, half components are rated higher by professionals with difference of 0.09-0.30 are *Social Orientation, Initiative, Analytical Thinking, Innovation, Leadership, Achievement/ Effort, Independence, Persistence*, and another half are rated higher by the academe with the difference of 0.06-0.70 are *Attention to Detail, Concern for Others, Self-control, Adaptability/ Flexibility, Dependability, Integrity, Stress Tolerance, Cooperation*.

The findings also pinpoint to area where the classroom trainings were rated lower than the industry requirement: Social orientation ( $d=0.30$ ), Initiative ( $d=0.29$ ), Analytical thinking ( $d=0.25$ ) and Leadership ( $d=0.21$ ). Two components that are less emphasized by the professionals, but over emphasized by the academe are Cooperation ( $d=0.70$ ) and Stress tolerance ( $d=0.39$ ).

Inconsistency of perception were also indicated among academe regarding their opinion on Analytical thinking ( $SD=1.01$ ), Innovation ( $SD=1.07$ ), Leadership and Persistence ( $SD=1.04$ ), while inconsistency among professional were indicated in component Adaptability/Flexibility ( $SD=1.09$ ), Dependability ( $SD=1.04$ ) and Cooperation ( $SD=1.07$ ).

**Table 4 The comparative perception about component of attitude**

Attitude	Academe		Professionals		difference
	mean	stdev	mean	stdev	
Social Orientation	4.25	0.91	4.55	0.89	-0.30
Initiative	4.47	0.86	4.76	0.89	-0.29
Analytical Thinking	4.40	1.01	4.65	0.78	-0.25
Innovation	4.37	1.07	4.60	0.81	-0.23
Leadership	4.40	1.04	4.61	0.84	-0.21
Achievement/Effort	4.48	0.77	4.60	0.94	-0.12
Independence	4.31	0.93	4.41	0.89	-0.10
Persistence	4.47	1.04	4.55	0.90	-0.09
Attention to Detail	4.67	0.82	4.60	0.83	0.06
Concern for Others	4.50	0.97	4.41	0.99	0.09
Self-control	4.63	0.86	4.53	0.98	0.10

Adaptability/Flexibility	4.50	0.91	4.36	1.09	0.14
Dependability	4.77	0.77	4.62	1.04	0.15
Integrity	4.77	0.77	4.60	0.88	0.16
Stress Tolerance	4.50	0.91	4.11	0.98	0.39
Cooperation	4.67	0.82	3.97	1.07	0.70

## LIMITATION AND IMPLICATION

The study was conducted among professional secretaries worked in banking industries, private companies and SDA church leaders in North Sulawesi, which their scope of business and management are limited with in local settings, and most of them are ASMIK graduates.

The academe respondents are also limited to ASMIK lecturers, academic administrators and ASMIK senior students. Their opinions, suggestions and evaluation are strongly related to the needs of the local and church business, therefore any improvement and development of ASMIK curriculum and education process based on this study would greatly affect the need of the local business and market.

The researcher suggested that further study may be conducted to the national and international business corporation in other area of Indonesia where national and multinational corporations operate.

## CONCLUSIONS AND RECOMMENDATIONS

The study concluded that all three components of secretary competency are important, however the professionals gave higher rating in all components than the academe's rating with difference of 0.24 for attitude and skill, and 0.17 for knowledge.

At the critical value of  $t = -3.32 < -2.02$ , the study concludes that there is a significant difference between the professional's perception and the academe perception.

In components of attitude, the respondents' opinion is divided in two different perceptions, half components are rated higher by professionals with difference of 0.09-0.30, and another half are rated higher by the academe with difference of 0.06-0.70. Social orientation ( $d=0.30$ ), Initiative ( $d=0.29$ ), Analytical thinking ( $d=0.25$ ) and Leadership ( $d=0.21$ ) are attitude component rated higher by the professionals, while are Cooperation ( $d=0.70$ ) and Stress tolerance ( $d=0.39$ ) are rated higher by the academe.

Both professionals and academe perceived skill-based form of secretarial training are important skill. All component of skills were rating higher by the professional except Service orientation is the only component rated higher by the academe with  $d=0.05$ .

Five components are rated higher more than 0.30 by professionals: Persuasion ( $d=0.66$ ), Critical thinking ( $d=0.40$ ), Active listening ( $d=0.38$ ), Negotiation ( $d=0.34$ ) and Writing ( $d=0.33$ ). Another four skill components rated higher by professionals with difference  $\geq 0.20$ : Instructing, Active learning, Time management ( $d=0.23$ ), and System analysis ( $d=0.20$ ). The rest of skill components were rated higher by professionals with difference between 0.09-0.18.

All knowledge components are considered important by the respondents except for Mathematics rated as fairly important. Four knowledge components rated



higher  $\geq 0.30$  by professionals are English ( $d=0.51$ ), Computer application and Business administration ( $d=0.31$ ) and Clerical administrative procedure ( $d=0.30$ ).

The study recommends that the development of secretarial professional education must not only be determined by the requirements of BAN-PT of Indonesian Department of Higher Education, but also must be based on correctly handle the relationship between theoretical classroom teaching, practical office training with the emphasizes on systematically incorporate the 4.0 professional attitude with the skills and knowledge as proposed by professionals who have direct experience working with industries.

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