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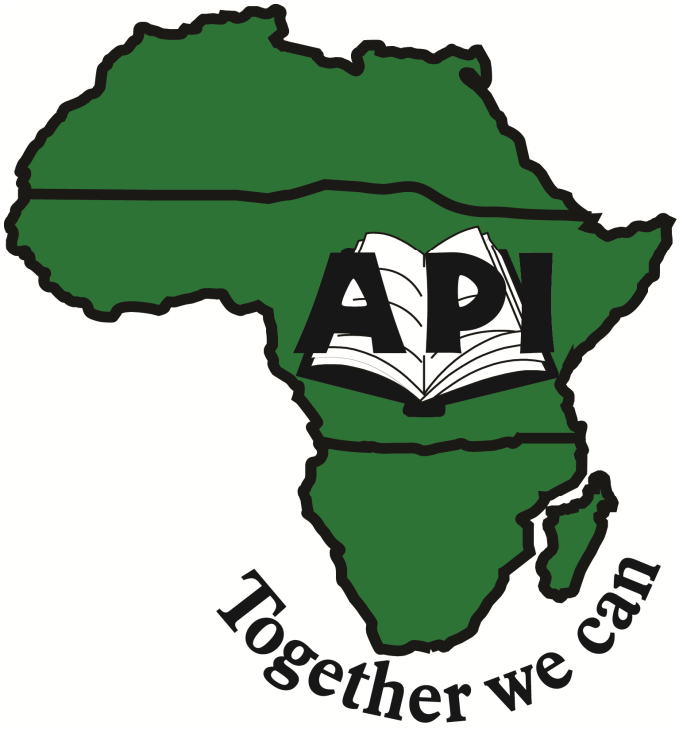

PUBLIC ADMINISTRATION & MANAGEMENT TERM THREE STUDENT'S MODULES (PAM)

Contents

Website: www.africapopulation.net
Email: info@africapopulation.net

Course Name: LOCAL GOVERNMENTS ADMINISTRATION

Local government refers collectively to administrative authorities over areas that are smaller than a state. The term is used to contrast with offices at nation-state level, which are referred to as the central government, national government, or (where appropriate) federal government. "Local government" only acts within powers delegated to it by legislation.

Main articles on each country will usually contain some information about local government, or links to an article with fuller information. The rest of this article gives information or links for countries where a relatively full description is available.

India was traditionally divided into provinces governed by centrally appointed governors with considerable autonomy in local affairs. There are currently 34 provinces. During the Soviet occupation and the development of country-wide resistance, local areas came increasingly under the control of mujaheddin groups that were largely independent of any higher authority; local commanders, in some instances, asserted a measure of independence also from the mujaheddin leadership in Pakistan, establishing their own systems of local government, collecting revenues, running educational and other facilities, and even engaging in local negotiations. Mujaheddin groups retained links with the peshawar parties to ensure access to weapons that were doled out to the parties by the government of Pakistan for distribution to fighters inside India.

The Taliban set up a shura (assembly), made up of senior Taliban members and important tribal figures from the area. Each shura made laws and collected taxes locally. The Taliban set up a provisional government for the whole of Afghanistan, but it did not exercise central control over the local shuras.

The process of setting up the transitional government in June 2002 by the Loya Jirga took many steps involving local government. First, at the district and municipal level, traditional shura councils met to pick electors—persons who cast ballots for Loya Jirga delegates. Each district or municipality had to choose a predetermined number of electors, based on the size of its population. The electors then traveled to regional centers and cast ballots, to choose from amongst themselves a smaller number of loya jirga delegates— according to allotted numbers assigned to each district. The delegates then took part in the Loya Jirga.

The warlords who rule various regions of the country exert local control. The transitional government is attempting to integrate local governing authorities with the central government, but it lacks the loyalty from he warlords necessary to its governing authority. More traditional elements of political authority—such as Sufi networks, royal lineage, clan strength, age-based wisdom, and the like—still exist and play a role in Afghan society. Karzai is relying on these traditional sources of authority in his challenge to the warlords and older Islamist leaders. The deep ethnic, linguistic, sectarian, tribal, racial, and regional cleavages present in the country create what is called "Qawm" identity, emphasizing the local over higher-order formations. Qawm refers to the group to which the individual considers

himself to belong, whether a subtribe, village, valley, or neighborhood. Local governing authority relies upon these forms of identity and loyalty.

Argentina

Argentina is a federation of 23 provinces and the federal capital of Buenos Aires. During the 19th century there was a bitter struggle between Buenos Aires and the interior provinces, and there has long been an element of tension regarding the division of powers between the central government and provincial bodies. The federal government retains control over such matters as the regulation of commerce, customs collections, currency, civil or commercial codes, or the appointment of foreign agents. The provincial governors are elected every four years.

The constitutional "national intervention" and "state of siege" powers of the president have been invoked frequently. The first of these powers was designed to "guarantee the republican form of government in the provinces." Since the adoption of the 1853 constitution, the federal government has intervened over 200 times, mostly by presidential decree. Under this authority, provincial and municipal offices may be declared vacant, appointments annulled, and local elections supervised. Between 1966 and 1973, all local legislatures were dissolved and provincial governors were appointed by the new president. A restoration of provincial and municipal government followed the return to constitutional government in 1973. After the March 1976 coup, the federal government again intervened to remove all provincial governors and impose direct military rule over all municipalities. Since 1983, representative local government has been in force again.

Until 1996, the President appointed the mayor of Buenos Aires, and by law, the president and Congress controlled any legislation that affected the city. Constitutional reforms that year led to an elected mayoral position, and a 60-member Poder Legislativo (legislative power). The members are elected by proportional representation to four-year terms.

Canada

Canada has a federal system with three orders of government. The largest is the federal government, followed by the provincial and territorial governments. At the root level is the municipal (or local) government.[1] Municipal governments are controlled by the provincial (or territorial) order of government.

Egypt

Local government traditionally enjoyed limited power in Egypt's highly centralized state. Under the central government were twenty-six governorates (sing., muhafazah; pl., muhafazat). These were subdivided into districts (sing., markaz; pl., marakaz) and villages (sing., qaryah; pl., qura) or towns. At each level, there was a governing structure that combined representative councils and government-appointed executive organs headed by governors, district officers, and mayors, respectively. Governors were appointed by the president, and they, in turn, appointed subordinate executive officers. The coercive backbone of the state apparatus ran

downward from the Ministry of Interior through the governors' executive organs to the district police station and the village headman (sing., umdah; pl., umadah).

Before the revolution, state penetration of the rural areas was limited by the power of local notables, but under Nasser, land reform reduced their socioeconomic dominance, and the incorporation of peasants into cooperatives transferred mass dependence from landlords to government. The extension of officials into the countryside permitted the regime to bring development and services to the village. The local branches of the ruling party, the Arab Socialist Union (ASU), fostered a certain peasant political activism and coopted the local notables—in particular the village headmen—and checked their independence from the regime.

State penetration did not retreat under Sadat and Mubarak. The earlier effort to mobilize peasants and deliver services disappeared as the local party and cooperative withered, but administrative controls over the peasants remained intact. The local power of the old families and the headmen revived but more at the expense of peasants than of the state. The district police station balanced the notables, and the system of local government (the mayor and council) integrated them into the regime.

Sadat took several measures to decentralize power to the provinces and towns. Governors acquired more authority under Law Number 43 of 1979, which reduced the administrative and budgetary controls of the central government over the provinces. The elected councils acquired, at least formally, the right to approve or disapprove the local budget. In an effort to reduce local demands on the central treasury, local government was given wider powers to raise local taxes. But local representative councils became vehicles of pressure for government spending, and the soaring deficits of local government bodies had to be covered by the central government. Local government was encouraged to enter into joint ventures with private investors, and these ventures stimulated an alliance between government officials and the local rich that paralleled the infitah alliance at the national level. Under Mubarak decentralization and local autonomy became more of a reality, and local policies often reflected special local conditions. Thus, officials in Upper Egypt often bowed to the powerful Islamic movement there, while those in the port cities struck alliances with importers.

Mali

In recent years, Mali has undertaken an ambitious decentralization program, which involves the capital district of Bamako, seven regions subdivided into 46 cercles, and 682 rural community districts (communes). The state retains an advisory role in administrative and fiscal matters, and it provides technical support, coordination, and legal recourse to these levels. Opportunities for direct political participation, and increased local responsibility for development have been improved.

In August-September 1998, elections were held for urban council members, who subsequently elected their mayors. In May/June 1999, citizens of the communes elected their communal council members for the first time. Female voter turnout was about 70% of the total, and observers considered the process open and transparent. With mayors, councils, and boards in place at the local level, newly elected officials,

civil society organizations, decentralized technical services, private sector interests, other communes, and donor groups began partnering to further development.

Eventually, the cercles will be reinstituted (formerly grouping arrondissements) with a legal and financial basis of their own. Their councils will be chosen by and from members of the communal councils. The regions, at the highest decentralized level, will have a similar legal and financial autonomy, and will comprise a number of cercles within their geographical boundaries. Mali needs to build capacity at these levels, especially to mobilize and manage financial resources.the result of numerous reforms and reorganisation over the centuries.

Unitary state

A **unitary state** is a sovereign state governed as one single unit in which the central government is supreme and any administrative divisions (subnational units) exercise only powers that the central government chooses to delegate. Many states in the world have a unitary system of government.

Unitary states are contrasted with federal states (federations):

- In a unitary state, subnational units are created and abolished and their powers may be broadened and narrowed, by the central government. Although political power in unitary states may be delegated through devolution to local government by statute, the central government remains supreme; it may abrogate the acts of devolved governments or curtail their powers.
    - The United Kingdom is an example of a unitary state. Scotland, Wales, and Northern Ireland, which along with England are the constituent countries of the United Kingdom, have a degree of autonomous devolved power - the Scottish Government and Scottish Parliament in Scotland, the Welsh Assembly Government and National Assembly for Wales in Wales, and the Northern Ireland Executive and Northern Ireland Assembly in Northern Ireland. But such devolved power is only delegated by Britain's central government, more specifically by the Parliament of the United Kingdom, which is supreme under the doctrine of parliamentary supremacy. Further, the devolved governments cannot challenge the constitutionality of acts of Parliament, and the powers of the devolved governments can be revoked or reduced by the central government (the Parliament with a government comprising the Cabinet, headed by the Prime Minister). For example, the Northern Ireland Assembly has been suspended four times, with its powers reverting to the central government's Northern Ireland Office.
- In federal states, by contrast, states or other subnational units share sovereignty with the central government, and the states comprising the federation have an existence and power functions that cannot be unilaterally changed by the central government. In some cases, such as in the United States, it is the federal government that has only those powers expressly delegated to it.

- An example of a federal state is the United States; under the United States Constitution, power is shared between the federal government of the United States and the U.S. states. Many federal states also have unitary lower levels of government; while the United States is federal, the states themselves are unitary under Dillon's Rule - counties and municipalities have only the authority granted to them by the state governments by the state constitution or legislative act.

Most countries with the Westminster system of government are unitary states except Australia, Canada and Malaysia, which have federal systems. These nations may be considered hybrids of both systems, employing the centrality of the unitary system at the federal level, and the sharing of power with states, provinces and territories found in federal systems.

Devolution (like federation) may be symmetrical, with all subnational units having the same powers and status, or asymmetric, with regions varying in their powers and status.

Constitution

A **constitution** is a set of rules for government—often codified as a written document—that enumerates the powers and functions of a political entity. These rules together make up, i.e. constitute, what the entity is. In the case of countries and autonomous regions of federal countries the term refers specifically to a constitution defining the fundamental political principles, and establishing the structure, procedures, powers and duties, of a government. By limiting the government's own reach, most constitutions guarantee certain rights to the people. The term *constitution* can be applied to any overall system of law that defines the functioning of a government, including several uncodified historical constitutions that existed before the development of modern codified constitutions.

Constitutions concern different levels of political organization. They exist at national (e.g., codified Constitution of Canada, uncodified Constitution of the United Kingdom), regional (e.g., the Massachusetts Constitution), and sometimes lower levels. They also define many political and other groups, such as political parties, pressure groups, and trade unions. A supranational constitution is possible (e.g., proposed European Union constitution). The traditional absolute sovereignty of modern nations assumed in a constitution is often limited by binding international treaties such as the American Convention on Human Rights which binds the 24 American countries that have ratified it, and the European Convention on Human Rights which binds the 47 member countries of the Council of Europe.

Non-political entities such as corporations and voluntary associations, whether incorporated or not, often have what is effectively a constitution, often called memorandum and articles of association (U.S. incorporation).

The Constitution of India is the longest written constitution of any sovereign country in the world[1], containing 448 articles, 12 schedules and 94 amendments, with 117,369 words in its English language version[2].

Etymology

The term *constitution* comes from a Latin term denoting an important law, usually one proclaimed by the Roman emperor (*"constitutiones principis"*: the edicta, mandata, decrera and rescripta)[3]. Later, the term was widely used in canon law for an important determination, especially by the Pope, which are now referred to as *apostolic constitutions.*

General features

Generally, every modern constitution confers specific powers to an organization or institutional entity, established upon the primary condition that it abides by the said constitution's limitations. According to Scott Gordon, a political organization is constitutional to the extent that it "contain[s] institutionalized mechanisms of power control for the protection of the interests and liberties of the citizenry, including those that may be in the minority."[4]

The Latin term *ultra vires* describes activities of officials within an organization or polity that fall outside the constitutional or statutory authority of those officials. For example, a students' union may be prohibited as an organization from engaging in activities not concerning students; if the union becomes involved in non-student activities these activities are considered *ultra vires* of the union's charter, and nobody would be compelled by the charter to follow them. An example from the constitutional law of nation-states would be a provincial government in a federal state trying to legislate in an area exclusively enumerated to the federal government in the constitution, such as ratifying a treaty. *Ultra vires* gives a legal justification for the forced cessation of such action, which might be enforced by the people with the support of a decision of the judiciary, in a case of judicial review. A violation of rights by an official would be *ultra vires* because a (constitutional) right is a restriction on the powers of government, and therefore that official would be exercising powers he doesn't have.

In most but not all modern states the constitution has supremacy over ordinary statute law (see Uncodified constitution below); in such states when an official act is unconstitutional, i.e. it is not a power granted to the government by the constitution, that act is *null and void*, and the nullification is ab initio, that is, from inception, not from the date of the finding. It was never "law", even though, if it had been a statute or statutory provision, it might have been adopted according to the procedures for adopting legislation. Sometimes the problem is not that a statute is unconstitutional, but the application of it is, on a particular occasion, and a court may decide that while there are ways it could be applied that are constitutional, that instance was not allowed or legitimate. In such a case, only the application may be ruled unconstitutional. Historically, the remedy for such violations have been petitions for common law writs, such as *quo warranto*.

History and development

Early legal codes

Excavations in modern-day Iraq by Ernest de Sarzec in 1877 found evidence of the earliest known code of justice, issued by the Sumerian king Urukagina of Lagash *ca* 2300 BC. Perhaps the earliest prototype for a law of government, this document itself has not yet been discovered; however it is known that it allowed some rights to his citizens. For example, it is known that it relieved tax for widows and orphans, and protected the poor from the usury of the rich.

After that, many governments ruled by special codes of written laws. The oldest such document still known to exist seems to be the Code of Ur-Nammu of Ur (*ca* 2050 BC). Some of the better-known ancient law codes include the code of Lipit-Ishtar of Isin, the code of Hammurabi of Babylonia, the Hittite code, the Assyrian code and Mosaic law.

Later constitutions

In 621 BC a scribe named Draco codified the cruel oral laws of the city-state of Athens; this code prescribed the death penalty for many offences (nowadays very severe rules are often called "Draconian"). In 594 BC Solon, the ruler of Athens, created the new *Solonian Constitution*. It eased the burden of the workers, and determined that membership of the ruling class was to be based on wealth (plutocracy), rather than by birth (aristocracy). Cleisthenes again reformed the Athenian constitution and set it on a democratic footing in 508 BC.

Aristotle (*ca* 350 BC) was one of the first in recorded history to make a formal distinction between ordinary law and constitutional law, establishing ideas of constitution and constitutionalism, and attempting to classify different forms of constitutional government. The most basic definition he used to describe a constitution in general terms was "the arrangement of the offices in a state". In his works *Constitution of Athens*, *Politics*, and *Nicomachean Ethics* he explores different constitutions of his day, including those of Athens, Sparta, and Carthage. He classified both what he regarded as good and bad constitutions, and came to the conclusion that the best constitution was a mixed system, including monarchic, aristocratic, and democratic elements. He also distinguished between citizens, who had the right to participate in the state, and non-citizens and slaves, who did not.

The Romans first codified their constitution in 449 BC as the *Twelve Tables*. They operated under a series of laws that were added from time to time, but Roman law was never reorganised into a single code until the *Codex Theodosianus* (AD 438); later, in the Eastern Empire the *Codex repetitæ prælectionis* (534) was highly influential throughout Europe. This was followed in the east by the *Ecloga* of Leo III the Isaurian (740) and the *Basilica* of Basil I (878).

The *Edicts of Ashoka* established constitutional principles for the 3rd century BC Maurya king's rule in Ancient India.

Many of the Germanic peoples that filled the power vacuum left by the Western Roman Empire in the Early Middle Ages codified their laws. One of the first of these Germanic law codes to be written was the Visigothic *Code of Euric* (471). This was followed by the *Lex Burgundionum*, applying separate codes for Germans and for

Romans; the *Pactus Alamannorum*; and the Salic Law of the Franks, all written soon after 500. In 506, the *Breviarum* or *"Lex Romana"* of Alaric II, king of the Visigoths, adopted and consolidated the *Codex Theodosianus* together with assorted earlier Roman laws. Systems that appeared somewhat later include the *Edictum Rothari* of the Lombards (643), the *Lex Visigothorum* (654), the *Lex Alamannorum* (730) and the *Lex Frisionum* (*ca* 785). These continental codes were all composed in Latin, whilst Anglo-Saxon was used for those of England, beginning with the Code of Ethelbert of Kent (602). In ca. 893, Alfred the Great combined this and two other earlier Saxon codes, with various Mosaic and Christian precepts, to produce the *Doom Book* code of laws for England.

Japan's *Seventeen-article constitution* written in 604, reportedly by Prince Shōtoku, is an early example of a constitution in Asian political history. Influenced by Buddhist teachings, the document focuses more on social morality than institutions of government *per se* and remains a notable early attempt at a government constitution. Another is the *Constitution of Medina*, drafted by the prophet of Islam, Muhammad, in 622. It is said to be one of the earliest constitutions which guarantees basic rights to religions and adherents as well as reinforcing a judiciary process regarding the rules of warfare, tax and civil disputes.

In Wales, the *Cyfraith Hywel* was codified by Hywel Dda c. 942–950.

The *Pravda Yaroslava*, originally combined by Yaroslav the Wise the Grand Prince of Kiev, was granted to Great Novgorod around 1017, and in 1054 was incorporated into the *Russkaya Pravda*, that became the law for all of Kievan Rus. It survived only in later editions of the 15th century.

The *Gayanashagowa*, or 'oral' constitution of the Iroquois nation, has been estimated to date from between 1090 and 1150. It is also thought to have provided a partial inspiration for the US Constitution and Bill of Rights, as was recognised by the US Congress in a resolution passed in October, 1988.

In England, Henry I's proclamation of the Charter of Liberties in 1100 bound the king for the first time in his treatment of the clergy and the nobility. This idea was extended and refined by the English barony when they forced King John to sign *Magna Carta* in 1215. The most important single article of the *Magna Carta*, related to "*habeas corpus*", provided that the king was not permitted to imprison, outlaw, exile or kill anyone at a whim—there must be due process of law first. This article, Article 39, of the *Magna Carta* read:

No free man shall be arrested, or imprisoned, or deprived of his property, or outlawed, or exiled, or in any way destroyed, nor shall we go against him or send against him, unless by legal judgement of his peers, or by the law of the land.

Constitution of May 3, 1791 (painting by Jan Matejko, 1891). Polish King Stanisław August (left, in regal ermine-trimmed cloak), enters St. John's Cathedral, where Sejm deputies will swear to uphold the new Constitution; in background, Warsaw's Royal Castle, where the Constitution has just been adopted.

This provision became the cornerstone of English liberty after that point. The social contract in the original case was between the king and the nobility, but was gradually extended to all of the people. It led to the system of Constitutional Monarchy, with further reforms shifting the balance of power from the monarchy and nobility to the House of Commons.

In 1222, Hungarian King Andrew II issued the Golden Bull of 1222.

Between 1220 and 1230, a Saxon administrator, Eike von Repgow, composed the *Sachsenspiegel*, which became the supreme law used in parts of Germany as late as 1900.

In 1236, Sundiata Keita presented an oral constitution federating the Mali Empire, called the *Kouroukan Fouga*.

Meanwhile, around 1240, the Coptic Egyptian Christian writer, 'Abul Fada'il Ibn al-'Assal, wrote the *Fetha Negest* in Arabic. 'Ibn al-Assal took his laws partly from apostolic writings and Mosaic law, and partly from the former Byzantine codes. There are a few historical records claiming that this law code was translated into Ge'ez and entered Ethiopia around 1450 in the reign of Zara Yaqob. Even so, its first recorded use in the function of a constitution (supreme law of the land) is with Sarsa Dengel beginning in 1563. The *Fetha Negest* remained the supreme law in Ethiopia until 1931, when a modern-style Constitution was first granted by Emperor Haile Selassie I.

Stefan Dušan, Emperor of Serbs and Greeks, made and enforced Dušan's Code in Serbia, in two state congresses: in 1349 in Skopje and in 1354 in Serres.

In China, the Hongwu Emperor created and refined a document he called *Ancestral Injunctions* (first published in 1375, revised twice more before his death in 1398). These rules served in a very real sense as a constitution for the Ming Dynasty for the next 250 years.

Modern constitutions

The earliest written constitution still governing a sovereign nation today may be that of San Marino. The *Leges Statutae Republicae Sancti Marini* was written in Latin and consists of six books. The first book, with 62 articles, establishes councils, courts, various executive officers and the powers assigned to them. The remaining books cover criminal and civil law, judicial procedures and remedies. Written in 1600, the document was based upon the *Statuti Comunali* (Town Statute) of 1300, itself influenced by the *Codex Justinianus*, and it remains in force today.

In 1639, the Colony of Connecticut adopted the Fundamental Orders, which is considered the first North American constitution, and is the basis for every new Connecticut constitution since, and is also the reason for Connecticut's nickname, "the Constitution State". England had two short-lived written Constitutions during Cromwellian rule, known as the Instrument of Government (1653), and Humble Petition and Advice (1657).

Agreements and Constitutions of Laws and Freedoms of the Zaporizian Host can be acknowledged as the first European constitution in a modern sense.[5] It was written in 1710 by Pylyp Orlyk, *hetman* of the Zaporozhian Host. This *"Constitution of Pylyp Orlyk"* (as it is widely known) was written to establish a free Zaporozhian-Ukrainian Republic, with the support of Charles XII of Sweden. It is notable in that it established a democratic standard for the separation of powers in government between the legislative, executive, and judiciary branches, well before the publication of Montesquieu's *Spirit of the Laws*. This Constitution also limited the executive authority of the *hetman*, and established a democratically elected Cossack parliament called the General Council. However, Orlyk's project for an independent Ukrainian State never materialized, and his constitution, written in exile, never went into effect.

Other examples of early European constitutions were the Corsican Constitution of 1755 and the Swedish Constitution of 1772. All of the British colonies in North America that were to become the 13 original United States, adopted their own constitutions in 1776 and 1777, during the American Revolution (and before the later Articles of Confederation and United States Constitution), with the exceptions of Massachusetts, Connecticut and Rhode Island. The Commonwealth of Massachusetts adopted its Constitution in 1780, the oldest still-functioning constitution of any U.S. state; while Connecticut and Rhode Island officially continued to operate under their old colonial charters, until they adopted their first state constitutions in 1818 and 1843, respectively.

The United States Constitution, ratified June 21, 1788, was influenced by the British constitutional system and the political system of the United Provinces, plus the writings of Polybius, Locke, Montesquieu, and others. The document became a benchmark for republicanism and codified constitutions written thereafter. Next were the Polish-Lithuanian Commonwealth Constitution of May 3, 1791, traditionally regarded as world's second and Europe's first,[6][7][8] and the French Constitution of September 3, 1791. The Spanish Constitution of 1812 was the fourth modern, democratic and liberal world´s national constitution gone into effect. It served as a model for other liberal constitutions of several South-European and Latin American nations like Portuguese Constitution of 1822, constitutions of various Italian states during Carbonari revolts (i.e. in the Kingdom of the Two Sicilies), or Mexican Constitution of 1824.[9] As a result of the Napoleonic Wars, the absolute monarchy of Denmark lost its personal possession of Norway to another absolute monarchy, Sweden. However the Norwegians managed to infuse a radically democratic and liberal constitution in 1814, adopting many facets from the American constitution and the revolutionary French ones; but maintaining a hereditary monarch limited by the constitution, like the Spanish one.

Principles of constitutional design

After tribal people first began to live in cities and establish nations, many of these functioned according to unwritten customs, while some developed autocratic, even tyrannical monarchs, who ruled by decree, or mere personal whim. Such rule led some thinkers to take the position that what mattered was not the design of governmental institutions and operations, as much as the character of the rulers.

This view can be seen in Plato, who called for rule by "philosopher-kings."[10] Later writers, such as Aristotle, Cicero and Plutarch, would examine designs for government from a legal and historical standpoint.

The Renaissance brought a series of political philosophers who wrote implied criticisms of the practices of monarchs and sought to identify principles of constitutional design that would be likely to yield more effective and just governance from their viewpoints. This began with revival of the Roman law of nations concept[11] and its application to the relations among nations, and they sought to establish customary "laws of war and peace"[12] to ameliorate wars and make them less likely. This led to considerations of what authority monarchs or other officials have and don't have, from where that authority derives, and the remedies for abusing such authority.[13]

A seminal juncture in this line of discourse arose in England from the Civil War, the Cromwellian Protectorate, the writings of Thomas Hobbes, Samuel Rutherford, the Levellers, John Milton, and James Harrington, leading to the debate between Robert Filmer, arguing for the divine right of monarchs, on the one side, and on the other, Henry Neville, James Tyrrell, Algernon Sidney, and John Locke. What arose from the latter was a concept of government being erected on the foundations of first, a state of nature governed by natural laws, then a state of society, established by a social contract or compact, which bring underlying natural or social laws, before governments are formally established on them as foundations.

Along the way several writers examined how the design of government was important, even if the government were headed by a monarch. They also classified various historical examples of governmental designs, typically into democracies, aristocracies, or monarchies, and considered how just and effective each tended to be and why, and how the advantages of each might be obtained by combining elements of each into a more complex design that balanced competing tendencies. Some, such as Montesquieu, also examined how the functions of government, such as legislative, executive, and judicial, might appropriately be separated into branches. The prevailing theme among these writers was that the design of constitutions is not completely arbitrary or a matter of taste. They generally held that there are underlying principles of design that constrain all constitutions for every polity or organization. Each built on the ideas of those before concerning what those principles might be.

The later writings of Orestes Brownson[14] would try to explain what constitutional designers were trying to do. According to Brownson there are, in a sense, three "constitutions" involved: The first the *constitution of nature* that includes all of what was called "natural law." The second is the *constitution of society*, an unwritten and commonly understood set of rules for the society formed by a social contract before it establishes a government, by which it establishes the third, a *constitution of government*. The second would include such elements as the making of decisions by public conventions called by public notice and conducted by established rules of procedure. Each constitution must be consistent with, and derive its authority from, the ones before it, as well as from a historical act of society formation or constitutional ratification. Brownson argued that a state is a society with effective

dominion over a well-defined territory, that consent to a well-designed constitution of government arises from presence on that territory, and that it is possible for provisions of a written constitution of government to be "unconstitutional" if they are inconsistent with the constitutions of nature or society. Brownson argued that it is not ratification alone that makes a written constitution of government legitimate, but that it must also be competently designed and applied.

Other writers[15] have argued that such considerations apply not only to all national constitutions of government, but also to the constitutions of private organizations, that it is not an accident that the constitutions that tend to satisfy their members contain certain elements, as a minimum, or that their provisions tend to become very similar as they are amended after experience with their use. Provisions that give rise to certain kinds of questions are seen to need additional provisions for how to resolve those questions, and provisions that offer no course of action may best be omitted and left to policy decisions. Provisions that conflict with what Brownson and others can discern are the underlying "constitutions" of nature and society tend to be difficult or impossible to execute, or to lead to unresolvable disputes.

Constitutional design has been treated as a kind of metagame in which play consists of finding the best design and provisions for a written constitution that will be the rules for the game of government, and that will be most likely to optimize a balance of the utilities of justice, liberty, and security. An example is the metagame Nomic.[16]

Governmental constitutions

Most commonly, the term *constitution* refers to a set of rules and principles that define the nature and extent of government. Most constitutions seek to regulate the relationship between institutions of the state, in a basic sense the relationship between the executive, legislature and the judiciary, but also the relationship of institutions within those branches. For example, executive branches can be divided into a head of government, government departments/ministries, executive agencies and a civil service/bureaucracy. Most constitutions also attempt to define the relationship between individuals and the state, and to establish the broad rights of individual citizens. It is thus the most basic law of a territory from which all the other laws and rules are hierarchically derived; in some territories it is in fact called "Basic Law."

Key features

The following are features of democratic constitutions that have been identified by political scientists to exist, in one form or another, in virtually all national constitutions.

Codification

A fundamental classification is codification or lack of codification. A codified constitution is one that is contained in a single document, which is the single source of constitutional law in a state. An uncodified constitution is one that is not

contained in a single document, consisting of several different sources, which may be written or unwritten.

Codified constitution

Most states in the world have codified constitutions.

Codified constitutions are often the product of some dramatic political change, such as a revolution. The process by which a country adopts a constitution is closely tied to the historical and political context driving this fundamental change. The legitimacy (and often the longevity) of codified constitutions has often been tied to the process by which they are initially adopted.

States that have codified constitutions normally give the constitution supremacy over ordinary statute law. That is, if there is any conflict between a legal statute and the codified constitution, all or part of the statute can be declared *ultra vires* by a court, and struck down as unconstitutional. In addition, exceptional procedures are often required to amend a constitution. These procedures may include: convocation of a special constituent assembly or constitutional convention, requiring a supermajority of legislators' votes, the consent of regional legislatures, a referendum process, and other procedures that make amending a constitution more difficult than passing a simple law.

Constitutions may also provide that their most basic principles can never be abolished, even by amendment. In case a formally valid amendment of a constitution infringes these principles protected against any amendment, it may constitute a so-called *unconstitutional constitutional law*.

Codified constitutions normally consist of a ceremonial preamble, which sets forth the goals of the state and the motivation for the constitution, and several articles containing the substantive provisions. The preamble, which is omitted in some constitutions, may contain a reference to God and/or to fundamental values of the state such as liberty, democracy or human rights.

Uncodified constitution

As of 2010 only three states have uncodified constitutions: Israel, New Zealand, and the United Kingdom. Uncodified constitutions (also known as unwritten constitutions) are the product of an "evolution" of laws and conventions over centuries. By contrast to codified constitutions, in the Westminster tradition that originated in England, uncodified constitutions include written sources: e.g. constitutional statutes enacted by the Parliament (House of Commons Disqualification Act 1975, Northern Ireland Act 1998, Scotland Act 1998, Government of Wales Act 1998, European Communities Act 1972 and Human Rights Act 1998); and also unwritten sources: constitutional conventions, observation of precedents, royal prerogatives, custom and tradition, such as always holding the General Election on Thursdays; together these constitute the British constitutional law. In the days of the British Empire, the Judicial Committee of the Privy Council

acted as the constitutional court for many of the British colonies such as Canada and Australia which had federal constitutions.

In states using uncodified constitutions there is no entrenchment of constitutional provisions and thus constitutional law as such: laws of constitutional significance can be created, altered, or repealed by the legislative body in the same was as any statute.

Written versus unwritten / codified versus uncodified

The term *written constitution* is used to describe a constitution that is entirely written, which by definition includes every codified constitution; but not all constitutions based entirely on written documents are codified.

Some constitutions are largely, but not wholly, codified. For example, in the Constitution of Australia, most of its fundamental political principles and regulations concerning the relationship between branches of government, and concerning the government and the individual are codified in a single document, the Constitution of the Commonwealth of Australia. However, the presence of statutes with constitutional significance, namely the Statute of Westminster, as adopted by the Commonwealth in the Statute of Westminster Adoption Act 1942, and the Australia Act 1986 means that Australia's constitution is not contained in a single constitutional document. The Constitution of Canada, which evolved from the British North America Acts until severed from nominal British control by the Canada Act 1982 (analogous to the Australia Act 1986), is a similar example.

The terms *written constitution* and *codified constitution* are often used interchangeably, as are *unwritten constitution* and *uncodified constitution*, although this usage is technically inaccurate. Strictly speaking, *unwritten constitution* is never an accurate synonym for *uncodified constitution*, because all modern democratic constitutions mainly comprise written sources, even if they have no different legal status than ordinary statutes. Another, correct, term used is *formal* (or *formal written*) *constitution*, for example in the following context: "The United Kingdom has no formal [written] constitution" (which does not preclude a constitution based on documents but not codified).

Entrenchment

The U.S. Constitution

The presence or lack of entrenchment is a fundamental feature of constitutions. An entrenched constitution cannot be altered in any way by a legislature as part of its normal business concerning ordinary statutory laws, but can only be amended by a different and more onerous procedure. There may be a requirement for a special body to be set up, and the proportion of favourable votes of members of this body may be required to be higher to pass an amendment than for statutes. Some constitutions contain entrenched clauses, i.e. articles stating that certain modifications are either more difficult to make than normal modifications, or may never be made under any circumstances. Entrenchment is an inherent feature in

most codified constitutions. A codified constitution will incorporate the rules which must be followed for the constitution itself to be changed.

The US constitution is an example of an entrenched constitution, and the UK constitution is an example of a constitution that is not entrenched (or codified). In some states the text of the constitution may be changed; in others the original text is not changed, and amendments are passed which add to and may override the original text and earlier amendments.

Procedures for constitutional amendment vary between states. In a nation with a federal system of government the approval of a majority of state or provincial legislatures may be required. Alternatively, a national referendum may be required. Details are to be found in the articles on the constitutions of the various nations and federal states in the world.

In constitutions that are not entrenched, no special procedure is required for modification. Lack of entrenchment is a characteristic of uncodified constitutions; the constitution is not recognised with any higher legal status than ordinary statutes. In the UK, for example laws which modify written or unwritten provisions of the constitution are passed on a simple majority in Parliament. No special "constitutional amendment" procedure is required. Indeed it is an often-stated principle of UK Parliamentary Sovereignty that no sovereign Parliament is bound by the acts of its predecessors. [17]; and there is no higher authority that can create law which binds Parliament.

In practice democratic governments do not use the lack of entrenchment of the constitution to impose the will of the government or abolish all civil rights, as they could in theory do, but the distinction between constitutional and other law is still somewhat arbitrary, usually following historical principles embodied in important past legislation. For example, several UK Acts of Parliament such as the Bill of Rights, Human Rights Act and, prior to the creation of Parliament, Magna Carta are regarded as granting fundamental rights and principles which are treated as almost constitutional. Several rights that in another state might be guaranteed by constitution have indeed been abolished or modified by the UK Parliament in the early twentyfirst century, including the unconditional right to trial by jury, the right to silence without prejudicial inference, permissible detention before a charge is made extended from 24 hours to 42 days, and the right not to be tried twice for the same offence.

Fundamental Laws of England

Absolutely unmodifiable articles

The strongest level of entrenchment exists in those constitutions that state that some of their most fundamental principles are absolute, i.e. certain articles may not be amended under any circumstances. An amendment of a constitution that is made consistently with that constitution, except that it violates the absolute non-modifiability, can be called an *unconstitutional constitutional law*. Ultimately it is always possible for a constitution to be overthrown by internal or external force, for

example, a revolution (perhaps claiming to be justified by the right to revolution) or invasion.

An example of absolute unmodifiability is the German Federal Constitution. This states in Article 20 that the country has to be a democratic, federal and social republic, and in Article 1 that the state powers have to: (i) leave dignity of man inviolable; (ii) where rule of law prevails; and (iii) where sovereignty lies with the people. Article 79, Section 3 states that these articles cannot be changed, even according to the methods of amendment defined elsewhere in the document.

Another example is the Constitution of Honduras, which has an article stating that the article itself and certain other articles cannot be changed in any circumstances. Article 374 of the Honduras Constitution asserts this unmodifiability, stating, "It is not possible to reform, in any case, the preceding article, the present article, the constitutional articles referring to the form of government, to the national territory, to the presidential period, the prohibition to serve again as President of the Republic, the citizen who has performed under any title in consequence of which she/he cannot be President of the Republic in the subsequent period."[18] This unmodifiability article has played an important role in the 2009 Honduran constitutional crisis.

Distribution of sovereignty

Federalism

Constitutions also establish where sovereignty is located in the state. There are three basic types of distribution of sovereignty according to the degree of centralisation of power: unitary, federal, and confederal. The distinction is not absolute.

In a unitary state, sovereignty resides in the state itself, and the constitution determines this. The territory of the state may be divided into regions, but they are not sovereign and are subordinate to the state. In the UK, the constitutional doctrine of Parliamentary sovereignty dictates than sovereignty is ultimately contained at the centre. Some powers have been devolved to Northern Ireland, Scotland, and Wales (but not England).Some unitary states (Spain is an example) devolve more and more power to sub-national governments until the state functions in practice much like a federal state.

A federal state has a central structure with at most a small amount of territory mainly containing the institutions of the federal government, and several regions (called *states*, *provinces*, etc.) which comprise the territory of the whole state. Sovereignty is divided between the centre and the constituent regions. The constitutions of Canada and the United States establish federal states, with power divided between the federal government and the provinces or states. Each of the regions may in turn have its own constitution (of unitary nature).

A confederal state comprises again several regions, but the central structure has only limited coordinating power, and sovereignty is located in the regions. Confederal constitutions are rare, and there is often dispute to whether so-called "confederal"

states are actually federal. A historical example of a confederal constitution is the Swiss Federal Constitution.[*citation needed*]

To some extent a group of states which do not constitute a federation as such may by treaties and accords give up parts of their sovereignty to a supranational entity. For example the countries comprising the European Union have agreed to abide by some Union-wide measures which restrict their absolute sovereignty in some ways, e.g., the use of the metric system of measurement instead of national units previously used.

Separation of powers

Constitutions usually explicitly divide power between various branches of government. The standard model, described by the Baron de Montesquieu, involves three branches of government: executive, legislative and judicial. Some constitutions include additional branches, such as an auditory branch. Constitutions vary extensively as to the degree of separation of powers between these branches.

Lines of accountability

In presidential and semi-presidential systems of government, department secretaries/ministers are accountable to the president, who has patronage powers to appoint and dismiss ministers. The president is accountable to the people in an election.

In parliamentary systems, ministers are accountable to Parliament, but it is the prime minister who appoints and dismisses them. In Westminster systems, this power derives from the monarch (or head of state in Westminster-style republics, such as India and the Republic of Ireland), a component of Parliament. There is the concept of a vote of no confidence in many countries with parliamentary systems, which means that if a majority of the legislature vote for a no confidence motion, then the government must resign, and a new one will be formed, or parliament will be dissolved and a general election called.

State of emergency

Main article: State of emergency

Many constitutions allow the declaration under exceptional circumstances of some form of state of emergency during which some rights and guarantees are suspended. This deliberate loophole can be and has been abused to allow a government to suppress dissent without regard for human rights—see the article on state of emergency.

Façade constitutions

Constitutionalism

Italian political theorist Giovanni Sartori noted the existence of national constitutions which are a façade for authoritarian sources of power. While such documents may express respect for human rights or establish an independent judiciary, they may be ignored when the government feels threatened, or never put into practice. An extreme example was the Constitution of the Soviet Union that on paper supported freedom of assembly and freedom of speech; however, citizens who transgressed unwritten limits were summarily imprisoned. The example demonstrates that the protections and benefits of a constitution are ultimately provided not through its written terms but through deference by government and society to its principles. A constitution may change from being real to a façade and back again as democratic and autocratic governments succeed each other.

The constitution of the United States, being the first document of its type, necessarily had many unforeseen shortcomings which had to be patched through amendments, but has generally been honored and a powerful structure, and no dictatorship has been able to take hold; the constitution of Argentina written many years later in 1853 building on many years of experience of the US constitution was arguably a better document, but did not prevent a succession of dictatorial governments from ignoring it—a state of emergency was declared 52 times to bypass constitutional guarantees[19].

Constitutional courts

The constitution is often protected by a certain legal body in each country with various names, such as *supreme*, *constitutional* or *high* court. This court judges the compatibility of legislation with the provisions and principles of the constitution, which is termed "constitutionality." Especially important is the court's responsibility to protect constitutionally established rights and freedoms. In constitutions without the concept of supreme law, such as the United Kingdom constitution, the concept of "constitutionality" has little meaning, and constitutional courts do not exist. A "constitutional violation" is an action or legislative act that is judged by a constitutional court to be contrary to the constitution, that is, "unconstitutional." An example of constitutional violation by the executive could be a politician who abuses the powers of his constitutionally-established office. An example of constitutional violation by the legislature is an attempt to pass a law that would contradict the constitution, without first going through the proper constitutional amendment process.

A constitutional court is normally the court of last resort, the highest judicial body in the government. The process of judicial review is then integrated into the system of courts of appeal. This is the case, for example, with the Supreme Court of the United States or Supreme Court of India. Cases must normally be heard in lower courts before being brought before the Supreme Court, except cases for which the Supreme Court has original jurisdiction. Some other countries dedicate a special court solely to the protection of the constitution, as with the German Constitutional Court. Most constitutional courts are powerful instruments of judicial review, with the power to declare laws "unconstitutional," that is, incompatible with the constitution. The effect of this ruling varies between governments, but it is common for the courts' action to rule a law unenforceable, as is the case in the United States. However,

many courts have the problem of relying on the legislative and executive branches' co-operation to properly enforce their decisions. For example, in the United States, the Supreme Court's ruling overturning the "separate but equal" doctrine in the 1950s depended on individual states co-operation to enforce. Some failed to do so, prompting the federal government to intervene. Other countries, such as France, have a Constitutional Council which may only judge the constitutionality of laws before the ratification process.

Some countries, mainly those with uncodified constitutions, have no such courts at all – for example, as the United Kingdom traditionally functions under the principle of parliamentary sovereignty: the legislature has the power to enact any law it wishes. However, through its membership in the European Union, the UK is now subject to the jurisdiction of European Union law and the European Court of Justice; similarly, by acceding to the Council of Europe's European Convention on Human Rights, it is subject to the European Court of Human Rights. In effect, these bodies can invalidate or interpret UK legislation for compliance with international treaty obligations, first established as a principle by the Factortame case.

Administrative division

"Subnational entity", "administrative unit", "administrative area" and "regional government" redirect here.
This article is about the country subdivisions generally used in regional and local government. For "administrative division" in the sense of a company department, see Administration (business) and Administration.

Administrative divisions are divisions of a political division. In other words, they are designated portions of a country. They are also called **subnational entities**. They are each granted a certain degree of autonomy, and are required to manage themselves through their own local governments. Countries are divided up into these smaller units to make managing their land and the affairs of their people easier. For example, a country may be divided into provinces (or states), which in turn are divided into counties, which in turn may be divided in whole or in part into municipalities. These are only a few of the names given to administrative subdivisions; more examples are provided below.

Administrative divisions are a type of country subdivision, and can overlap with the other types. The other types of country subdivision generally don't have governments.

Administrative divisions are conceptually separate from *dependent areas*, in that the former are included in the core or mainland of the respective state.

Examples of administrative divisions

English terms

In many of the following terms corresponding to British cultural influence, areas of relatively low mean population density might bear a title of an entity one would

expect to be either larger or smaller. There is no fixed rule, for "all politics is local"[1] as is perhaps well demonstrated by their relative lack of systemic order. In the realm of self-government, any of these can and does occur along a stretch of road—which for the most part is passing through rural unsettled countryside. Since the terms are administrative political subdivisions of the local regional government their exact relationship and definitions are subject to home rule considerations, tradition, as well as state statute law and local governmental (administrative) definition and control. In the British cultural legacy, most regional entities begin with fairly expansive counties which encompass an appreciable territorial area and proceed down in size to smaller entities.

Within those entities are the large and small cities or towns, which may or may not be the county seat. Some of the world's larger cities culturally, if not officially, span into multiple counties and those crossing state or provincial boundaries culturally are quite common as well, but are rarely incorporated within the same municipal government. Many sister cities share a water boundary which quite often serves as a border of both cities and counties. For example, Cambridge and Boston, Massachusetts appear to the casual traveler as one large city, while locally they each are quite culturally different and occupy different counties.

a supra-national division. Municipality

A **municipality** is an administrative entity composed of a clearly defined territory and its population and commonly denotes a city, town, or village, or a small grouping of them. A municipality is typically governed by a mayor and a city council or municipal council.

The notion of municipality includes townships but is not restricted to them. A municipality is a general-purpose district, as opposed to a special-purpose district.

In most countries, a municipality is the smallest administrative subdivision to have its own democratically elected representative leadership. In some countries, municipalities are referred to as "communes" (for example, French *commune*, Italian *comune*, Romanian *comună*, Swedish *kommun* and Norwegian/Danish *kommune*). The term derives from the medieval commune. In some countries, especially in the Middle East, the term "municipality" is also used to refer to the municipal administrative building known elsewhere as the town hall or city hall.

The largest municipalities can be found in Canada, Greenland, Iceland, Australia and Brazil.

Public administration

Public administration can be broadly described as the development, implementation and study of branches of government policy. The pursuit of the public good by enhancing civil society, ensuring a well-run, fair, and effective public service are some of the goals of the field.

Public administration is carried out by public servants who work in public departments and agencies, at all levels of government, and perform a wide range of tasks. Public administrators collect and analyze data (statistics), monitor budgets, draft legislation, develop policy, and execute legally mandated government activities. Public administrators serve in many roles: ranging from "front-line" positions serving the public (e.g., peace officers, parole officers, border guards); administrators (e.g., auditors); analysts (e.g., policy analysts); and managers and executives of government branches and agencies.

Public administration is also an academic field. In comparison with related fields such as political science, public administration is relatively new, having emerged in the 19th century. Multidisciplinary in character, it draws on theories and concepts from political science, economics, sociology, administrative law, behavioural science, management and a range of related fields. The goals of the field of public administration are related to the democratic values of improving equality, justice, security, efficiency, effectiveness of public services usually in a non-profit, non-taxable venue; business administration, on the other hand, is primarily concerned with taxable profit. For a field built on concepts (accountability, governance, decentralization, clientele), these concepts are often ill-defined and typologies often ignore certain aspects of these concepts (Dubois & Fattore 2009).[1]

In academia

In the United States, the academic field draws heavily on political science and law. Scholars such as John A. Rohr write of a long history behind the constitutional legitimacy of government bureaucracy. In Europe (notably in Britain and Germany), the divergence of the field from other disciplines can be traced to the 1720s continental university curriculum. Formally, official academic distinctions were made in the 1910s and 1890s, respectively.

One minor tradition that the more specific term "public management" refers to ordinary, routine or typical management concerns, in the context of achieving public good. Others argue that public management as a new, economically driven perspective on the operation of government. This latter view is often called "new public management" by its advocates. New Public Management represents a reform attempt, aimed at reemphasizing the professional nature of the field. This will replace the academic, moral or disciplinary emphasis. Some theorists advocate a bright line differentiation of the professional field from related academic disciplines like political science and sociology; it remains interdisciplinary in nature.

As a field, public administration can be compared to business administration, and the master of public administration (MPA) viewed as similar to a master of business administration (MBA) for those wishing to pursue governmental or non-profit careers. An MPA often emphasizes substantially different ethical and sociological criteria that are traditionally secondary to that of profit for business administrators. The MPA is related to similar government studies including public affairs, public policy, and political science. Differences often include program emphases on policy analysis techniques or other topical focuses such as the study of international affairs

as opposed to focuses on constitutional issues such as separation of powers, administrative law, problems of governance and power, and participatory democracy.

The Doctor of Public Administration (DPA) is an applied-research doctoral degree in the field of public administration, focusing on practice. The DPA requires a dissertation and significant coursework beyond the masters level. Upon successful completion of the doctoral requirements, the title of "Doctor" is awarded and the post-nominals of D.P.A. are often added.

Public administration theory is the domain in which discussions of the meaning and purpose of government, bureaucracy, budgets, governance, and public affairs takes place. In recent years, public administration theory has periodically connoted a heavy orientation toward critical theory and postmodern philosophical notions of government, governance, and power. However, many public administration scholars support a classic definition of the term emphasizing constitutionality, service, bureaucratic forms of organization, and hierarchical government.

History

Antiquity to the early 19th century

Classic scholars including Plato, Aristotle, Vishnu Gupta (Kautilya) and Machiavelli are the basis of subsequent generations of public administration. Until the birth of a national state, the governors principally emphasized moral and political human nature, as well as the on the organization of the governing bodies. Operations were perceived to be secondary to establishing and clarifying the overall guiding theory of government. In Machiavelli's *The Prince*, European princes or governors were offered advice for properly administering their governments. This work represents one of the first Western expressions of the methodology of government. As the centuries moved past, scholars and governors persisted in their various endeavors explaining how one governs.

Though progress varied across the globe, 16th century Western Europe primarily ascribed to the "national-state" model of government and its corresponding administrative structures. Predominantly imperial Asia, tribal Africa, and the tribal/colonial Americas were each feeling the extent of Europe's diplomatic strategies whose emphasis was war, profit, and proselytizing. In any event, nation-states required a professional force and structure for carrying out the primary purposes of government: ensuring stability with through law, security with a military, and some measure of equity through taxation.

Consequently, the need for expert civil servants whose ability to read and write formed the basis for developing expertise in such necessary activities as legal records, military prowess, and tax administration, and record keeping. As the European imperialist age progressed and the militarily dominant region extended its hold over other continents and people, the need for increasingly conventional administrative expertise grew.

Eighteenth century noble, King Frederick William I of Prussia, created professorates in Cameralism in an effort to service this need. The universities of Frankfurt an der Oder and University of Hallewere Prussian institutions emphasizing economic and social disciplines, with the goal of societal reform. Johann Heinrich Gottlob Justi was the most well-known professor of Cameralism. Thus, from a Western European perspective, classic, medieval, and enlightened scholars formed the foundation of the discipline that has come to be called public administration.

Mid-1800s - 1930s

Lorenz von Stein, an 1855 German professor from Vienna, is considered the founder of the science of public administration in many parts of the world. In the time of Von Stein, public administration was considered a form of administrative law, but Von Stein believed this concept too restrictive.

Von Stein taught:

- Public administration relies on many prestablished disciplines such as sociology, political science, administrative law and public finance. Further, public administration is an integrating science.
- Public administrators need be concerned with both theory and practice. Practical considerations are at the forefront of the field, but theory is the basis of best practices.
- Public administration is a science because knowledge is generated and evaluated according to the scientific method.

In the United States, Woodrow Wilson is considered the father of public administration. He first formally recognized public administration in an 1887 article entitled "The Study of Administration." The future president wrote that "it is the object of administrative study to discover, first, what government can properly and successfully do, and, secondly, how it can do these proper things with the utmost possible efficiency and at the least possible cost either of money or of energy."[2] Wilson was more influential to the science of public administration than Von Stein, primarily due to an article Wilson wrote in 1887 in which he advocated four concepts:

- Separation of politics and administration
- Comparative analysis of political and private organizations
- Improving efficiency with business-like practices and attitudes toward daily operations
- Improving the effectiveness of public service through management and by training civil servants, merit-based assessment

The separation of politics and administration has been the subject of lasting debate. The different perspectives regarding this dichotomy contribute to differentiating characteristics of the suggested generations of public administration.

1940s

The separation of politics and administration advocated by Wilson continues to play a significant role in public administration today. However, the dominance of this dichotomy was challenged by second generation scholars, beginning in the 1940s. Luther Gulick's fact-value dichotomy was a key contender for Wilson's allegedly impractical politics-administration dichotomy. In place of Wilson's first generation split, Gulick advocated a "seamless web of discretion and interaction" (Fry 1989, 80).[3]

Luther Gulick and Lyndall Urwick are two such second generation scholars. Gulick, Urwick, and the new generation of administrators stood on the shoulders of contemporary behavioral, administrative, and organizational "giants" including Henri Fayol, Fredrick Winslow Taylor, Paul Appleby, Frank Goodnow, and Willam Willoughby. With the help of these specialists and their empirical work on human nature, group behavior, and business organizations, second generation public administration scholars had a necessary advantage over the pre-generation and first generation scholars. That is, the new generation of organizational theories no longer relied upon logical assumptions and generalizations about human nature like classical and enlightened theorists.

Gulick is considered a watershed theorist, a truly unique administrative scholar credited with generating a comprehensive, generic theory of organization. During his seven decade career Gulick differentiated his theories from those of his predecessors by emphasizing the scientific method, efficiency, professionalism, structural reform, and executive control. Gulick summarized the duties of administrators with an acronym; POSDCORB, which stands for planning, organizing, staffing, directing, coordinating, reporting, and budgeting. Finally, Fayol offered a systematic, 14-point, treatment of private management. Second generation theorists drew upon private management practices for administrative sciences. A single, generic management theory bleeding the borders between the private and the public sector, was thought to be possible. With the general theory, the administrative theory could be focused on governmental organizations.

Post-World War II - 1970s

The mid-1940s theorists challenged Wilson and Gulick. The politics-administration dichotomy remained the center of criticism in the third generation. In addition to this area of criticism, government itself came under fire as ineffective, inefficient, and largely a wasted effort. The sometimes deceptive, and expensive American intervention in Vietnam along with domestic scandals including Watergate are two examples of self-destructive government behavior during the third generation. There was a call by citizens for efficient administration to replace ineffective, wasteful bureaucracy. Public administration would have to distance itself from politics to answer this call and remain effective.

Elected officials supported such reform. The Hoover Commission, chaired by University of Chicago professor Louis Brownlow, to examine reorganization of government. Dr. Brownlow subsequently founded the public administration service on the university, 1313 E. 60th Street. The organization PAS provided consulting services to governments at all levels of government until the 1970s.

1980s

In the late 1980s, yet another generation of public administration theorists began to displace the last. What was called New Public Management was proposed by David Osborne and Ted Gaebler [4] . The new model advocated the use of private sector innovation, resources, and organizational ideas to improve the public sector. During the Clinton Administration (1992-2000), Vice President Al Gore adopted and reformed federal agencies accordingly. New public management there by became prevalent throughout the US bureaucracy.

Some critics argue that the New Public Management concept of Americans as "customers" rather than "citizens" is an unacceptable abuse. That is, customers are a means to an end, profit, rather than part of the policy making process. Citizens are in fact the proprietors of government (the owners), opposed to merely the customers of a business (the patrons). In New Public Management, people are viewed as economic units not democratic participants. Nevertheless, the model is still widely accepted at all levels of government.

1990s

In the late 1990s, Janet and Robert Denhardt proposed a new public service model [5]. This model's chief contribution is a focus on Americans as "citizens" rather than "customers". Accordingly, the citizen is expected to participate in government and take an active role throughout the policy process. No longer are the proprietors considered an end to a mean. Whilse this remains feasible at the federal, state & local levels, where the concept of citizenship is commonly wedded, the emergence of 'transnational administration' with the growing number of international organizations and 'transnational executive networks' complicates the prospects for citizen engagement.[6]

One example of this is openforum.com.au, an Australian non-for-profit eDemocracy project which invites politicians, senior public servants, academics, business people and other key stakeholders to engage in high-level policy debate.

New public management (NPM)

The critics of NPM claim that a successor to NPM is digital era governance, focusing on themes of reintegrating government responsibilities, needs-based holism (executing duties in cursive ways), and digitalization (exploiting the transformational capabilities of modern IT and digital storage).

Core branches of public administration

In academia, the fields of Public Administration, are contrived in five disciplines. These disciplines make up the whole of the academic field of Public Administration.

Ethics in Public Administration serves as a normative approach to decision making.
Policy Analysis serves as an empirical approach to decision making.

Public Budgeting is the activity within a government that seeks to allocate scarce resources among unlimited demands.
Organizational Theory in Public Administration is the study of the structure of governmental entities and the many particulars inculcated in them.
Human Resource Management in Public Administration is an internal service insuring equitable treatment, ethical standards, and promoting a merit-based system.

Decision-making models and public administration

Given the array of duties public administrators find themselves performing, the professional administrator might refer to a theoretical framework from which he or she might work. Indeed, many public and private administrative scholars have devised and modified decision-making models.

William Niskanen's budget-maximizing

An relatively recent rational choice variation, proposed by William Niskanen in a 1971 article budget-maximizing model, argued that rational bureaucrats will universally seek to increase their budgets, thereby contributing to state growth, measured by expenditure. Niskanen served on President Reagan's Council of Economic Advisors; his model underpinned what has been touted as curtailed public spending and increased privatization. However, budgeted expenditures and the growing deficit during the Reagan administration is evidence of a different reality. A range of pluralist authors have critiqued Niskanen's universalist approach. These scholars have argued that officials tend also to be motivated by considerations of the public interest.

Patrick Dunleavy's bureau shaping

The bureau-shaping model, a modification of Niskanen, holds that rational bureaucrats only maximize the part of their budget that they spend on their own agency's operations or give to contractors and interest groups. Groups that are able to organize a "flowback" of benefits to senior officials would, according to this theory, receive increased budgetary attention. For instance, rational officials will get no benefit from paying out larger welfare checks to millions of low-income citizens because this does not serve a bureaucrats' goals. Accordingly, one might should instead expect a jurisdiction to seek budget increases for defense and security purposes in place of domestic social programming. If we refer back to Reagan once again, Dunleavy's bureau shaping model accounts for the alleged decrease in the "size" of government while spending did not, in fact, decrease. Domestic entitlement programming was financially de-emphasized for military research and personnel.

Notable scholars

Notable scholars of public administration have come from a range of fields. In the period before public administration existed as its own independent discipline, scholars contributing to the field came from economics, sociology, management,

political science, law, and, other related fields. More recently, scholars from public administration and public policy have contributed important studies and theories.

For a longer list of academics and theorists, see the List of notable public administration scholars article .

International public administration

There are several organizations that are active. The oldest is the International Association of Schools and Institutes of Administration (IASIA). Based in Brussels, Belgium, IASIA is an association of organizations and individuals whose activities and interests focus on public administration and management. The activities of its members include education and training of administrators and managers. It is the only worldwide scholarly association in the field of public management. Visit their Web site at www.iiasiisa.be/schools/aeacc.htm.

Also the International Committee of the US-based National Association of School of Public Affairs and Administration (NASPAA) has developed a number of relationships around the world. They include sub regional and National forums like CLAD, INPAE and NISPAcee, APSA, ASPA. For general information about these regional networks, visit www.GlobalMPA.net.

The Center for Latin American Administration for Development (CLAD), based in Caracas, Venezuela, this regional network of schools of public administration set up by the governments in Latin America is the oldest in the region. Information about CLAD is accessible at www.clad.org.ve.

The Institute is a founding member and played a central role in organizing the Inter-American Network of Public Administration Education (INPAE). Created in 2000, this regional network of schools is unique in that it is the only organization to be composed of institutions from North and Latin America and the Caribbean working in public administration and policy analysis. It has more than 49 members from top research schools in various countries throughout the hemisphere, www.ebape.fgv.br/inpae.

NISPAcee is a network of experts, scholars and practitioners who work in the field of public administration in Central and Eastern Europe, including the Russian Federation and the Caucasus and Central Asia. Their English Web site is located at www.nispa.sk/_portal/homepage.php.

The US public administration and political science associations like NASPA, APSA and ASPA. These organizations have helped to create the fundamental establishment of modern public administration. For more information visit the Web sites of American Political Science Association, www.apsanet.org, and the American Society of Public Administration www.aspanet.org.

Government

A **government** is the body within a community, political entity or organization which has the authority to make and enforce rules, laws, and regulations.

Typically, the term "government" refers to a civil government or sovereign state which can be either local, national, or international. However, commercial, academic, religious, or other formal organizations are also governed by internal bodies. Such bodies may be called boards of directors, managers, or governors or they may be known as the administration (as in schools) or councils of elders (as in churches). The size of governments can vary by region or purpose.

Growth of an organization advances the complexity of its government, therefore small towns or small-to-medium privately-operated enterprises will have fewer officials than typically larger organizations such as multinational corporations which tend to have multiple interlocking, hierarchical layers of administration and governance. As complexity increases and the nature of governance becomes more complicated, so does the need for formal policies and procedures.

Types of governments

- Anarchism - a political philosophy which considers the state to be unnecessary, harmful, or otherwise undesirable, and favors instead a stateless society
- Authoritarian – Authoritarian governments are characterized by an emphasis on the authority of the state in a republic or union. It is a political system controlled by nonelected rulers who usually permit some degree of individual freedom.
- Constitutional monarchy – A government that has a monarch, but one whose powers are limited by law or by a formal constitution. Example: United Kingdom[1][2]
- Constitutional republic – A government whose powers are limited by law or a formal constitution, and which is chosen by a vote amongst at least some sections of the populace (Ancient Sparta was in its own terms a republic, though most inhabitants were disenfranchised : The early United States was a republic, but the large numbers of slaves did not have the vote). Republics which exclude sections of the populace from participation will typically claim to represent all citizens (by defining people without the vote as "non-citizens").

- Democracy – Rule by a government (usually a Constitutional Republic or Constitutional Monarchy) chosen by election where most of the populace are enfranchised. The key distinction between a democracy and other forms of constitutional government is usually taken to be that the right to vote is not limited by a person's wealth or race (the main qualification for enfranchisement is usually having reached a certain age). A Democratic government is therefore one supported (at least at the time of the election) by a majority of the populace (provided the election was held fairly). A "majority" may be defined in different ways. There are many "power-sharing" (usually in countries where people mainly identify themselves by race or religion) or

"electoral-college" or "constituency" systems where the government is not chosen by a simple one-vote-per-person headcount.

- Dictatorship – Rule by an individual who has full power over the country. The term may refer to a system where the Dictator came to power, and holds it, purely by force - but it also includes systems where the Dictator first came to power legitimately but then was able to amend the constitution so as to, in effect, gather all power for themselves.[3] See also Autocracy and Stratocracy.
- Monarchy – Rule by an individual who has inherited the role and expects to bequeath it to their heir.[4]
- Oligarchy – Rule by a small group of people who share similar interests or family relations.[5]
- Plutocracy – A government composed of the wealthy class. Any of the forms of government listed here can be plutocracy. For instance, if all of the voted representatives in a republic are wealthy, then it is a republic and a plutocracy.
- Theocracy – Rule by a religious elite.[6]
- Totalitarian – Totalitarian governments regulate nearly every aspect of public and private life.
- Legalism - A legalistic government enforces the law with rewards to those who obey the laws and harsh punishments to people who go against the law.

Origin

For many thousands of years when people were hunter-gatherers and small scale farmers, humans lived in small, non-hierarchical and self-sufficient communities.

The development of agriculture resulted in ever increasing population densities.[7] David Christian explains how this helped result in states with laws and governments:

As farming populations gathered in denser and larger communities, interactions between different groups increased and the social pressure rose until, in a striking parallel with star formation, new structures suddenly appeared, together with a new level of complexity. Like stars, cities and states reorganize and energize the smaller objects within their gravitational field.
—*David Christian, p. 245 , Maps of Time*

The exact moment and place that the erectional phenomenon of human government developed is lost in time; however, history does record the formations of very early governments. About 5,000 years ago, the first small city-states appeared.[7] By the third to second millenniums BC, some of these had developed into larger governed areas: Sumer, Ancient Egypt, the Indus Valley Civilization, and the Yellow River Civilization.[8]

States formed as the results of a positive feedback loop where *population growth* results in *increased information exchange* which results in *innovation* which results in *increased resources* which results in further population growth.[9][10] The role of cities in the feedback loop is important. Cities became the primary conduits for the dramatic increases in information exchange that allowed for large and densely

packed populations to form, and because cities concentrated knowledge, they also ended up concentrating power.[11][12] "Increasing population density in farming regions provided the demographic and physical raw materials used to construct the first cities and states, and increasing congestion provided much of the motivation for creating states."[13]

Fundamental purpose

According to supporters of government,the fundamental purpose of government is the maintenance of basic security and public order.[14] The philosopher Thomas Hobbes figured that people were rational animals and thus saw submission to a government dominated by a sovereign as preferable to anarchy.[15][16] According to Hobbes, people in a community *create* and *submit to* government for the purpose of establishing for themselves, safety and public order.[16][17][18][19]

Military defense

The fundamental purpose of government is to maintain social order and protect property. “Security of person and property, and equal justice between individuals, are the first needs of society, and the primary ends of government: if these things can be left to any responsibility below the highest, there is nothing, except war and treaties, which requires a general government at all.” [22]

Militaries are created to deal with the highly complex task of confronting large numbers of enemies.

Once governments came onto the scene, they began to form and use armies for conflicts with neighboring states, and for conquest of new lands. Governments seek to maintain monopolies on the use of force,[23] and to that end, they usually suppress the development of private armies within their borders.

Social security

Social security is related to economic security. Throughout most of human history, parents prepared for their old age by producing enough children to ensure that some of them would survive long enough to take care of the parents in their old age.[24] In modern, relatively high-income societies, a mixed approach is taken where the government shares a substantial responsibility of taking care of the elderly.[24]

This is not the case everywhere since there are still many countries where social security through having many children is the norm. Although social security is a relatively recent phenomenon, prevalent mostly in developed countries, it deserves mention because the existence of social security substantially changes reproductive behavior in a society, and it has an impact on reducing the *cycle of poverty*.[24] By reducing the cycle of poverty, government creates a self-reinforcing cycle where people see the government as friend both because of the financial support they receive late in their lives, but also because of the overall reduction in national poverty due to the government's social security policies—which then adds to public support for social security.[25]

Aspects of government

The Parliament of the United Kingdom, the 'Mother of all Parliaments'

Governments vary greatly, as do the relationships of citizens of a state to its government.

Abuse of power

The leaders of governments are human beings, and given human nature, what constitutes good governance has been a subject written about since the earliest books known. In the western tradition Plato wrote extensively on the question, most notably in The Republic. He (in the voice of Socrates) asked if the purpose of government was to help ones friends and hurt ones enemies, for example. Aristotle, Plato's student picked up the subject in his treatise on *Politics*. Many centuries later, John Locke addressed the question of abuse of power by writing on the importance of checks and balances [26] to prevent or at least constrain abuse. It is believed that Thomas Jefferson was influenced by John Locke.[27]

Legitimacy

The concept of legitimacy is central to the study of governments. Statists have attempted to formalize ways to legitimize government or state authority.

Social contract theorists, such as Thomas Hobbes and Jean-Jacques Rosseau, believe that governments reduce people's freedom/rights in exchange for protecting them, and maintaining order. Many people question, however, whether this is an actual exchange (where people voluntarily give up their freedoms), or whether they are taken by threat of force by the ruling party.

Other statist theorists, like David Hume, reject social contract theory on the grounds that, in reality, consent is not involved in state-individual relationships and instead offer different definitions of legitimacy based on practicality and usefulness.

Anarchists, on the other hand, claim that legitimacy for an authority must be consensual and reject the concept of states altogether; For them, authority must be earned not self-legitimated. For example, a police officer does not earn his authority as a doctor does since the authority is voluntarily transferred to the doctor while the police officer just takes it.

Criticised aspects

War

In the most basic sense, people of one nation will see the government of another nation as the enemy when the two nations are at war. For example, the people of Carthage saw the Roman government as the enemy during the Punic wars.[28]

Enslavement

In early human history, the outcome of war for the defeated was often enslavement. The enslaved people would not find it easy to see the conquering government as a friend.

Religious opposition

People with religious views opposed to the official state religion will have a greater tendency to view that government as their enemy. A good example would be the condition of Roman Catholicism in England before the Catholic Emancipation. Protestants—who were politically dominant in England—used political, economic and social means to reduce the size and strength of Catholicism in England over the 16th to 18th centuries, and as a result, Catholics in England felt that their religion was being oppressed.[29]

Class oppression

Whereas capitalists in a capitalist country may tend to see that nation's government positively, a class-conscious group of industrial workers—a proletariat—may see things very differently.[*original research?*] If the proletariat wishes to take control of the nation's productive resources, and they are blocked in their endeavors by continuing adjustments in the law made by capitalists in the government,[30] then the proletariat will come to see the government as their enemy—especially if the conflicts become violent.

The same situation can occur among peasants. The peasants in a country, e.g. Russia during the reign of Catherine the Great, may revolt against their landlords, only to find that their revolution is put down by government.

Critical views and alternatives

The relative merits of various forms of government have long been debated by philosophers, politicians and others. However, in recent times, the traditional conceptions of government and the role of government have also attracted increasing criticism from a range of sources. Some argue that the traditional conception of government, which is heavily influenced by the zero-sum perceptions of state actors and focuses on obtaining security and prosperity at a national level through primarily unilateral action, is no longer appropriate or effective in a modern world that is increasingly connected and interdependent.

Human security

One such school of thought is human security, which advocates for a more people-based (as opposed to state-based) conception of security, focusing on protection and empowerment of individuals. Human security calls upon governments to recognise that insecurity and instability in one region affects all and to look beyond national borders in defining their interests and formulating policies for security and development. Human security also demands that governments engage in a far greater level of cooperation and coordination with not only domestic organisations,

but also a range of international actors such as foreign governments, intergovernmental organisations and non-government organisations.

Whilst human security attempts to provide a more holistic and comprehensive approach to world problems, its implementation still relies to a large extent on the will and ability of governments to adopt the agenda and appropriate policies. In this sense, human security provides a critique of traditional conceptions of the role of government, but also attempts to work within the current system of state-based international relations. Of course, the unique characteristics of different countries and resources available are some constraints for governments in utilising a human security framework.

Anarchism

Anarchists disagree with the very nature of government, the hierarchical nature of a society which is governed, the government possessing legislative and political power, and the governed possessing none. Anarchists believe that explicit consent is necessary for legitimacy within a collective group or government. There are many forms of anarchist theories. Some anarchists, such as anarcho-syndicalists or anarcho-primitivists, advocate egalitarianism and non-hierarchical societies while others, such as anarcho-capitalists, advocate free markets, individual sovereignty and freedom.

Public services

Public services is a term usually used to mean services provided by government to its citizens, either directly (through the public sector) or by financing private provision of services. The term is associated with a social consensus (usually expressed through democratic elections) that certain services should be available to all, regardless of income. Even where public services are neither publicly provided nor publicly financed, for social and political reasons they are usually subject to regulation going beyond that applying to most economic sectors. Public services is also a course that can be studied at college and/or university. These courses can lead entry in to the: police, ambulance and fire services.

It is also an alternative term for civil service.

Sectors

Public service tend to be those considered so essential to modern life that for moral reasons their universal provision should be guaranteed, and they may be associated with fundamental human rights (such as the right to water). An example of a service which is not generally considered an essential public service is hairdressing.The Volunteer Fire Dept. and Ambulance Corps. are institutions with the mission of servicing the community. A service is helping others with a specific need or want. Service ranges from a doctor curing an illness, to a repair man, to even a food pantry. All of these services are important in people's lives.

Characteristics

A public service may sometimes have the characteristics of a public good (being non-rivalrous and non-excludable), but most are merit goods, that is, services which may (according to prevailing social norms) be under-provided by the market. In most cases public services are services, i.e. they do not involve manufacturing of goods such as nuts and bolts. They may be provided by local or national monopolies, especially in sectors which are natural monopolies.

They may involve outputs that are hard to attribute to specific individual effort and/or hard to measure in terms of key characteristics such as quality. They often require high levels of training and education. They may attract people with a public service ethos who wish to give something to the wider public or community through their work and are prepared to work harder for less pay as a result. (John Kenneth Galbraith has looked at the role of such "public virtue" in economic growth.)

History

Historically, the widespread provision of public services in developed countries usually began in the late nineteenth century, often with the municipal development of gas and water services. Later, other services such as electricity and healthcare began to be provided by governments. In most developed countries such services are still provided by local or national government, the biggest exceptions being the U.S. and the UK, where private provision is more significant. Nonetheless, such privately-provided public services are often strongly regulated, for example (in the US) by Public Utility Commissions.

In developing countries public services tend to be much less well developed. Water services, for example, may only be available to the wealthy middle class. For political reasons the service is often subsidised, which reduces the finance available for expansion to poorer communities.

Nationalization

Nationalization really took off following the World Wars of the first half of the twentieth century. Across Europe, because of the extreme demands on industries and the economy, central planning was required to ensure the maximum degree of efficient production was obtained. Many public services, especially electricity, gas and public transport were products of this era. Following the second world war, many countries also began to implement universal health care and expanded education under the funding and guidance of the state.

Privatization

There are several ways to privatise public services. A free-market corporation may be established and sold to private investors, relinquishing government control altogether. This essentially ends the public service and makes it a private service. Another option, used in the Nordic countries, is to establish a corporation, but keep ownership or voting power essentially in the hands of the government. For example,

the Finnish state owned 49% of Kemira, the rest being owned by private investors. A 49% share doesn't make it a "government enterprise", but it means that all other investors together would have to oppose the state's opinion in order to overturn the state's decisions in the shareholder's meeting. Regulated corporation can also acquire permits on the agreement that they fulfill certain public service duties. When a private corporation runs a natural monopoly, then the corporation is typically heavily regulated, to prevent abuse of monopoly power. Lastly, the government can buy the service on the free market. In many countries, medication is provided in this manner: the government reimburses part of the price of the medication. Also, bus traffic, electricity, healthcare and waste management are privatized in this way. One recent innovation, used in the UK increasingly as well as Australia and Canada is public-private partnerships. This involves giving a long lease to private consortia in return for partly funding infrastructure.

Public services versus Services of General Interest

At the European level, some countries use the name service of general interest, while other prefer public services. It has been a discussion, for instance during the writing of the european constitution (the word services of general interest has been used).

Also most see the two names as synonyms, the services of general interest doesn't imply that the "public services" are delivered by public servants, but can also be delivered by a private company. ETUC named its petition "for high quality public services" but explains "Public services are known as Services of general interest (SGI) and Services of general economic interest (SGEIs) in European Union terminology."

Civil service

The term **civil service** has two distinct meanings:

- A branch of governmental service in which individuals are employed on the basis of professional merit as proven by competitive examinations.
- The body of employees in any government agency other than the military.

A **civil servant** or **public servant** is a civilian public sector employee working for a government department or agency. The term explicitly excludes the armed services, although civilian officials will work at "Defence Ministry" headquarters. The term always includes the (sovereign) state's employees; whether regional, or sub-state, or even municipal employees are called "civil servants" varies from country to country. In the United Kingdom, for instance, only Crown employees are civil servants, county or city employees are not.

Many consider the study of civil service to be a part of the field of public administration. Workers in "non-departmental public bodies" (sometimes called "QUANGOs") may also be classed as civil servants for the purpose of statistics and possibly for their terms and conditions. Collectively a state's civil servants form its **Civil Service** or **Public Service**.

No state of any extent can be ruled without a bureaucracy, but organizations of any size have been few until the modern era. Administrative institutions usually grow out of the personal servants of high officials, as in the Roman Empire. This developed a complex administrative structure, which is outlined in the Notitia Dignitatum and the work of John Lydus, but as far as we know appointments to it were made entirely by inheritance or patronage and not on merit, and it was also possible for officers to employ other people to carry out their official tasks but continue to draw their salary themselves. There are obvious parallels here with the early bureaucratic structures in modern states, such as the Office of Works or the Navy in 18th century England, where again appointments depended on patronage and were often bought and sold.

An **international civil servant** or **international staff member** is a civilian employee that is nominated by an international organisation.[1] These international civil servants do not resort under any national legislation (from which they have immunity of jurisdiction) but are governed by an internal staff regulation. All disputes related to international civil service are brought before special tribunals created by these international organisations such as, for instance, the Administrative Tribunal of the ILO.[2]

Specific referral can be made to the International Civil Service Commission (ICSC) of the UN, an independent expert body established by the United Nations General Assembly. Its mandate is to regulate and coordinate the conditions of service of staff in the United Nations common system, while promoting and maintaining high standards in the international civil service.

By Selected Countries

Canada

Canada's public service is a large body, with over 200 departments and 450,000 members, including commissions, councils, crown corporations, the Office of the Queen's Privy Council for Canada, and the Royal Canadian Mounted Police.

China

Emperor Wen of Sui (r. 581–604), who established the first civil service examination system in China; a painting by the chancellor and artist Yan Liben (600–673).

One of the oldest examples of a civil service based on meritocracy is the Imperial bureaucracy of China, which can be traced as far back as the Qin Dynasty (221–207 BC). During the Han Dynasty (202 BC–220 AD) the *xiaolian* system of recommendation by superiors for appointments to office was established. In the areas of administration, especially in the military, appointments would be based solely on merit.

After the fall of the Han Dynasty, the Chinese bureaucracy would regress into a semi-merit system known as the Nine-rank system, yet in this system noble birthright became the most significant prerequisite for one to gain access to more authoritative posts.

This system was reversed during the short-lived Sui Dynasty (581–618), which initiated a civil service bureaucracy recruited by written examinations and recommendation. The following Tang Dynasty (618–907) would adopt the same measures of drafting officials, and would decreasingly rely upon aristocratic recommendations and more and more upon promotion based on the written examinations.

However, the civil service examinations were practiced on a much smaller scale in comparison to the stronger, centralized bureaucracy of the Song Dynasty (960–1279). In response to the regional military rule of jiedushi and loss of civil authority during the late Tang period and Five Dynasties (907–960), the Song emperors were eager to implement a system where civil officials would owe their social prestige to the central court and gain their salaries strictly from the central government. This ideal was not fully achieved since many scholar officials were affluent landowners and partook in many anonymous business affairs in an age of economic revolution in China. Nonetheless, gaining a degree through three levels of examination — prefectural exams, provincial exams, and the prestigious palace exams — was a far more desirable goal in society than becoming a merchant. This was because the mercantile class was traditionally regarded with some disdain by the scholar official class. This class of state bureaucrats in the Song period were far less aristocratic than their Tang predecessors. The examinations were carefully structured in order to ensure people of lesser means than candidates born into wealthy, landowning families were given a greater chance at passing the exams and gaining an official degree. This included the employment of a bureau of copyists who would rewrite all of the candidate's exams in order to mask one's handwriting and therefore make all candidates anonymous and unable to employ favoritism by graders of the exams who might be associated to them and recognize their handwriting. The advent of widespread printing in the Song period allowed many more candidates of the exams access to required Confucian texts which could be utilized in passing the exams.

United Kingdom

The civil service in the United Kingdom only includes Crown employees; not those who are parliamentary employees. Public sector employees such as teachers and NHS doctors are not considered to be civil servants. Note that civil servants in devolved government departments in Northern Ireland are not part of the British Civil Service, but constitute the separate Northern Ireland Civil Service.

Brazil

In Brazil public servants are hired through entrance examinations, known as Public Contests - ***Concurso Público****, in Portuguese* -. There are several companies that the government hires to do the examinations, the most known are the Cespe, the Getúlio Vargas Foundation, ESAF, established in universities and the Foundation Cesgranrio. The position is filled according to the examination score.

In Brazil, public officials are privileged compared to the private sector.

- Culture Pass (yet to be enforced) - About 15% of their salary to spend more on movies, theater and other leisure and culture
- Maternity leave - Maternity leave for a time in Brazil is 120 days to 180 days are public officials
- Lifelong employment - It is prohibited to resign civil servants in Brazil, except if there is any occurrence or very serious violation.
- Wage - The civil servants are among the richest working class in Brazil, depending on the career

Spain

The civil service in Spain (*funcionariado*) is often considered to include government employees, "Comunidades Autónomas" employees as well as city's employees. There are three main bodies on the Spanish civil services, political posts ("puestos de libre designación, level 28-30") with poor or no exam to get them, posts "funcionarios de carrera" with an exam to get them and "personal laboral" posts also with an exam similar of "funcionarios de carrera". There are differences in exams between state, the 17 autonomic communities and the city councils, and differences between "funcionarios" and "personal laboral" exams vary in difficulty from one to others.

Ireland

The civil service of Ireland includes the employees of the Department of State (excluded are government ministers and a small number of paid political advisors) as well as a small number of core state agencies such as the Office of the Revenue Commissioners, the Office of Public Works, and the Public Appointments Service. The organisation of the Irish Civil Service is very similar to the traditional organisation of the British Civil Service, and indeed the grading system in the Irish Civil Service is nearly identical to the traditional grading system of its British counterpart. In Ireland, public sector employees such as teachers or members of the country's police force, *An Garda Síochána* are not considered to be civil servants, but are rather described as "public servants" (and form the Public service of the Republic of Ireland).

United States

In the United States, the civil service was established in 1872. The Federal Civil Service is defined as "all appointive positions in the executive, judicial, and legislative branches of the Government of the United States, except positions in the uniformed services." (5 U.S.C. § 2101). In the early 19th century, government jobs were held at the pleasure of the president — a person could be fired at any time. The spoils system meant that jobs were used to support the political parties. This was changed in slow stages by the Pendleton Civil Service Reform Act of 1883 and subsequent laws. By 1909, almost 2/3 of the U.S. federal work force was appointed based on merit, that is, qualifications measured by tests. Certain senior civil service positions, including some heads of diplomatic missions and executive agencies are filled by political appointees. Under the Hatch Act of 1939, civil servants are not allowed to engage in political activities while performing their duties.

The U.S. civil service includes the Competitive service and the Excepted service. The majority of civil service appointments in the U.S. are made under the Competitive Service, but certain categories in the Diplomatic Service, the FBI, and other National Security positions are made under the Excepted Service. (U.S. Code Title V)

U.S. state and local government entities often have competitive civil service systems that are modeled on the national system, in varying degrees.

As of January 2007, the Federal Government, excluding the Postal Service, employed about 1.8 million civilian workers. The Federal Government is the Nation's single largest employer. Although most federal agencies are based in the Washington D.C. region, only about 16% (or about 288,000) of the federal government workforce is employed in this region.[3]

There are over 1,300 federal government agencies.[4]

Other countries tend to use systems which vary between these two extremes. Germany makes a clear distinction, as in the U.S., between political and official posts (though the threshold is placed rather higher); also see Beamter.

Employees of international organisations (e.g., the United Nations or the International Atomic Energy Agency) are sometimes referred to as *international civil servants*.

Other meanings

Civil service also means a form of legal conscientious objection, for example the Swiss Civilian Service. More accurately, in this scope Civil service is work of public interest done as a replacement for a military obligation to which one objects. It should be noted that the Finnish "siviilipalvelus", French "service civil", German "Zivildienst", Italian "servizio civile" and Swedish "civiltjänst" all can be translated to "civil service".

Legislation

Legislation (or "statutory law") is law which has been promulgated (or "enacted") by a legislature or other governing body, or the process of making it. (Another source of law is judge-made law or case law) Before an item of legislation becomes law it may be known as a bill, and may be broadly referred to as "legislation" while it remains under consideration to distinguish it from other business. Legislation can have many purposes: to regulate, to authorize, to proscribe, to provide (funds), to sanction, to grant, to declare or to restrict.

It can be used to help data protection within computers in the form of the data protection act 1998. It helps keep data safe and with ever growing leglislation laws being passed, it improves the security of your details on the internet.

In some jurisdictions legislation must be confirmed by the executive branch of government before it enters into force as law. Primary legislation may delegate to the executive or other parties limited powers to make secondary legislation, such as Rules, Regulations and Orders which implement its policy in detail.

Under the Westminster system, an item of primary legislation is known as an Act of Parliament after enactment.

Legislation is usually proposed by a member of the legislature (e.g. a member of Congress or Parliament), or by the executive, whereupon it is debated by members of the legislature and is often amended before passage. Most large legislatures enact only a small fraction of the bills proposed in a given session.[Whether a given bill will be proposed and enter into force is generally a matter of the legislative priorities of government.

Legislation is regarded as one of the three main functions of government, which are often distinguished under the doctrine of the separation of powers. Those who have the formal power to *create* legislation are known as legislators; a judicial branch of government will have the formal power to *interpret* legislation (see statutory interpretation); the executive branch of government can act only within the powers and limits set by the law.

Alternate means of law-making

The function and procedures are primarily the responsibility of the legislature. However, there are situations where legislation is made by other bodies or means, such as when constitutional law or secondary legislation is enacted. Such other forms of law-making include referendums, constitutional conventions, orders-in-council or regulations. The term *legislation* is sometimes used to include these situations, or the term *primary legislation* may be used to exclude these other forms.

Other empirical and conceptual problems

On the surface, identifying a form of government appears to be easy. Most would say that the United States is a democratic republic while the former Soviet Union was a totalitarian state. However, as Kopstein and Lichbach (2005:4) argue, defining regimes is tricky. Defining a form of government is especially problematic when trying to identify those elements that are essential to that form. There appears to be a disparity between being able to identify a form of government and identifying the necessary characteristics of that form.

For example, in trying to identify the essential characteristics of a democracy, one might say "elections." However, both citizens of the former Soviet Union and citizens of the United States voted for candidates to public office in their respective states. The problem with such a comparison is that most people are not likely to accept it because it does not comport with their sense of reality. Since most people are not going to accept an evaluation that makes the former Soviet Union as democratic as the United States, the usefulness of the concept is undermined.

In political science, it has long been a goal to create a typology or taxonomy of polities, as typologies of political systems are not obvious [3]. It is especially important in the political science fields of comparative politics and international relations. One important example of a book which attempts to do so is Robert Dahl's Polyarchy (Yale University Press (1971)).

One approach is to further elaborate on the nature of the characteristics found within each regime. In the example of the United States and the Soviet Union, both did conduct elections, and yet one important difference between these two regimes is that the USSR had a single-party system, with all other parties being outlawed. In contrast, the United States effectively has a bipartisan system with political parties being regulated, but not forbidden. A system generally seen as a representative democracy (for instance Canada, India and the United States) may also include measures providing for: a degree of direct democracy in the form of referendums and for deliberative democracy in the form of the extensive processes required for constitutional amendment.

Another complication is that a huge number of political systems originate as socio-economic movements and are then carried into governments by specific parties naming themselves after those movements. Experience with those movements in power, and the strong ties they may have to particular forms of government, can cause them to be considered as forms of government in themselves. Some examples are as follows:

- Perhaps the most widely cited example of such a phenomenon is the communist movement. This is an example of where the resulting political systems may diverge from the original socio-economic ideologies from which they developed. This may mean that adherents of the ideologies are actually *opposed* to the political systems commonly associated with them. For example, activists describing themselves as Trotskyists or communists are often opposed to the communist states of the 20th century.

- Islamism is also often included on a list of movements that have deep implications for the form of government. Indeed, many nations in the Islamic world use the term *Islamic* in the name of the state. However, these governments in practice exploit a range of different mechanisms of power (for example debt and appeals to nationalism). This means that there is no single form of government that could be described as “Islamic” government. Islam as a political movement is therefore better seen as a loose grouping of related political practices rather than a single, coherent political movement.

- The basic principles of many other popular movements have deep implications for the form of government those movements support and would introduce if they came to power. For example, bioregional democracy is a pillar of green politics.

Institution

This article is about institutions as social mechanisms. For formal establishments, see Organization. For a computer science concept, see Institution (computer science).

Institutions are structures and mechanisms of social order and cooperation governing the behavior of a set of individuals within a given human collectivity. Institutions are identified with a social purpose and permanence, transcending individual human lives and intentions, and with the making and enforcing of rules governing cooperative human behavior. The term "institution" is commonly applied to customs and behavior patterns important to a society, as well as to particular formal organizations of government and public service. As structures and mechanisms of social order among humans, institutions are one of the principal objects of study in the social sciences, including sociology, political science, and economics. Institutions are a central concern for law, the formal mechanism for political rule-making and enforcement. The creation and evolution of institutions is a primary topic for history.

Aspects of institutions

Although individual, formal organizations, commonly identified as "institutions," may be deliberately and intentionally created by people, the development and functioning of institutions in society in general may be regarded as an instance of emergence; that is, institutions arise, develop and function in a pattern of social self-organization, which goes beyond the conscious intentions of the individual humans involved.

As mechanisms of social cooperation, institutions are manifest in both objectively real, *formal* organizations, such as the U.S. Congress, or the Roman Catholic Church, and, also, in *informal* social order and organization, reflecting human psychology, culture, habits and customs. Most important institutions, considered abstractly, have both objective and subjective aspects: examples include money and marriage. The institution of money encompasses many formal organizations, including banks and government treasury departments and stock exchanges, which may be termed, "institutions," as well as subjective experiences, which guide people in their pursuit of personal well-being. Powerful institutions are able to imbue a paper currency with certain value, and to induce millions into cooperative production and trade in pursuit of economic ends abstractly denominated in that currency's units. The subjective experience of money is so pervasive and persuasive that economists talk of the "money illusion" and try to disabuse their students of it, in preparation for learning economic analysis.

Marriage and family, as a set of institutions, also encompass formal and informal, objective and subjective aspects. Both governments and religious institutions make and enforce rules and laws regarding marriage and family, create and regulate various concepts of how people relate to one another, and what their rights, obligations and duties may be as a consequence. Culture and custom permeate marriage and family. In the United States and western Europe, a transition from a conception of marriage, as license for sexual intercourse granted by Church and State, to a conception of marriage as a form of contract, freely entered into, has

occasioned momentous social and political controversies regarding laws and customs governing the freedom of women, divorce, cohabitation outside marriage, contraception, and homosexuality.

Examples of recently emerging institutions may include many Web 2.0 socially based internet activities, such as open source software or free software, and Wikipedia itself. Gilles Deleuze compared emergent institutions with legal codes, such that,

...tyranny is a regime in which there are many laws and few institutions; democracy is a regime in which there are many institutions, and few laws. Oppression becomes apparent when laws bear directly on people, and not on the prior institutions that protect them.[1]

Perspectives of the social sciences

While institutions tend to appear to people in society as part of the natural, unchanging landscape of their lives, study of institutions by the social sciences tends to reveal the nature of institutions as social constructions, artifacts of a particular time, culture and society, produced by collective human choice, though not directly by individual intention.

The relationship of institutions to human nature is a foundational question for the social sciences. Institutions can be seen as "naturally" arising from, and conforming to, human nature—a fundamentally conservative view—or institutions can be seen as artificial, almost accidental, and in need of architectural redesign, informed by expert social analysis, to better serve human needs—a fundamentally progressive view. Adam Smith anchored his economics in the supposed human "propensity to truck, barter and exchange". Modern feminists have criticized traditional marriage and other institutions as element of an oppressive and obsolete patriarchy. The Marxist view which sees human nature as historically 'evolving' towards voluntary social cooperation, shared by some anarchists, is that supraindividual institutions such as the market and the state are incompatible with the individual liberty which would obtain in a truly free society.

Economics, in recent years, has used game theory to study institutions from two perspectives. Firstly, how do institutions survive and evolve? In this perspective, institutions arise from Nash equilibria of games. For example, whenever people pass each other in a corridor or thoroughfare, there is a need for customs, which avoid collisions. Such a custom might call for each party to keep to their own right (or left—such a choice is arbitrary, it is only necessary that the choice be uniform and consistent). Such customs may be supposed to be the origin of rules, such as the rule, adopted in many countries, which requires driving automobiles on the right side of the road.

Secondly, how do institutions affect behaviour? In this perspective, the focus is on behaviour arising from a given set of institutional rules. In these models, institutions determine the rules (i.e. strategy sets and utility functions) of games, rather than arise as equilibria out of games. For example, the Cournot duopoly model is based on an institution involving an auctioneer who sells all goods at the market-clearing

price. While it is always possible to analyse behaviour with the institutions-as-equilibria approach instead, it is much more complicated.

In political science, the effect of institutions on behavior has also been considered from a meme perspective, like game theory borrowed from biology. A "memetic institutionalism" has been proposed, suggesting that institutions provide selection environments for political action, whereby differentiated retention arises and thereby a Darwinian evolution of institutions over time. Public choice theory, another branch of economics with a close relationship to political science, considers how government policy choices are made, and seeks to determine what the policy outcomes are likely to be, given a particular political decision-making process and context.

Sociology traditionally analyzed social institutions in terms of interlocking social roles and expectations. Social institutions created and were composed of groups of roles, or expected behaviors. The social function of the institution was executed by the fulfillment of roles. Basic biological requirements, for reproduction and care of the young, are served by the institutions of marriage and family, for example, by creating, elaborating and prescribing the behaviors expected for husband/father, wife/mother, child, etc.

In history, a distinction between eras or periods, implies a major and fundamental change in the system of institutions governing a society. Political and military events are judged to be of historical significance to the extent that they are associated with changes in institutions. In European history, particular significance is attached to the long transition from the feudal institutions of the Middle Ages to the modern institutions, which govern contemporary life.

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Course Name	: Audit Practice and Procedures

Course Description
The Course details different definitions, scope and purpose of auditing, audit appointment process, internal control systems wit in an organization, process of planning and audit, having an audit evidence, as well as understanding working papers.

Course Objectives

- To help students develop skills in evaluating different internal control systems of the organization.
- To enable them access knowledge and skills of developing an audit plan.
- To help students develop the idea of analyzing and interpreting several audits.
- To assist students learn the different theories of constructing an audit plan or procedure.

Course content
Introduction

- Definition of an Audit
- Reasons for performing an audit
- Scope of an external audit
- Types of audits
- Auditing regulatory frameworks
- Eligibility to conduct company audits
- Categories of Auditing Practice Board (APB)
- Accounting Vs Auditing

The Audit Appointment Process

- Client screening
- Before accepting information
- Communicate with present auditors
- Present auditors

Internal Controls

- Definition of internal control systems
- Reasons for need of internal controls
- Understanding the system
- Documenting the system
- Methods of ascertaining the system

Planning the Audit

- Typical planning procedure
- The overall audit plan
- Developing the audit plan to meet the audit objectives
- Definition of audit risk in relation to planning
- Form of audit risks

Audit Evidence

- Definition of audit evidence

- Factors that constitutes sufficient appropriate evidence
- Relevance of audit evidence
- Different techniques of gathering audit evidence
- Analytical procedures as substantive procedures

Working Papers

- Definition of working papers in auditing
- Contents of working papers
- Standardization of working papers
- Advantages of standardized papers
- Form and control of working paper
- General guidelines that are followed in preparation of working papers
- Confidentiality, safe custody and ownership of working papers
- Permanent file
- Contents of a typical permanent audit file

Mode of delivery Face to face lectures
Assessment
Coursework 40%
Exams 60%
Total Mark 100%

What is an audit?

An independent examination of the financial statements of an enterprise where such an examination is conducted with a view to expressing an opinion as to whether those statements give a true and fair view.

Why auditing

It was recognised that whenever a fiduciary relationship with the financial implications existed there was need for an outsider with sufficient independence and objectivity to review the accounts of stewardship and to express an opinion as to their honesty or otherwise. For example, audit of financial statements of a company to show how the directors have dealt with the assets of the company on behalf of the shareholders. The companies Act 1948 together with subsequent Acts emphasise the compulsory audit requirement including the recognised professional qualification, duties, powers, responsibilities and minimum disclosure levels by auditors.

Auditing is a very old profession, and the role of the auditor has changed since it originated, from a reviewer of simple accounts, to a role with a strong emphasis on the detection of fraud, to its current state of expressing an opinion on the truth and fairness of a company's financial statements.

Assignment

Read and make notes on the development of auditing.

The purpose of external audit

All users of financial statements have an interest in the state of the company's financial affairs. An independent audit fulfils the need to ensure that those financial statements are objective, free from bias and manipulation and relevant to the needs of the users.

Main reasons for performing an audit;

1. To fulfil a company requirement (legal requirements as per companies Act.)
2. To identify any material weaknesses in the accounting and internal control system and make recommendations for their improvement
3. Audited financial statements are a basis when soliciting credit financing
4. In case of business purchase, combinations or amalgamations the audited values of assets and liabilities are more reliable
5. A satisfactory audit report can be used to provide evidence of a well run business for the interest of stakeholders
6. Disputes between management are more easily settled; for instance profit sharing arrangements.

Disadvantages of an audit

1. High audit fees

The accountant may be involved in the preparing of financial statements or as a tax adviser or general
financial adviser. Since fees are based on time necessarily spent and personnel engaged, the fees are
high for sole traders and partnership

2. Disruption the audit work causes to staff and management of the client in giving time to provide information.

Scope of external audit

No audit is identical to any other however; a number of stages can be identified.

1. Planning of the audit

Assessing the accounting and internal control systems and audit risk assessment
At this stage the auditor makes a preliminary evaluation of the enterprise's internal controls

a) If the controls are likely to lead to a true and fair set of financial statements (strong) the auditor will test those controls (compliance testing/reliance approach)
b) If the controls appear weak, he will carry out extensive testing of the transactions and balances which appear in the financial statements.
c) If the controls are not operating currently the auditor takes on a substantive approach.

2. Consideration of the ways in which audit evidence can be sought
    - Testing of internal controls tests of control
    - Extensive testing of transactions and balances 'substantive procedures'

1. Finally the auditor will review the financial statements as a whole and formulate an audit opinion.

TYPE OF AUDITS

1. Year end audits
2. Interim and final audits

Interim stage - planning and tests of controls
Final state - substantive balance sheet audit

3. Continuous audits - for large clients.

The audit report lends credibility to the accounts since it is the opinion of an independent expert (the auditor). So third parties can rely on the accounts

AUDITING REGULATORY FRAMEWORK

Of the accounting professional bodies the following qualify in a practising firm and once a practising certificate is gained they can audit limited companies;

1. ACCA (Association of Chartered Certified Accountants)
2. ICAEW (Institute of Chartered Accountants in England and Wales)
3. ICAS (Institute of Chartered Accountants of Scotland)
4. ICAI (Institute of Chartered Accountants in Ireland)

Eligibility to conduct company audits;

1. Membership of a recognised supervisory body (RSB)
2. Eligibility under the rules of the RSB

RSB is a body, which exists to ensure that its members comply with their rules and thereby ensuring that all audits are performed to a satisfactory standard by qualified persons. The above professional boddies comprise the RSB.

Rules and practices of RSBs must be such that the following criteria are satisfied;

1. Only fit and proper persons can be appointed as company auditors

An auditor may be an individual, a firm or a body corporate (where 15% of the ownership and
control is in the hands of qualified persons.)

2. The company audit work is conducted properly and with integrity;
    - High standards of performance
    - Compliance with statements of auditing standards
    - General ethical standards
    - Procedures to maintain competence, ensure compliance, monitoring and enforcement

Auditing Practice Board (APB)

It replaced the auditing practices committee (APC) who produce Auditing Standards and Guidelines.
It is different from APC in that its non-practitioner members (lawyers, industrialists, academics) have voices on the board and the board can issue standards in its own right without CCAB having to veto the issue of standards.

Categories of APB guidance

a) Statements of auditing standards (SAS's)

These contain the basic principles and essential procedures with which auditors are expected to comply.
To a greater extent, they agree with international standards on auditing but where there is conflict
UK standards prevail.

b) Practice Notes (PNs)

Give guidance to assist auditors in applying auditing standards in particular circumstances and industries.

c) Bulletins: Provide auditors with timely guidance on new or emerging issues.

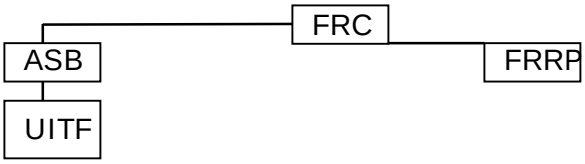
Statement of standards for reporting accountants (SSRA)

This is currently only one dealing with the reporting requirements of smaller companies that are exempt from the audit requirements.
The auditing profession is regulated by the APB guiding its members' activities through the publication of

- SASs
- PNs and

- Bulletins

The accounting standards setting process



a) The Financial Reporting Council FRC)
Comprises around 25 members who are users, prepairs and auditors of accounts
It is responsible for guiding the ASB on its planned work programme

b) The Accounting Standards Board (ASB)
Has about 9 members and issues Financial Reporting Standards (FRSs)

c) The Financial Reporting Review Panel (FRRP)
Has about 15 members
Is concerned with the examination and questioning of departures from accounting standards
Has authority to take companies to court to force them revise defective accounts.

d) The urgent issue task force (UITF)
Covers urgent matters not covered by the existing accounting standards and the normal standard-
setting process is not practicable.

Accounting Vs auditing
Although the auditing progression is regulated by the APB the auditor must ensure that he maintains an independent knowledge of accounting standards and their application because he is primarily concerned with the end result of accounting - whether proper books of accounts have been kept, consistent and appropriate accounting policies were adopted and whether the financial statements comply with legislative requirements and accounting standards.

Other influences
e) The government
Overseas the auditing and accounting profession by financing statutes and regulations within which
the auditor must work. Self regulation for auditors was sanctioned by government in the recognised
supervisory body and recognised qualifying bodies.

f) Department of trade and industry (DTI)
Monitors the auditing profession

g) EC and European Directives
The Directives have an impact an audit practice for example the proposed voluntary community
environmental auditing scheme.

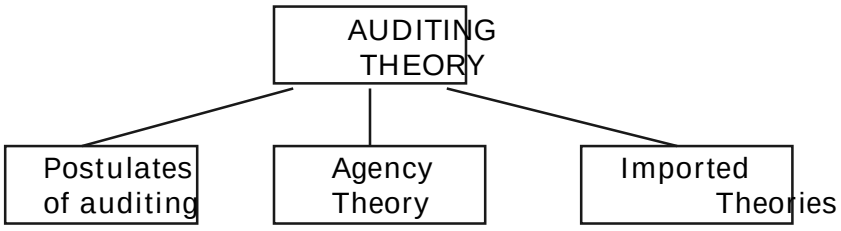
b) International Auditing Bodies

The international federation of accountants (IFAC) publishes international standards on auditing
(ISAs)
The FEE (Federation des Experts Compatibles Europeans) attempts to co-ordinate the activities of
European accounting bodies.

Conclusion:
The main influences on the auditing profession are:

- The companies Acts legislation
- The auditing profession through the APB
- The accounting profession through FRC and its sub-bodies
- The government
- The DTI
- The EC and European directives
- The international auditing bodies

Question
Given that directors have to ensure that fixed assets are correctly recorded, adequately secured, properly maintained, appropriately depreciate and written down where necessary and acquisitions and disposals are properly authorised. What types of controls would you expect to find in such a setting.



Postulates of auditing
Auditing theory supports and justifies practice. Postulates of auditing originally laid down by Martz and Sharat and subsequently developed.

Definition
Postulate: Something which is assumed to be true as basis for an argument, something taken for granted. There are no means of directly verifying or proving postulates and they represent “facts of life” which cannot be further reduced and which must be accepted in order to operate in the field.

If the auditing postulates are not true, then auditing as a discipline has no defence because certain issues cannot be resolved (such as independence)

Mautz and Sharaf: the eight postulates

a) Financial statements and financial data are verifiable
b) There is no necessary conflict of interest between the auditors and the management of the enterprise under audit
c) The financial statements and other information submitted for verification are free from collusive and other unusual irregularities

d) Consistent application of generally accepted accounting principles (GAAP) results in the fair presentation of financial position and the results of operations.
e) In the absence of clear evidence to the contrary, what has held true in the past for the enterprise under examination will hold true in the future.
f) When examining financial data for the purpose of expressing an independence opinion thereon, the auditors act exclusively in the capacity of audit
g) The professional status of the independent auditors imposes commensurate professional obligations.

These postulates have been developed and refined, but their basic premise remains unchallenged.

1. **Financial statements and financial data are verifiable**

This postulate appears to be reasonable and also very practical. If this postulate was not true, then no audit could ever take place, because it represents the fundamental purpose of an audit. There are circumstances of course, where this postulate is discovered to be untrue, or at least it is not operating, when the accounts and systems concerned are too unreliable or inadequate. This situation usually leads to a qualified audit report, the qualification stating that the auditors are unable to form an opinion on the truth and fairness of the financial statements (Called a disclaimer of opinion).

Even in the situation described above, the initial assumption is that the postulate holds true. The main reason that it does hold true most of the time is that there are external pressures on the business to keep a good system of control, producing auditable accounts. Such pressures come from banks, investors, creditors and other invited parties and it is formalised in company acts.

2. **No necessary conflict of interest between auditors and management.**

The postulate assumes that auditors and managers are working together towards the same goal of producing a true and fair set of accounts. Conflicts which arise are part of the normal relationship, such as:-

a) Honest disagreements over, say, the application of an accounting policy
b) Profit related pay, or similar situations, leading managers to manipulate figures to increase their remuneration.
c) Management fraud.

3. If the auditors cannot rely on the representation, explanations and so on given by the managers, then they may be unable to form an opinion, unless other evidence is available.

4. Financial statements free from irregularities

This assumption is the basis for the sampling techniques used by auditors, where a relatively small sample is collected, after using statistical methods, from a much larger' population. The audit approach which reviews the system of internal controls and tests for weaknesses in the system allows statistical sampling to be used. If it was assumed that irregularities both collusive and non-collusive, exist then the sample sizes would be increased to unmanageable levels, increasing the cost of the audit. Managers and auditors would also come into conflict, and this would cause the problem.

There is a move in modern auditing away from this postulate and towards recognition of the possibility of material fraud. This recognised that auditors should carry out their work with the expectation of discovering and material misstatement.

Although in an ideal environment this postulate should hold true, no system can be 100% effective and so reduces might be a better word that eliminates". A good system of internal control should reduce the probability of loss of assets, error, collusive, irregularities, manipulation of results and management override of controls.

5. Application of GAAP results in fair presentation

It is not enough to say accounts show a true and fair view. A bench mark must be provided to aid the auditors, and this is provided by GAAP (Generally Accepted Accounting Practice). UK GAAP consists of SSAPs, FRS and company law since compliance with a standard may occasionally to a result which is not true and fair, the consistency concept steps in. The appropriate policy should be applied consistently to show a true and fair view. Without this guidance, auditors opinions would become so subjective and personalised that they would become useless.

6. What has held true in the past will hold true in the future

This extends the going concern principle as it relies on the accuracy of forecasting and the consistency of decisions by management over a number of years. If it did not hold true, then it would be impossible to rely on trends in the accounts and inter-temporal analytical review procedures (comparing results year to year would become meaningless. The audit procedures to compensate for this loss would be onerous. Including full and long examinations of post balance sheet events. It might even leave the audit open ended until the next audit took place. This is important in the context of representations from management. Particularly from small businesses as any other evidence will be rare, apart from analytical procedures.

7. The auditors act exclusively in the capacity of auditor

This postulate focuses on the independence of the auditors, but it appears to be expressing an ideal which is not met in practice. Large accountancy firms, provide taxation, consultancy and corporate finance services to audit clients (remember that they cannot provide accountancy services to public companies). Small audit firms provide accountancy and taxation services to audit clients. Such audit firms may not see this as a problem affecting independence, but criticism from outside the profession has focused on this issue.

8. The professional status of the independent auditors imposes commensurate professional obligations.

This postulate underlies the concept of due care. It implies that auditors will maintain a standard of professional efficiency and put service before personal interest. As under any sale of services, the buyer is entitled to a good product for his money. The auditors can ensure this by, for example, keeping up to date with technical issues, but there is no absolute definition of what constitutes reasonable care and skill. The cost of negligence is high.

SAS 2002. The matters which should be considered include the following

⇨ Knowledge of the entity's business
- Economic factors/industry conditions
- Important characteristics of the entity
- Operating style/control consciousness of directors
- Auditors cumulative knowledge, expected changes

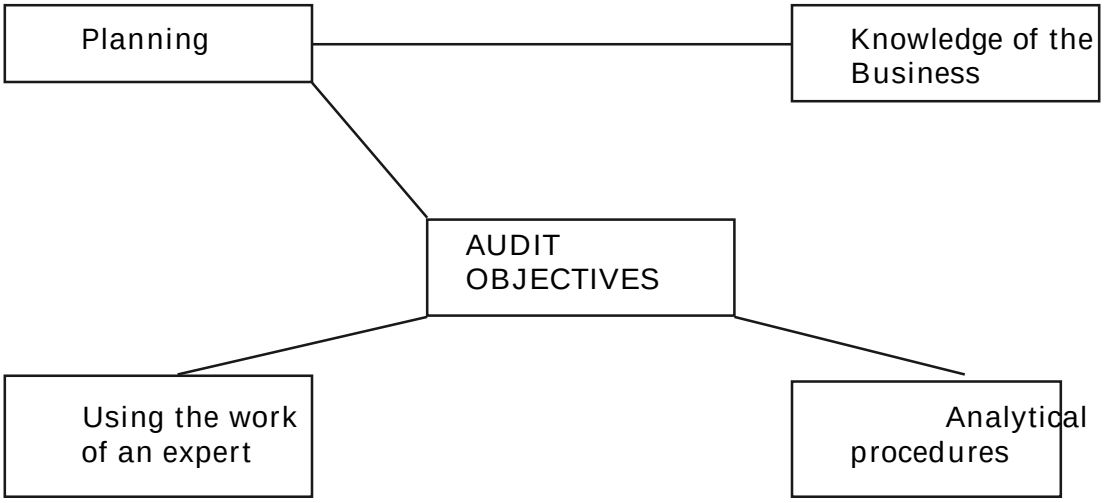
=> Risk and materiality
- Setting materiality for audit planning
- Assessment of risks errors, significant audit areas
- Indication of misstatements (Fraud)

- Complex accounting areas (Accounting estimates)

⇨ Nature, timing and extent of procedures
- Tests of controls Vs substantive procedures
- Use of IT by entity auditors
- Work of internal auditors
- Procedures at/before year end

⇨ Co-ordination, direction, supervision and review
- Involvement of other auditors
- Involvement of experts
- Number of locations
- Staffing requirements

⇨ Other materials
- Regulatory requirements
- Going concern matters
- Terms of engagement, statutory responsibilities
- Nature, timing of reports, communication etc



Planning

SAS 200 planning states that auditors should plan the audit work so as to perform the audit in an effective manner (SAS 2001).

Objectives of audit planning are:-
- Appropriate attention is given on different audit areas
- Potential problems identified
- Facilitate review

SAS 200 looks at recurring audits. For new audits, the procedures below should be extended.

Distinguish between:-
- Overall strategy: audit plan
- Detailed procedures: The audit programme.

Considerations which are relevant in deciding whether a client is high risk include:-

i) Evidence of client engagement in fraudulent or illegal activities.
ii) The state of economic sector in which client operates (A depressed sector may indicate risk)

iii) The nature of the industry and client product lines, for example the building industry or fashion industry which are volatile
iv) The clients previous audit history (frequent changes of auditors and qualified reports are obviously bad news.
v) The general abilities of the client management

THE AUDIT APPOINTMENT PROCESS

CLIENT SCREENING

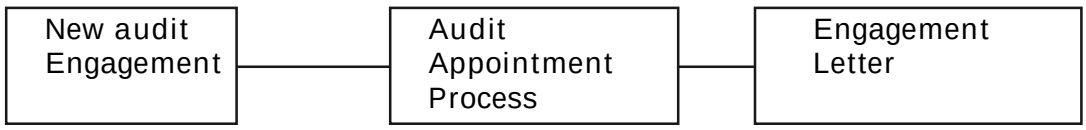
When a potential client approaches an auditor asking him to conduct an audit, the auditor will need to consider legal requirements and ethical considerations (where the potential client has previously had an auditor) when deciding whether or not to accept the potential client as a client.

Auditing standards require auditors to obtain a knowledge of the clients business, sufficient enable them to identify and understand those issues that may have a significant impact on the financial statements.

The knowledge is obtained both before accepting the client and after and should cover the following areas.
a) Industry conditions affecting the client business
b) The entity itself
c) The entity's products, market, suppliers, expenses, and operations
d) The entity financial performance and condition
e) The reporting environment

Risk
Client screening procedures are designed to screen out potentially risky audit clients. A risky client is one which may result in costs exceeding the audit fees due to the extra work that the auditors would need to perform to satisfy his objectives and give this audit opinion. Costs need to be viewed in their widest context e.g if the client ends up suing the auditor for negligence, the auditor will incur costs in defending the action and his reputation will be damaged, particularly if a number of clients are pursuing negligence claims.

The Audit appointment process



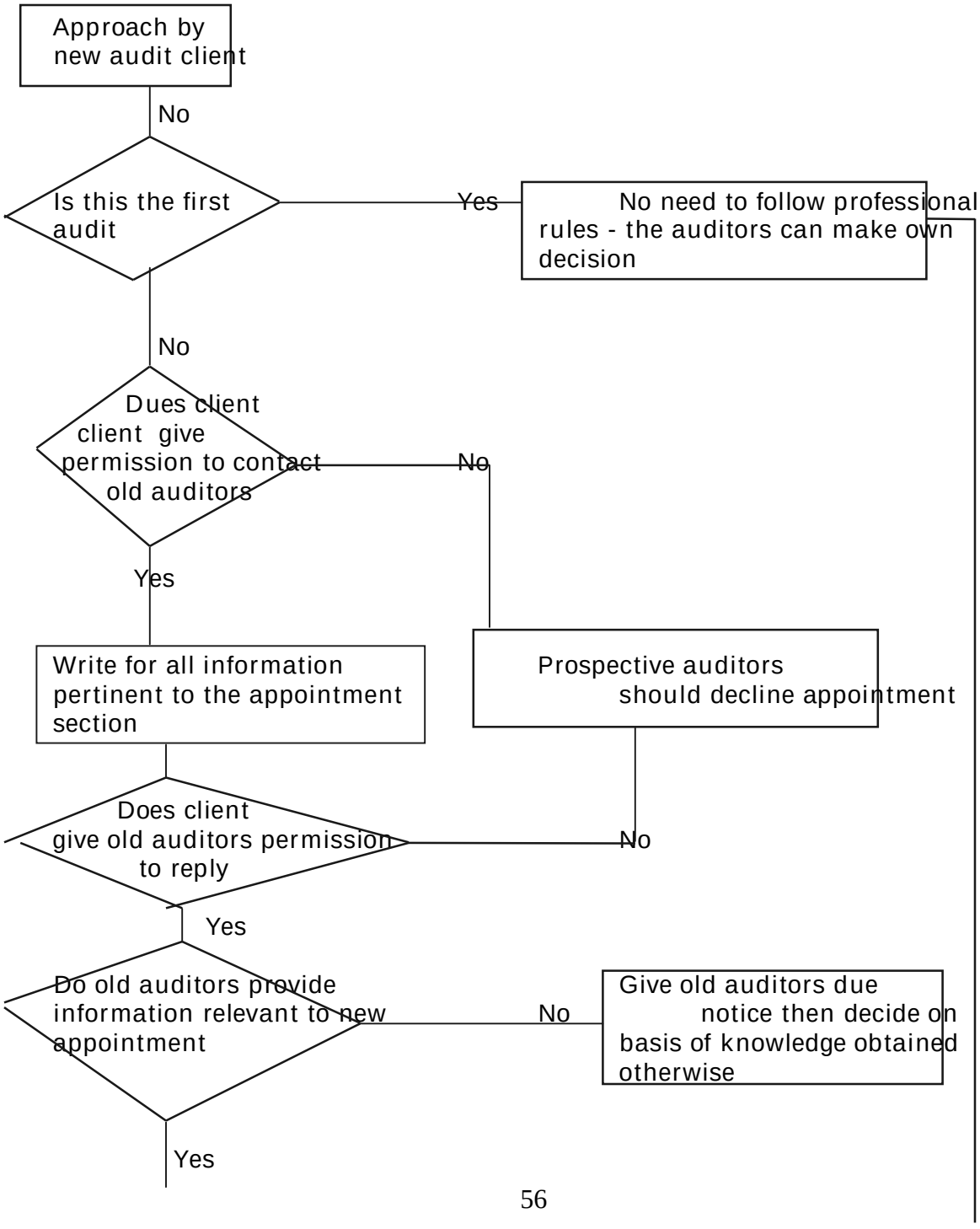
New audit engagement
There are additional audit considerations when a new audit client is obtained
⇨ Before accepting nomination
- Ensure properly qualified to act i.e independent, competent
- Ensure firms resources are adequate to service clients needs i.e staff, expertise, time
- Obtain references in respect of new client, e,g Dun P Bradstreet and assess risk
- Communicate with present auditors

Communicate with present auditors
Rules of professional conduct statements 5 changes in professional appointment.

- Obtain clients permission to communicate with present auditors if refused decline nomination
- Write to auditors requesting information which may help decision whether to accept nomination

Present auditors
On receiving the above request the present auditors should:-

- Request clients permission to discuss affairs freely
- If refused inform proposed new auditors (who should decline nomination)
- Discuss freely all relevant matters



Accept/reject appointment decision

A working paper for the audit file to be used by he audit partners in deciding whether or not to accept an audit client. Consideration should be given to the following factors

i) legal
ii) ethical
iii) practical

Legal

The CA 1985 prohibits officers or servants of the company or partners or employees of an officer or servant of the company from accepting the position of auditors to the company.

The auditor must be a member of a recognised supervisory body (RSB) and eligible under the rules of that body. An RSB must only deem persons eligible for appointment who are

- appropriately qualified
- a member of a firm controlled by a qualified person

Ethical

If the fees from this appointment would exceed 15% of the gross fees of the practice (other than new practices) then the appointment should not be accepted.
Any personal relationship (kinship, friendship or mutual business interest) with an officer or employee of the company would be considered unethical. Any financial involvement with the company such as a shareholding or a loan to or from the company would also be regarded as unethical.

INTERNAL CONTROLS

Definition of internal control system

Defines the internal control system as comprising the control environment and control procedures. It includes all the policies and procedures adopted by the management of an entity to assist in their objective of achieving, as far as practicable, the orderly and efficient conduct of the business, including adherence to management policies, the safeguarding of assets, the prevention and direction of fraud and error, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information.

Control environment means that overall attitude, awareness and actions of directors and management regarding the internal control system and its importance to the entity. It encompasses management style, corporate culture, values, philosophy and operating style, the organisational structure, personnel policies and procedures.

Personnel policies and procedures, for example, would include those covering recruitment, retention and dismissal. The organisation structure should have clear lines of reporting responsibility and the maintenance of an internal audit function and audit committee demonstrates a commitment to high level controls. The use of management accounts for the purposes of variance analysis is also a high level control.

The control environment provides a background to detailed control procedures. It does not of itself, of course, ensure the effectiveness of the internal control system as a whole.

Control procedures are those established to achieve the entity's specific objectives. These objectives in an accounting context include the proper authorisation, timely and accurate

recording of transactions in the correct period, the safeguarding of assets and ensuring the existence of assets recorded. They include particular procedures to prevent, detect and correct errors. They differ from entity to entity and are affected by the size of the entity.

In practice, the choice of controls may reflect a comparison of the cost of operating individual controls against the benefits expected to be derived from them.

Many of the internal controls which would be relevant to the large enterprise are not practical, appropriate or necessary in the small enterprise. Managements of small enterprises have less need to depend on formal internal controls for the reliability of the records and other information, because of their personal contact with, or involvement in, the operation of the enterprise itself.

2. **Why do companies need internal controls?**

Companies need internal controls to stop things going missing and to make some sense of how the business is doing. Documents get lost and assets go home with the staff even where there are controls in place to record everything. Managers have a gut feeling for how the business is doing, but when all they have to prove it is three large boxes stuffed full of invoices and two large boxes full of expenses (and neither of these are quite complete), they may find it difficult to prove their ideas to the taxation authorities, and of course they may well be very wrong.

Documents are batched and pre-numbered so that once can check that they are all there. If some sales invoices have gone missing we may not be collecting what is owed to us. This means that our cash flow suffers and we cannot pay our debts. It also means that our financial statements may be wrong. If our financial statements understate our income we will find it more difficult to obtain finance from the bank we will appear less attractive to investors. If our purchase invoice go missing, or we do not match goods received notes to invoices at the period end in order to arrive at a goods received not invoiced figure, matters are even worse. We think we are making good profits but we are not. We spend money that is owing to creditors and when they present their final demands we have no cash and they threaten to put us into liquidation. Business goodwill is damaged. We then have to adjust profits downwards and we are accused of misleading the bank about our profits in order to obtain finance.

But what is the amounts involved are small? Does one invoice really matter? Experience shows that if one invoice has gone missing it is highly likely that several more are also missing, and the larger the organisation gets, the bigger the numbers get, and the tighter the controls have to be prevent significant errors.

Why so many authorisation controls? In order to allocate responsibility and deal with everyday problems. If fifteen people are involved in the processing of one invoice and something is badly wrong with it, there has to be a mechanism to show that the error occurred at a particular stage. If we do not this, errors continue to happen, no-one takes responsibility and the organisation gets a reputation for inadequate administration and inefficiency, and frauds become possible. Say for example, a clerk routinely authorises a false purchase invoice raised by a friend outside the company. The company pays the invoice and the clerk and his friend share the proceeds. This is a very common type of fraud. Controls to prevent this require payments to be authorised only with reference to purchase invoices that are attached to goods received notes, or authorisations for the receipt of services by managers completely unconnected with the accounting function.

State that internal controls within an accounting system are needed to ensure that:

a) transactions are executed in accordance with general or specific authority
b) all transactions are recorded at the correct amount in the correct account in the proper period so as to permit the preparation of financial statements
c) access to assets and records is authorised.
d) recorded assets are compared with existing assets periodically and appropriate action is taken with regards to differences.

At an early stage in his work the auditor will have to decide the extent to which he wishes to place reliance on the internal controls of the enterprises. As the audit proceeds, that decision will be kept under review and, depending on the results his of his examination, he may decide to place more or less reliance on these controls.

The principal reason why internal control interests the auditor is that the reliance of the accounting records. If the auditor is satisfied that the internal control system is functioning, there is therefore a reduced risk of error in the accounting records.

The operation of internal controls should ensure the completeness and accuracy of the accounting records. If the auditor is satisfied that the internal control system is function, there is therefore a reduced risk of error in the accounting records.

It is very important to the auditor therefore to establish what internal control system exists and then to test that system to ensure that it is working properly.

Another reason that the auditor needs to consider the adequacy of the accounting system is that the auditor usually has an additional responsibility under legislation to form an opinion as to whether proper accounting records have been kept. This implies the operation of a sound system of internal control.

By recording the accounting system and checking its operation by tests of control, the auditor can reduce the amount of substantive procedures. The total amount of work is reduced as a result.

Specific control procedures
The include;
a) Reporting, reviewing and approving reconciliation
b) Checking the arithmetical accuracy of the records
Such controls include checking the casts on a purchase invoice, and recalculating the sales tax on sales invoices.
c) Controlling applications and the environment of computer information
d) Maintaining and reviewing control accounts and trial balances
Control accounts include receivables and payables ledger control accounts, bank reconciliations and non-current asset
registers.
e) Approval and control of documents
In a purchase system for example, there should be present authority limits. An order up to the value of $1,000 could be
approved by a department head, up to $5,000 by any one director, and beyond this by the Board as a whole.
f) Comparing internal data with external sources of information
This might include supplier statement reconciliation
g) Comparing the results of cash, security and inventory counts with the accounting records

An important general principle with respect to assets and records is that segregation. In particular there should be a
division of responsibilities for:

i) authorising or initiating the transactions:
ii) the physical custody and control of assets involved
iii) recording the transaction

No one person should be in a position both to misappropriate an asset and to conceal his act by falsifying the records. For
example, in a sales system the duties of receiving money from customers and writing up the sales ledger should be
separated. If not, money could be misappropriated and the records falsified to cover this.

i) Comparing and analysing the financial results with budgeted amounts.

UNDERSTANDING THE SYSTEM

Accounting and internal control systems.

ISA 400 requires that auditors obtain and document an understanding of the accounting system and control environment sufficient to determine their audit approach, whether that be a systems based approach, or a substantive approach. It also helps with the assessment of inherent and control risk. If control risk is to be assessed as less than high, the justification for that assessment must be documented.

This understanding can be updated year on year and auditors often perform 'walk through' tests, to ensure that their understanding and documentation of the system are correct. This simply involves taking a transaction through the system from source to destination and can often 'double' as a test of control and as a substantive procedure, depending on which elements of the transactions are checked. Such tests are particularly useful where the auditor is relying on the client's documentation of the system.

Remember that most companies are under a legal obligation to keep proper accounting records and that auditors are required to form an opinion as to whether they have done so. Most national laws require that:

a) The accounting records must be sufficient to show and explain the company transactions and must be such as to:
   i) disclose with reasonable accuracy, at any time, the financial position of the company at that time; and
   ii) enable the directors to ensure that any balance sheet and income statement company with the requirements of the legislation as to their form.

National legislation often prescribes specific books and accounts that must be kept

DOCUMENTING THE SYSTEM

Introduction

The various methods of ascertaining and recording the system may be summarised as follows:

Ascertaining	Recording
a) Examining previous audit work	a) Narrative notes
b) Client's own documentation of the system	b) Organisation chart
c) Interviews with client's staff	c) Internal control questionnaires (ICQs) or checklists
d) Tracing transactions	d) Flowcharts
e) Examining client's documents	
f) Observation of client's procedures	

Methods of ascertaining the system

a) Examining previous audit work

In any situation except the first audit, the audit files should contain a record of the system as it operated at the last audit date. Unless there have been major changes, this will only require updating. Thus, the systems examination is work largely carried out at the first audit of a new client.

b) Client's own documentation of the system

Some clients, especially large clients, will have manuals of accounting procedures. These will provide a valuable source of information

c) Interviews with client's staff

At various stages during the examination of the system, the auditor will need to sit down with members of the client's staff and find out how they carry out their functions.

d) Tracing transactions (Walk-through checks)

In order to follow a particular sequence relating to a single transactions, it may be best to follow through a few typical transactions.

e) Examining client's documents

Example of part of an ICE adopted by a practising firm

INTERNAL CONTROLL EVALUATION CHECKLIST PURCHASES - PAYABLES- PAYMENTS CLIENT: PERIOD	Prepared by: Date: Reviewed by: Date

a) Control objectives.
b) Business considerations.
c) The checklist.

a) Control objectives As ICQ
b) Business consideration As ICQ
c) The checklist

1. Purchases

1.1 Can goods be purchased without authority?	Reference	Comments
a) purchase requisitions approvals?		
b) limit of buyers' authority to order?		
c) purchasing segregated from receiving, accounts payable and inventory records?		

unissued orders safeguarded against loss?

1.2 **Can liabilities be incurred although goods not received?**

a) receiving segregated from purchase, accounts payable and inventory records?
b) are all goods passed directly to stores?
c) GRNs or equivalent prepared independently?
d) adequate comparison with order, claims for short shipments etc?
e) invoices, GRNs, direct to accounts payable not purchasing?
f) invoices checked to order and GRNs, prices checked?
g) check of extensions, additions, discounts?
h) documents cancelled to prevent re-use?
i) unmatched documents investigated regularly?
j) freight checked, bills matched to consignments?
k) purchase returns and allowances controlled-follow-up?
l) forward purchases controlled?

1.3 **Can cut-off errors occur?**

a) time lapse from recent of goods to invoice processing?
b) valuation of unmatched GRNs?
c) adequate control and recording of receipts?

1.4 **Can invoices be wrongly allocated?**

a) nominal ledger analysis?
b) analysis independently checked?
c) staff purchases controlled?
d) independent and regular review?

1.5 **Can liabilities be recorded for goods or services not ordered?**

a) goods received without authority?

2. **Trade payables**

2.1 **Can liabilities be incurred but not recorded?**

a) payables agreed periodically?
b) supplier's statements independently reconciled?
c) invoice register?
d) forward contracts?
e) order backlog follow up?
f) debit balances controlled?

3. **Payments**

3.1 **Can payments be made if not properly supported?**

a) discounts taken?
b) control over invoices before validating complete?
c) cheque signatories independent of purchasing, receiving, accounts payable and cheque preparation
d) signatories examine support for payment, check completeness, cancel support?
e) control over signature plates or presigned cheques?
f) control where one signature?

g) frequency with which cheques mailed?
h) independent regular bank reconciliation, with cheques directly from bank and review reconciliation?
i) cheques crossed account payee only, continuity accounted for, control over unused cheques?
j) bank transfers controlled - standing orders?
k) issue of bearer or 'cash' cheques?
l) advances and loans controlled?
m) giro payments, traders credits, direct debits?

PLANNING THE AUDIT

Objective and general principles governing an audit of financial statements
ISA 200 objective and general principles an audit of Financial Statements states that the auditor should carry out an audit in accordance with ISAs and ethical principles to provide reasonable assurance that the financial statements are free from material misstatement.

Reasonable assurance is subject to the inherent limitations of the audit process which arise from the use of testing, the inherent limitations of any accounting or internal control system and the fact the most evidence is persuasive rather than conclusive. A significant element of any audit involves the use of judgement.

The auditor should plan and perform the audit with an attitude of professional scepticism recognising that circumstances may exist which cause the financial statements to be materially misstated.

An example of this principle is that the auditor should look to find additional evidence to support representations from management, and should not simply assume that they are correct.

Extent of audit work
It is for the auditor to decide on the extent of audit work he considers necessary in order to support his opinion. He may decide to conduct an extensive review of the accounting systems by carrying out detailed tests on a large number of transactions, documents, records etc. On the other hand he may wish to rely on the internal controls which are in operation to justify a reduction in the level of audit testing on those items.

AUDIT PLANNING, KNOWLEDGE OF THE BUSINESS AND ANALYTICAL PROCEDURES

ISA 300 planning states that 'the auditor should plan the audit work so that the audit will be performed in an effective manner

Adequate planing of the audit work helps to ensure that appropriate attention is devoted to important areas of the audit, that potential problems are identified and that the work is completed expeditiously. Planning also assists in proper assignment of work to assistants and in co-ordination of work done by other auditors and experts.

The extent of planning will vary according to the size of the entity, the complexity of the audit and the auditor's experience with the entity and knowledge of the business.

Obtaining knowledge of the business is an important part of planning the work. The auditor's knowledge of the business assists in the identification of events, transactions and practices which may have a material effect on the financial statements.

The auditor may wish to discuss elements of the overall audit plan and certain audit procedures with the entity's audit committee, management and staff to improve the effectiveness and efficiency of the audit and to co-ordinate audit procedures with work of the entity's personnel. The overall audit plan and the audit programme, however, remain the auditor's responsibility.

The auditor should develop and document an overall audit plan describing the expected scope and conduct of the audit;

While the record of the overall audit plan will need to be sufficiently detailed to guide the development of the audit programme, its precise form and content will vary depending on the size of the entity, the complexity of the audit and the specific methodology and technology used by the auditor.

Typical planning procedures

Although the auditor's planning procedures will vary from one audit to the next the following are typical:

a) Consider the background to the client's business and attempt to ascertain any problem for that
   sector of industry or commerce which may affect the audit work.
b) Consider an outline plan of the audit including the extent to which he may wish to rely upon internal controls and the extent to which work can be allocated to interim or final audit stages.
c) Review matters raised in the audit of the previous year by examining the audit files and discussing points with staff previously in outed in the audit to ascertain those facts which may have relevance to the current year.
d) Assess the effect if any change in legislation or accounting practice on the financial statements of the client.
e) Review any management or interim accounts which the client may have prepared as these may indicate areas of concern in the audit.
f) Meet the senior management of the client to identify problem areas e.g material variances between budgeted and actual results and significant changes in the client's accounting procedures.
g) Consider the timing of significant phases of the preparation of the financial statements e,g dates of physical inventory counting, balancing of receivable and payable ledgers, posting of general ledgers, preparation of trial balance (list of account balances) and draft accounts
h) Consider the extent to which the client employees may be able to analyse and summarise the financial data and the relevance to the audit of work carried out by the client's internal auditors.
i) Consider the need for expert help and the involvement of other auditors in group audits
j) Determine the number and grade of audit staff to be allocated to each stage of the audit
k) Consultant members of the audit team to discuss any foreseeable problems. Often the partners will consult the manager who then becomes responsible for communication with other personnel used on that particular job. The preparation of a memorandum setting out the outline audit approach may be helpful.
l) A budget should be prepared allocating the time of each member (or grade) of the audit team. This budget should be used to control the time spent on that audit and any major variation (time both under and over spent) should be investigated by the manager. The use of the budget for the previous year would prove a valuable aid inn the preparation of this year's budget.

m) The client should be informed of the expected data of attendance by the auditors' staff and his agreement obtained.

The key failing in the planning process of auditors arise from:
a) the auditor commencing detailed. Testing before have complete the planning work, resulting in omissions, unnecessary work and misunderstandings with the client
b) inadequate documentation
c) lack of a proper understanding of the business

ISA 310 knowledge of the business, required auditors to obtain a knowledge of the business, sufficient to enable them to identify and understand those issues that may have a significant impact on the financial statements.
Knowledge is obtained both before accepting the client and after and should cover general economic factors, industry conditions affecting the client's business, the entity itself, the entity's products, market, suppliers, expenses and operations, the entity's financial performances and condition and the reporting environment.

Analytical procedures include comparison of financial information with prior periods, budget and forecasts and similar industries

It also includes consideration of predictable relationships such as the relationship of gross profit to sales, and payroll costs to the number of employees

Analytical procedures are used at the planning stage to assist in understanding the business and changes in the business, to identify areas of potential risk and to plan other procedures. The auditor's work on planning the audit will usually take place before annual financial statements are available. Accordingly, any analytical procedures performed at this stage of the audit will necessarily be based upon interim financial statements, estimated or budgeted financial statements, financial statements prepared for internal management purposes, or even, in some cases, the prior period's financial statements. The auditor will have expectations as to the relationship between various items in the financial statements and he will examine the financial data available at the planning stage to see whether his expectations match with recorded values. In any case where the results vary from expectations, the auditor should plan to conduct further work.

The auditor in developing his expectations should consider non- financial data and the likely impact of changes in factors external to the enterprise. For example, the knowledge that the client has increased its production capacity may lead to an expectation that sales revenue will have increased; on the other hand, the knowledge that the industry in general has suffered a downturn in demand may lead the auditor to expect sales to have decreased. A variation in gross profit margin may be the result of a change of sales mix or a change in production efficiency, or it may be the result of a misstatement. In any event, where the auditor's procedures efficiency, or it may be the result of a misstatement. In any event, where the auditor's procedures reveal variations from expectations he should plan to conduct further work to discover their cause.

THE OVERALL AUDIT PLAN
Designing, documenting and recording of the audit plan
ISA 300 requires that auditors 'develop and document an overall audit plan describing the expected scope and conduct of the audit'. Matters to be considered include:-
a) the auditor's knowledge of the business
b) understanding the accounting and internal control systems
c) risk and materiality

d) the nature, timing and extent of procedures
e) co-ordination, direction, supervision and review

Although the planning containing the plan will be prepared before detailed audit work commences, it is important to bear in mine the fact that the planning stage does not end there. There will inevitably be adjustments to the original plan which can only be discovered later. A significant breakdown in internal control may entail more work: a change in the timing of physical inventory counting may mean rescheduling the audit. The work of planning is therefore a continuous process throughout the audit.

Developing the audit plan to meet the audit objectives
Most practising firms have formalised the planning exercise for all but the very small audit assignment by using a standard planning memorandum in which evidence of initial decisions as to the appropriate procedures relevant to each assignment is recorded together with adjustments and additions to those procedures resulting from audit tests and review processes.
a) Highlight three objectives of audit planning
b) Outline six typical planning procedures

a) The objectives of the audit planing are:
   i) to ensure that appropriate attention is paid to the different areas of the audit. This involves, for example, ensuring that adequate time is devoted to the audit of inventories, which are usually higher risk, and that petty cash, which is usually lower risk, is not overaudited.
   ii) to ensure that potential problems are identified, such as weakness in the control over payables, which might lead to a material understatement
   iii) to facilitate review

Planing also assists in the proper allocation of work to the audit team and the co-ordination of work done by other auditors and experts.
b) I) Review of points raised in previous year's audit
   ii) Assess the effects of changes in legislation or accounting practice
   iii) Review of management accounts
   iv) Review of significant changes in systems
   v) Preparation of a timetable of audit work and a budget
   vi) Consideration of the extent to which client's staff or internal audit can assist in accounting matters.

AUDIT RISK
At the planning stage of the audit the auditor considers the extent and nature of the audit work he is to perform. It is common sense to realise that the 'riskier' the client is, the more work the auditor will plan to perform.
This risk might take many forms. It could be a risk that the client is operating in a volatile market, and may not succeed. It could be a risk that the financial statements are misstated because management are biased, or because internal controls have failed to detect and correct errors.

Alternative approaches to an audit
In order to achieve the audit objectives, evidence is required. In practice there are two main way this evidence is acquired.
a) **Systems approach**
The evaluation of internal control forms the basis of the audit. Detailed testing of items the financial

statements is kept to a minimum.

b) **Direct verification approach**
More detailed testing of items in the financial statements is carried out. The opinion based upon the
ability of the auditor to obtain sufficient appropriate evidence from number of sources.

In most situations the systems based approach is used as it is the most efficient method of arriving at an audit opinion.

Risk-based audit
The risk-based audit is a development of the system based audit. It is used by auditors in order to concentrate on high risk clients and on high risk areas of a client's business rather than perform detailed audit tests on all areas of a client's business. It enables a cost effective audit to be achieve.

The auditor should obtain an understanding of the accounting and internal control system sufficient to plan the audit and develop an effective audit approach. The auditor should use professional judgement to assess audit risk and to design audit procedures to ensure it is reduced to an acceptably low level'.

The auditor aims to ensure that there is no more than, say, a 5% risk that his opinion on the financial statements is incorrect. Or, in other words, he is ensuring that he is 95% certain that his opinion on the financial statements is correct. (Audit confidence is measured here as 100% minus audit risk). The percentage used (i.e 95%) is one of convention only. It implies that we can never be 100% sure of any conclusion. This is known as audit risk and means the auditors accept that 5 in every 100 reports issued may be incorrect. Audit risk can be set at any level. If auditors set it at 100%, there is no need to do any work at all, but there is a high risk of being found negligent! Auditors in practice 'set' audit risk at 4 - 6% and tailor their audit procedures accordingly.
Total audit risks, the risk of giving an inappropriate opinion when financial statements are materially misstated, has three components:
a) inherent risk (or IR)
b) control risk (or CR); and
c) detection risk (or DR).

These three risks multiplied together give total audit risk.
Remember though that it is the auditor's judgement that is always used to determine the value to be placed on these items - there is no hard and fast rule that the auditor can follow. Broadly, the lower the risk level required, the greater the audit work required.

Inherent risk, control risk and detection risk
a) **Inherent risk**
Definition: The susceptibility of an account balance or class of transactions to material misstatements, irrespective of related internal controls.

The risk will be affected by such items as how much the company is subject to market forces, the
cash situation of the company, the trading history of the company, the nature and incidence of
unusual transactions. Inventory, for example is more inherently risky than cash as there is greater

scope for manipulation and error. A business inn the construction industry is more risky than a food
retailer as it is more volatile.

b) Control risk
Definition: The risk that material misstatement could occur in an account balance or class of
transactions which would not be prevented or detected by the accounting or internal
systems

The risk will be affected by such factors as the control environment at the company including for
example, the integrity of the staff operating the system, the extent of supervisory controls, and the
strength of controls in particular account areas.

The preliminary assessment of control risk should always be high unless the auditor can either
identify controls that are likely to prevent or detect misstatements in each area, or, plans to perform
tests of control to support the assessment.

There should be full documentation of the accounting and internal control system in the auditor's
records, and of his assessment of control risk.

Evidence should be obtained through tests of control to support any assessment of control risk that is
less than high and the lower the assessment of control risk, the more evidence is needed to show that
systems are suitably designed and operating effectively.

When tests of control are complete, auditors should review their preliminary assessment of control
risk.

c) **Detection risk**
Definition: The risk that auditor's substantive procedures do not detect a material misstatement in an
account balance or class of transactions.

This is the 'variable' in the equation; the lower the auditor wishes detection risk to be, the more
substantive procedures must be performed and the larger sample sizes must be. Detection risk can
never be eliminated entirely because it encompasses human error.

The level of detection risk will determine the type and amount of audit testing to be carried out. If detection risk cannot be reduced to an acceptably low level, a qualified audit opinion should be issued. Detection risk is found by using the equation already given above, but re-arranging it to give:

DR = AR ÷ (IR x CR)

This simply means that the less effective the control system, and the greater the inherent risk in the business, the greater the level of detection risk. The auditor will therefore need to increase his audit testing. This will compensate for the poorer controls of the client and/or the greater risk arising from the nature of the client's business.

Entity risk
The combination of inherent risk and control risk is referred to as client risk or entity risk i.e both these risks relate to a client as an entity. It is both elements of entity risk which the auditor needs to consider at the planning state although control risk will need to be re-considered when the client's accounting systems are examined in detail.

Many auditors use formal procedures at the planning stage of the audit in order to assess whether the client is high or low risk. This is in form of enemaluation questionnaire

PLANNING MATERIALITY

Concept of materiality
An item is material of its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements.

Materiality is considered in planning audit procedures and in evaluating the effect of misstatements.
The auditor in planning the audit therefore needs to establish materiality levels to ensure that any material misstatement or omissions in the accounting records are discovered.

Establishing materiality levels
There are two levels of materiality to be considered, materiality at the overall financial statement level and materiality for individual balances and classes of transactions. The latter is usually derived from the former.
There is an inverse relationship between materiality and the level of audit risk. The higher the materiality level, the lower the audit risk and vice versa. Where, for example, materiality is low, audit risk is increased and the auditor can compensate for this by either carrying out additional tests of control, or by increasing substantive procedures. Either will have the effect of reducing the assessed level of control risk.
Materiality at the planning stage is often set at a lower level than is strictly necessary in order to reduce the risk of undiscovered misstatements, and to deal with the potential problem of having to adjust materiality levels at a later date in the light of evidence obtained.
The most common bases used are a percentage of sales, pre-tax profit or asset values

AUDIT PROGRAMMES
Designing the audit programme
ISA 300 requires auditors to 'develop and document an audit program setting out the nature, timing and extent of planned audit procedures required to implement the overall audit plan'.
The audit programme is essentially a record of the audit testing. It may also specify audit objectives for each area and time budgets. It shows the members of staff who have carried out the work and contains evidence of review of work.

The audit programme serves as:
a) a set of instructions to the audit team

b) a means to control and record the proper executive of the work
c) a record of the audit procedures to be adopted, the audit objectives, timing, sample size and basis of selection for each area

The audit programme is an important part of the auditor's working papers and records a significant part of the audit evidence required to justify the audit opinion.
Audit plans and the audit programme should be revised as necessary during the course of the audit

Standardised audit programmes and professional judgement

Definition: A standardised audit programme is a pre-prepared listing of objectives and tests which is
used on any audit.
Standardised audit programmes are common in practice and are often drawn from a database of procedures in large firms.
Their advantages are that they streamline work and act as a checklist to ensure that all important areas are considered. They improve the efficiency of the audit and facilitate delegation and control.

However they have a disadvantage in that, if used slavishly, they may stifle professional judgement. Auditors need to use professional judgement in their work as all audits will be different and therefore tests need to be designed for the different circumstances found in each audit

A middle way is used by some firms who, in their audit manual, will suggest the items to be included in an audit programme rather than requiring a standard form to be filled in.

STAFFING AND TRAINING ISSUES
Staffing
Planning needs to cover such points as:
- number of staff required
- level of expertise required;
- length of time each member of staff will be needed;
- exact timing of their work.

To assist in the allocation of staff to each stage of the audit, larger firms will designate job titles to each member of the audit team.

Job tile	Job description as regards the audit
Partner	Agree fees with client
	Review audit
	Sign audit report (after approval of accounts by directors)
Manager	Set broad time limits to job
	Assign staff to job
	Agree detailed timetable with supervisor or senior
	Review staff requirements and timetable at various stages
	Review audit in detail at end of interim and final audits
Supervisor (or junior manager)	Take charge of large jobs e.g a large group of companies, where each company or division is audited by a senior.

Senior	Take charge of the audit Agree audit timetable with client, and manger or supervisor Decide on detailed audit work Compile audit working papers
Clerks, semi-seniors And juniors	Perform detailed audit work assigned by seniors.

Training

Membership via qualification with an appropriate professional body is a pre-requisite of entitlement to audit. Training requirements include the setting of examinations and practical training. The practical training should not stop when an auditor has qualified. The practical training continues through the requirement to undertake continuing professional education (CPE)

Large firms run internal training course to satisfy the CPE requirement; smaller firms are often members of a training consortium which provide equivalent course.

Recognising the needs and limitations of the use of experts

ISA 620 using the work of an expert recognises that the auditor's education and experience enable him to be knowledgeable about business matters in general, but he is not expected to have the expertise of a person trained in the practice of another profession, such as an actuary or engineer. He may need to obtain evidence in the form of reports, opinions, valuations or statements from an expert. And ' when using the work performed by an expert, the auditor should obtain sufficient appropriate audit evidence that such work is adequate for the purposes of the audit.'

The following points are relevant to this area of auditing;

a) **Determining the need to use the work of an expert**

One element of the planning of an audit would be the consideration of whether specialist evidence
(From lawyers, stockholders, geologists, actuaries, etc) may be necessary for the auditor to form his
opinion. Factors affecting this decision would include the materiality of the item concerned, the risk
of misstatement based on the nature and complexity of the matter, and the quantity and quality of
other audit evidence available.

If it decided that expert evidence is needed, the expert should be engaged or employed either by the
client, or by the auditor with the consent of the client. If the client refuses, for whatever reasons, and
there is no other source of evidence for the item concerned, the auditor should qualify his audit
report.

b) **Competence and objectivity**

In order to be able to rely on the evidence provided by the expert, the auditor must be satisfied that

the expert is competent and objective. Competence would be evidence by certification, licensing, or
membership of an appropriate professional body, and suitable experience and reputation.

The expert will not be sufficiently objective if he is related to the entity by being financially dependent on it or by having an investment in it. Objectivity may also be impaired where the expert
is employed by the entity.

c) **Scope of the expert's work**

Once a specialist is appointed, there should be a consultation between the auditor, client and
specialist to determine the scope of the expert's work. This should clarify the objectives of the
expert's work, sources of information available to him, the form and content of the report required,
the intended use of the work, the expert's access to books and records, and the assumptions and
methods to be used by him.

d) **Assessing the work of the expert**

The auditor will need to assess the appropriateness of the expert's work. He should, therefore,
examine the specialist's report and determine if it is acceptable in the light of other work performed
and the auditor's knowledge of the business. He should obtain an understanding of the assumptions
and methods used and considered whether they are appropriate and reasonable. If the auditor is not
satisfied with the expert's work, he should discuss the problem with the client's management and
with the expert. It may occasionally be necessary to obtain the opinion of a second expert.

e) **The audit report**

Generally, no reference should be made to the use of an expert in the audit report as this may imply a
division of responsibilities or be misunderstood as a qualification. If it becomes necessary to modify
the audit report, it may be appropriate to refer to the expert, but this is only appropriate with the
expert's permission. If this is refused, legal advice may be necessary.

AUDIT EVIDENCE

ISA 500 audit evidence requires that auditors 'obtain sufficient appropriate audit evidence to be able to draw reasonable conclusions on which to base the audit opinion.
'Sufficient' relates to quantity of evidence, 'appropriate' relates to the quality or reliability and relevance of evidence
Evidence will normally be sought from a variety of different sources as evidence is persuasive rather than conclusive and auditors seek reasonable, not absolute assurance.

Sufficient, appropriate evidence

The auditor's judgement as to what constitutes sufficient appropriate evidence is influence by such factors as:

a) the assessment of inherent risk at the financial statement level and the individual balance or class of transaction level
b) the nature of the accounting and internal control systems and control risk
c) the materiality of the item
d) experience gained during previous audits
e) results of audit procedures
f) the source and reliability of the information available

We have already noted that the assessment of risk affects the amount of evidence required. Risk may be in a specific area, for example inventory or bad debt allowances are always subjective and hence high risk areas. Alternatively it may be a risk running through the financial statements as a whole. For example;

a) the auditor may have found material errors in the past; he may lack confidence in those preparing the records.
b) the company may be approaching insolvency and hoping to impress potential financial backers by showing the figures in a better light.
c) a bonus to be paid to management may be based on reported results.

Accounting and internal control systems:

ISA 400 Assessments and Internal Control requires that auditors obtain and document an understanding of the accounting system and control environment sufficient to determine their audit approach. The means of obtaining and documenting that understanding, by the use of narrative notes, flowcharts etc. Audit approach will broadly comprise either.

a) a system based approach whereby the auditor obtains comfort on the adequacy of the system by means of tests of controls, supplemented by a reduced level of substantive testing; or
b) a wholly substantive approach

The former is by the more efficient approach but the letter is often necessary in small business where the accounting and internal control systems are weak.

ISA 500 audit evidence requires auditors to obtain sufficient, appropriate evidence to support the assessed level of control risk.

Test of control are performed to obtain audit evidence about the effectiveness of the:

a) design of the accounting and internal control system for the prevention, detection and correction of misstatements
b) operation of internal control through the period.

So, for example, if the preliminary assessment of controls over payable is low risk (i.e the system of controls over payables appears to be goods at the planning stage) and tests of controls show that the controls are in fact good (i.e postings to payables are properly checked and authorised etc), it may be possible to reduce the sample of payables selected for circularisation or reconciliation at the year end.

Note that where control risk is assessed as less than high, auditors must document the basis for that conclusion and that it is often necessary to assess inherent risk and control risk together.

Deviations from prescribed controls may result from changes in personnel, human error or changes in the volume of transactions. The idea of an ‘exception’ is an important one. The auditor cannot excuse failure of a control on the grounds that the amounts involved were

small. If a control can fail in respect of a small monetary amount, it is as likely to fail with a significant amount.

The auditor will not be able to take comfort from the operation of controls if he has found any exceptions - unless he can satisfy himself that the exception is an isolated departure. An example of this could be an error made on a day when a temporary clerk was employed where there are no errors in any other time periods. The auditor may have to take that day and test it more extensively (i.e not rely on internal controls), but he could rely on controls over the remaining period. He is effectively splitting the year into two populations, taking a systems approach for one, a substantive for the other. If substantially different controls are used at different times during the period, auditors need to consider each separately.

Where the exceptions found are unacceptably high, the effect is to require a reassessment of the control risk ie, the internal control system cannot be relied upon to the extent originally envisaged. Control risk is therefore increased and therefore the substantive testing will need to be increased. In addition the nature of the errors found may result in the auditor concluding that his initial assessment of the inherent risk is incorrect. You need to appreciate that the auditor in planning the audit is not possession of detailed facts about the company's operations and the testing procedures provided him with further information that may be his original opinion.

Bear in mind that in practice it can be difficult to distinguish between a series of isolated deviations from the application of a control procedure and the non-functioning of that procedure as a whole. Consider the following: 'Our regular member of staff was off sick in March, in April we employed a temporary clerk, in May we had a reorganisation and in June we had a full systems failure and spent all of our time reinputting information. For these reasons only half of your sample of credit notes have been authorised.' On the assumption that credit notes were authorised for the rest of the period, do you consider the procedure to have been operating effectively, or has it broken down? It is of course a matter of professional judgement.

Substantive procedures - relevance

Substantive procedures are tests performed to obtain audit evidence to detect material misstatements in the financial statements and are of two types;

a) tests of details of transactions and balances analytical procedures
b) analytical procedures

The relevance of the audit evidence should be considered in relation to the overall audit objectives of forming a n opinion and reporting on the financial statements. To achieve this objective the auditor needs to obtain evidence to support the following financial statement assertions (i.e assertions by management embodied in the financial statements.

a) Existence: an asset or liability exists at a given date (i.e the assets and liabilities are not overstated.

Auditors spend a great deal of time on this assertion confirming the existence of assets such as
tangible non-current assets, inventories, receivable and cash. Clearly this is a fundamental assertion;
no other rights or obligations relating to the asset or liability).

b) Rights and obligations: an asset or liability pertains (i.e ' belongs') to the entity (i.e the entity has legal or other rights or obligations relating to the asset or liability).

The auditor must ensure that it is the business which owns the asset at the balance sheet date. There
are many situations where an asset could be on the business premises but belong to someone else.
Inventories, for example, may have been sold but not yet delivered. In a small business, some of the
assets may belong to the major shareholder.

c) Occurrence: a transaction or vent occurred during the relevant accounting period (i.e has correct cut-off been applied?)
d) Completeness: there are no unrecorded assets or liabilities, transactions or events (i.e the assets, liabilities, transactions and events are not understated.)
e) Valuation: the asset or liabilities is recorded at an appropriate carrying value; i.e for a non-current asset this would be initial cost plus increases (e.g revaluations), minus decreases (e.g depreciation and write downs to recoverable value).
f) Measurement: a transaction or event is recorded at the proper amount in the correct period. This refers to income statement items and prepayments and accruals
g) Presentation and disclosure: must be in accordance with relevant legislation and accounting standards (i.e the applicable financial reporting framework)

Two of the most important assertion tests are for completeness and existence. These are tests going in the 'opposite direction' to each other.

If for example the auditor wishes to test for the completeness of payables, he should take a sample of source documents such goods received notes, and trace them through the related invoices, daybooks and ledgers to the financial statements in the form of payables.

If on the other hand he wishes to test for the existence of receivables, he should start at the other end with a sample of receivables from the financial statements and trace these back through the ledgers, daybooks and invoices to the source documentation ie the orders or despatch notes.

Auditors in practice are concerned about the completeness or understatement of expenses and liabilities, and the existence or overstatement of assets and income. However, remember that if the overstated credit or an understated debit. If he discovers an understated credit there muse also be either an understated debit or an overstated credit.

The best test of the existence of an asset is to check its physical existence if it is tangible and the entity's document to title if it is not. Just because an asset exists does not mean to say that it belongs to the reporting entity; documentary evidence is needed to prove ownership.

Substantive tests may be incorporated with other procedures such as tests of control. An invoice for example is checked for both its accuracy (substantive) and its authorisation (test of control). The same invoices may also be used as part of a 'walk through' test which the auditor will perform as part of his preliminary assessment of internal controls at the planning stage.

Substantive procedures - reliability

Although the reliability of audit evidence is dependent upon the particular circumstances, the following general presumptions may be found helpful:

a) evidence obtained form external sources is more reliable than that obtained from the entity's record

b) evidence obtained from the entity's record is more reliable where the accounting and internal control system operate effectively;
c) evidence obtained directly by auditors by such means as analysis and physical inspection is more reliable than evidence obtained by or from the entity;
d) documentary evidence is more reliable than oral evidence

Documentary evidence is least reliable if created and held by the entity (e.g invoices). It is more reliable if it is created by third parties and held by the entity (e.g supplier statements). It is most reliable if it is created by third parties and held by the auditor (e.g confirmation of receivables).

The auditor should consider whether the conclusions drawn from differing types of evidence are consistent with one another. When audit evidence obtained from one source appears inconsistent with that obtained from another, the reliability of each remains in doubt until further work has been done to resolve the inconsistency. However, when the individual items of evidence relating to a particular matter are all consistent, then the auditor may obtain a cumulative degree of assurance higher than that which he obtains from the individual items. This is a form of 'synergy'.

Unfortunately, there are no hard and fast rules against which the reliability of evidence are by their nature difficult, and no satisfactory solution is as yet available. Most of the negligence claims against auditors arise where the quality of audit evidence is weak. Such cases rarely get into court but substantial cash settlements have been made out of court by many firms of auditors.

These settlements give a clear indication of the cost of lack of quality control and consequent weakness of audit evidence. Clearly when things go wrong in a business, a client will consider suing his auditors. The auditor must ensure that he has sufficient evidence to defend himself against such a claim.

Activity

Explain each of the following techniques of gathering audit evidence and give an example of each:
a) Inspection
b) Observation
c) Enquiry and confirmation
d) Computation
e) Analytical procedures

Activity solution

a) **Inspection** - this covers the physical review or examination of records, documents and tangible assets. An example of a test of controls is examining copy sales invoices for authorisation. An example of a substantive procedure would be checking the physical existence of a tangible asset. Additional work may be required to determine ownership, valuation and contractual obligations.
b) **Observation**- this technique involves looking at a process or procedure being performed. However, this observation may not be typical of the usual conduct of the procedure. An example is the distribution of wage packets to see that internal control procedures are adhered to or the observation by auditors of inventories being counted in accordance with instructions.
c) **Enquiry and confirmation** - seeking relevant information from knowledge persons inside or outside the enterprise, whether formally or informally, orally or in writing. The reliability of this techniques depends on the qualification and integrity of the source. An

example is the seeking of formal representations from management on the value of a material subsidiary company in an overseas country. Confirmation consists of seeking to corroborate responses to enquiry information in the accounting records (e.g confirmation of receivable balances).

d) **Computation** - checking the arithmetical accuracy of source documents and accounting records or performing independent calculations (e.g checking the addition of the trial balance)

e) **Analytical procedures** - the analysis of significant ratios and trends including the resulting investigation of fluctuations that are inconsistent with other information, or deviate from predicted amounts.

Note that all of the above can be used as a rest of control or as substantive procedures and that many can be performed using computer assisted audit techniques which are dealt with in a later chapter.

Analytical procedures as substantive procedures

Analytical procedures deal with comparisons of financial and non-financial information and were considered above in the content of planning. Analytical procedures used as substantive tests can be used alone where the total amounts involved are immaterial and in conjunction with detailed tests of transactions and balances elsewhere. These procedures provide good 'overall' evidences as to the accuracy of a balance or class of transactions. Examples include the following:

a) A comparison of payroll costs on a monthly basis taking account of wage rises, starters and leavers and seasonal work.

b) A comparison of sales with expenses, on a monthly basis and as a comparison with prior years

c) A comparison of the ageing of inventories or receivable on a monthly or quarterly basis and calculation days sales outstanding or inventory turnover.

Analytical procedures are used widely but are limited by factors such as the accuracy and predictability of relationships and the availability, relevance and comparability of information. They are also limited by the auditor's knowledge of the business and the availability of other types of evidence. It is common for analytical procedures to be performed on management accounts.

Backtor

a) I) Flowcharts provide evidence of the system in operation and, as they were prepared by the audit staff, the value of the evidence is good. The tests of control demonstrated that the system does in fact operate as recorded and, if it is necessary, this could be further substantiated by walk through tests.

ii) The statement provides evidence as to the accuracy of the depreciation chart the income statement, and the net book value of plant in the balance sheet. As oral evidence from someone from within the enterprise, it is not particularly reliable. Further evidence could be obtained by considering the useful live similar items of plant in the past or consulting trade journals which may detail relevant information.

iii) The newspaper report provides evidence that the auditor may wish to consist when carrying out his overall review of the financial statements of the enterprise. It is also of importance in considering the continuing commercial viability of company. As the evidence is from a source independent of the company considered to be reliable, but it must be borne in mind that newspaper reports be based upon hearsay and not just

fact. The quality of the evidence could be improved by discussing the matter with management or considering volumes sales in recent months.

iv) The letter provides evidence that the company is a going concern. As the evidence is from a source external to the company, it is reliable, but would be more so if the letter had been sent direct to the auditors. To substantiate the evidences the normal bank letter would be sent.

v) Attendance at a client's inventory count and performance of test counts provide evidence as to the existence and valuation of inventories. As the evidence documentary, was prepared by a member of the audit firm, and is based on physical inspection, it is very reliable. To support the evidence obtained, the items would need to be traced through to the final inventory valuation.

vi) Direct confirmation from a customer provides evidence as to the accuracy of the receivables figure included in the balance sheet. As the evidence is documentary and from a source external to the company, it is reliable. To further support the evidence, the receipt of cash from the customer, after the year-end, could be checked.

b) If items of evidence are inconsistent, then the reliability of each remains in doubt until the inconsistency had been resolved. With respect to the example given, the auditor would need to find evidence to explain the increased useful life from, for example, trade journals, etc.

WORKING PAPERS

Recording the audit process.

ISA 230 documentation states that the auditors should document matters which are important in providing evidence to support the audit opinion and evidence that the audit was carried out in accordance with ISAs'. Working papers should be 'sufficiently complete and detailed to provide an overall understanding of the audit.' They should record:

a) planning information
b) the work done and when it was done
c) results and conclusions

The extent of working papers is a matter of professional judgement and it is neither necessary nor practical to record every matter the auditor considers. It may be useful to consider what would be necessary to provide another auditor who had no previous experience with the audit with an understanding of the work performed and the basis of principal decisions, but not the detailed aspects of the audit.

Audits are required to record all matters which are important in supporting the report and in particular their reasoning and sufficient matters that requires the exercise of judgement. It is in areas such as these that the auditor may subsequently be questioned, often with the benefit of hindsight, and it is important for the auditor to be able to show what he knew at the time.

Working papers should be made available to third parties without client consent and extracts from the papers can be made available to the client entirely at the discretion of the auditor. However the auditor's working papers are not a substitute for proper accounting records!

ISA 230 required that appropriate procedures should be undertaken to maintain the confidentiality and safe custody of working papers and for their retention for a sufficient period to meet regulatory requirements.

Contents of working papers

a) Information likely to be of continuing importance on requiring audits i.e permanent file information such as the company's constitutional documents and other information concerning the legal and organisational structure of the entity.
b) Auditing planning information e,g audit planning memoranda and time budgets
c) Details of internal control and the accounting systems of the business, including the auditor's evaluation and assessment of risk.
d) Details of audit work carried out, including notes of errors, action taken and conclusions drawn, including work carried out by other auditors.
e) Evidence of review of audit work
f) Supporting schedules of financial statements
g) Audit summary including significant and unusual mattes
h) Copies of approved financial statements and auditors' reports, letter of representation, engagement letters, and reports to management on weaknesses in internal controls

Standardisation of working paper

Standardisation of working papers offers several advantage

a) It improves the efficiency of the preparation and review of working papers
b) If facilitates the delegation and review of work

AUDIT EVIDENCE

SAS 400 Audit evidence requires that auditors "obtain sufficient appropriate audit evidence to be able to draw reasonable conclusions on which to base the audit opinion. Sufficiency and appropriateness are interrelated and apply to audit evidence obtained from both tests of control and substantive procedures.

Sufficiency is the measure of the quantity of audit evidence appropriateness is the measure of the quality or reliability of audit evidence and its relevance to a particular assertion.

Usually audit evidence is persuasive rather than conclusive and auditors therefore often seek audit evidence from different sources or of a different nature to support the same assertion.

Sufficient, appropriate audit evidence:

The auditor will use judgement to decide what is sufficient and appropriate in the particular circumstances since he seeks to provide reasonable, net absolute, assurance that the financial statements are free from material misstatements.

The auditors judgement as to what is sufficient audit evidence is influenced by such factors as:

- The assessment of the nature and degree of risk of misstatement of both the financial statement level and the account
  balance or class of transactions level.
- The nature of the accounting and internal control systems, including the control environment
- The materiality of the item being examined
- The experience gained during previous audits and the auditors' knowledge of the business and industry;
- The findings from audit procedures, and from any audit work carried out in the course of preparing financial
  statements, including indications of fraud or error; and
- The source and reliability of information available

If unable to obtain sufficient appropriate audit evidence, auditors, auditors consider the implications for their report.

Since the assessment of risk affects the amount of audit evidence required enough evidence need to be gathered in specific areas of risk such as:
- where the auditor may have found material errors in the past, and the lacks confidence in those preparing records;
- where the company is approaching insolvency and is helping to impress potential financial backers by showing the
  figures in a better light.
- where any bonus to be paid to management may be based on reported results
- where an amount has been derived as an estimate based on subjective procedures

Accounting and Internal Control Systems
The aspects of the relevant parts of accounting and internal control systems about which auditors seek to obtain audit evidence are:-

a) Design: the accounting and internal control systems are capable of preventing or detecting material misstatements; and
b) Operation: the systems exist and have operated effectively throughout the relevant period.

The audit approach will broadly comprise either

i) a systems based approach where the auditor obtains comfort on the adequacy of the system by means of tests of controls, supplemented by a reduced level of substantive/testing or
ii) a wholly substantive approach in which extensive detailed testing is performed. (common for small business where the accounting and control systems are weak and the auditor needs to use this method to obtain sufficient and appropriate evidence).

Accounting system
Means a series of tasks and records of an entity by which transactions are processed as a means of maintaining financial records. Such systems identify, assemble, analyse, calculate classify, record, summarise and report transactions and other events.

The internal control system
Includes all the polices and procedures adopted by the directors and management of an entity to assist in achieving their objective of ensuring as far as practicable, the orderly and efficient conduct of its business, including adherence to internal policies, the safeguarding of assets, the prevent on and detection of fraud and error, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information.

The auditor should make a preliminary assessment of control risk and then plan and perform tests of control to support that assessment. e.g if the preliminary assessment of controls over creditors is low risk (the system of controls over creditors appears to be good at the planning stage) tests of control show that the controls are in fact good (proper posting, checkings and authority) it may be possible to reduce the sample of creditors selected for circularisation or reconciliation at the year end.

Where control risk is assessed as less than high, auditors must document the basis for that conclusion and that it is often necessary to assess inherent risk and control risk together. Effective controls may lead the auditor to reduce the controls.

Deviations from prescribed controls may result from change in personnel, human error or charges in the volume of transactions.
The auditor cannot excuse failure of a control on the grounds that the amounts involved are small; a control that fails for small amounts will fail with significant amounts as well.

The ideas of an exception is an important one; the auditor will not be able to take comfort from the operation of controls if he has found any exceptions - rules he can satisfy that the exception is an isolated departure where the exceptions found are unacceptably high, the effect is to require a reassessment of the control risk since the ICS cannot be relied upon to the extent originally envisaged. Control risk is therefore increased and therefore the substantive testing will need to be increased. In addition the nature of errors found may result in the auditor concluding that his initial assessment of the inherent risk is incorrect. You need to appreciate that the auditor in planning the audit is not in possession of detailed facts about the company's operations and the testing procedures provided him with further information that may be his original opinion.

Note that in practice it can be difficult to distinguish between a series of isolated deviations from the application of a control procedure and the non-functioning of that procedure as a whole.

Substantive procedures - relevance:
These are those tests of transactions and balances, and other procedures such as analytical review, which seek to provide audit evidence as to financial statements assertions such as completeness, Existence, valuation, presentations, disclosures etc.

The relevance of the audit procedure should be considered in relation to the overall audit objective of forming an opinion and reporting on the financial statements.

Existence: That an asset or liability exists at a given date.
Auditors spend a great deal of time on this assertion confirming the existence of assets such tangible fixed assets, stocks, debtors and cash clearly this is a fundamental assertion and management is in a way stating that the items are not wrongly stated and that the enterprise has no other rights or obligations relating to the assets or liabilities.

Valuation: That the asset or liability is recorded at an appropriate carrying value: i.e the initial cost or valuation plus additions or revaluations, minus depreciation, write downs or disposals.

Rights and obligations (ownership)
That an asset or liability belongs or pertains to the entity at a given date.
The auditor must ensure that it is the business which owns the asset at the balance sheet date and belongs to no one else and identify situations when the asset is on the business premises but belongs to a different entity altogether.

Occurrence: That a transaction or event occurred during the relevant accounting period. The auditor ensures that proper cut off procedures have been executed.

Completeness: That there are no unrecorded assets or liabilities, transactions or events. The auditor must ensure that all these items are correctly stated.

Measurement: That the transaction or event is recorded at the proper amount and revenue or expense is allocated to the proper period. (This assertion refers to profit and loss account items and prepayments and accruals).

Presentation and disclosure: That an item is disclosed, classified and described in accordance with the applicable reporting framework (e.g relevant legislation and applicable accounting standard).
Authorisation. That all transactions are properly authorised.

Audit evidence is usually obtained to support each financial statement assertion. Audit evidence regarding one assertion (e.g existence of stocks) does not compensate for failure to obtain audit evidence regarding another assertion (e.g valuation). Tests may, however, provide audit evidence about more than one assertion (e.g testing subsequent receipts from debtors may provide some evidence regarding both their existence and valuation.

Two of the most important assertion tests are for the completeness and existence. These tests go on in opposite directions to each other (directional testing); If the auditor wishes to test for completeness of creditors, he should take a sample of source documents such as GRN's and trace them through the related invoices, day books and ledgers to the financial statements in the form of creditors. However to test existence of debtors, the auditor starts at the other end with a sample of debtors from the ledgers, day books and invoices to the source documentation such as the orders or despatch notes.

The risk is to understate expenses and liabilities and overstate assets and income. Therefore if the trial balances, and the auditor discovers an overstated debit, there must also be either an overstated credit or an understated debit. If he discovers an understated credit, there must also be either an understated debit or an overstated credit.

Just because an asset exists does not mean that it belongs to the reporting entity and documentary evidence should be sought to prove ownership.

The nature, timing and extent of substantive procedures depend amongst other factors, on the auditors' assessment of the control environment and accounting systems generally and on the inherent and control risks relating to each assertion, as well as on any evidence obtained from audit work performed during the preparation of the financial statements. Where tests of control provide satisfactory evidence as to the effectiveness of accounting and internal control systems, the extent of relevant substantive procedures may be reduced, but not entirely eliminated.

Substantive procedures may be incorporated within other procedures e.g tests of control may be designed as dual purpose tests to provide evidence of a substantive nature, and such evidence may be obtained as part of the nature, and such evidence may be obtained as part of the work carried out to make preliminary assessments of risks of error.

Substantive procedures - relevance.
The reliability of audit evidence is influenced by its source; internal or external, and by its nature; visual, documentary or oral. While the reliability of audit evidence is dependent on individual circumstances, the following generalisations may help in assessing that reliability.

1- Audit evidence from external sources (e.g confirmation received from a third party) is more reliable than that obtained from the entity's records especially where the external source is independent.
2- Audit evidence obtained from the entity's records is more reliable when the related accounting and internal control systems operates effectively.
3- Evidence obtained directly by auditors such means as analysis and physical inspection is more reliable than evidence obtained by or from the entity.

4- Evidence in the form of documents and written representations is more reliable than oral representations
5- Original documents are more reliable than photocopies telexes or facsimiles

Documentary evidence created by a third party and held by the auditor is more reliable than that created by the third party and held by the entity or that created by the entity and held by the entity.

Audit evidence is more persuasive when items of evidence from different sources or of a different nature are consistent. When the audit evidence from one source is inconsistent with that from another, auditors determine additional procedures necessary to resolve the inconsistency. Where the individual items of evidence relating to a particular matter are all consistent, the auditor obtains a cumulative degree of assurance higher than that which he obtains from the individual items. This is a form of 'synergy'.

All the same, the reliability of evidence is very much a matter for the auditor's judgement of each situation in its own right, using his experience and knowledge of the client.

The auditor should always consider whether or not the evidence that he has would be sufficient to defend himself in a court of law.

The auditor should consider the relationship between the cost of obtaining audit evidence and the usefulness of the information obtained. However, the existence of difficulty or expense is not in itself a valid basis for omitting a necessary procedure.

Procedure for obtaining audit evidence

Auditors obtain audit evidence by procedures the choice of which is dependent, in part, upon the period of time during which the audit evidence sought is available and the form in which accounting records are maintained. The procedures include:-

1- **Inspection**

This consists physical review or examination of record, documents or tangible assets. Inspection of records and documents provides audit evidence of varying degrees of reliability depending on their nature and source and the effectiveness of the ICS over their processing.

A test of control would involve say examination of copy sales invoices for authorisation whereas a substantive procedure would involve checking of the physical existence of a tangible asset i.e inspection of a tangible assets provides reliable audit evidence about its existence but not necessary as to its ownership or value.

2- **Enquiry**

Consists seeking relevant information from knowledgeable persons inside or outside the enterprise, whether formally or informally, orally or in writing.. The reliability of this technique depends on the qualification and integrity of the source. E.g formal representations of management on the value of a material subsidiary company in an overseas country.

3- **Confirmation**

Confirmations consists of the response to an enquiry to corroborate information contained in the accounting records
e.g communication with debtors.
Responses to enquires may provide auditors with information not previously possessed or with corroborative audit
evidence.

4- **Computation**
Consists of checking the arithmetical accuracy of source documents and accounting records or performing
independent calculations.

5- **Re-performances**
Of controls such as the bank reconciliation to ensure they were performed correctly

Analytical procedures
Consists of the analysis of relationships between items of financial data, or between items of financial and non financial data, deriving from the same period, or between comparable financial information deriving from different periods or different entities, to identify consistencies and predicted patterns or significant fluctuations and unexpected relationships and the results of investigations therefrom.

These procedures provide good overall evidence as to the accuracy of a balance or class of transactions. Analytical procedures are commonly performed on management accounts to avoid the possibility of auditing are set of information and reporting on another.

Where any significant fluctuation or unexpected relationships are identified, the auditor must investigate, obtain explanations to support the deviation from the expected outcome and obtain corroboratory evidence to support the deviation.

Analytical procedures are widely used by are limited by the adequately of ICS (if weak the information is not reliable).

The relevance and reliability and additional procedures regarding given evidential matters

1. Flowcharts of the company's payroll routine prepared by the audit assistant backed up by tests of control. Flowcharts provide evidence of the system in operation and, as they were prepared by the audit staff, the value of the evidence is good. The tests of control have demonstrated that the system does infact operate as recorded and, if it is felt necessary, this could be further substantiated by walk through tests.
2. An overall statement by the production director that the expected working life of plant acquired during the year is 10 years.

The statement provides evidence as to the accuracy of the depreciation change in the profit and loss account and the
net book value of plant in the balance sheet. As it is oral evidence from someone within the enterprises, it is not
particularly reliable. Further evidence could be obtained by considering the useful lives of similar items of plant in
the past or consulting trade journals which may detail the relevant information.

1. A news paper report that new technology is expected to have an adverse effect on the sales of products representing 20% of the company's turnover.

The newspaper report provides evidence that the auditor may wish to consider when carrying out his overall review
of the financial statements of the enterprise. It is also important in considering the continuing commercial viability
of the company. As the evidence is from a source independent of the company, it is considered to be reliable, but it
must be borne in mind that newspaper reports can be based upon hear say and not just fact,. The quality of the
evidence could be improved by discussing the matter with management or considering volumes of sales in recent
months.

2. A letter to the managing director from the company's bank manager indicating that the bank intends to extend overdraft facilities for a period of one year.

The letter provides evidence that the company is a going concern. As the evidence is from a source external to the
company, it is reliable, but would be more so if the letter had been sent direct to the auditors. To substantiate
evidence, the normal bank letter would be sent.

3. List of items of stock control by a member of your firm of certified accountants during observation of the company's stock count.

Attendance at a client's stock take and performance of tests counts provide evidence as to the existence and
valuation of stock. As the evidence is documentary, was prepared by a member of the audit firm, and is based on
physical inspection, it is very reliable. To support the evidence obtained, the items would need to be traded through
to the final stock valuations.

4. A letter from a debtor to your firm in reply to a confirmation request indicating agreement with the balance as recorded in the books of the client.

Direct confirmation from a debtor provides evidence as to the accuracy of the debtors figure included in balance
sheet. As the evidence is documentary, and from a source external to the company, it is reliable. To further support
the evidence, the receipt of cash from the debtors, after the year-end, could be checked.

WORKING PAPERS

Working paper are the material that auditors prepare or obtain, and retain in connection with the performance of the audit. Working papers may be in form of data stored on paper, film, electronic media or other media. Working papers support amongst other thins, the statement in the auditors' report as to the auditors' compliance or otherwise with auditing standards, and this record compliance with auditing standards to the extent that this is important in supporting their report. "Auditors should document in their working papers matters which are important in supporting their report"). In short working papers record;

a) the planning and performance of the audit
b) the supervision and review of the audit work; and
c) the audit evidence resulting from the audit work performed which the auditors consider necessary and which they have relied to support their report.

Recording the audit process:

Auditors should record in their working papers their reasoning on significant matters that require exercise of judgement. It is such areas that the auditor may subsequently be questioned, often with the benefit of hind sign, in such circumstances it is important that the auditor demonstrates the relevant facts that were known at the time the auditor drew his conclusion.

Working papers should provide an experienced auditor with no previous connection with the audit with an understanding of the work performed and the basis of decision taken.

Form and control of working papers

The form and content of working papers are affected by matters such as;
- the nature of the engagement;
- the form of the auditors report;
- the nature and complexity of the entity's business.
- the nature and condition of the entity's accounting and internal control system
- the needs in the particular circumstances for direction, supervision of the work of members of the audit team, and
- the specific methodology and technology of auditors use.

The following are general guidelines to be followed in the preparation of working papers;
- permanent ink should be used;
- descriptions should be given of audit symbols used
- All working papers must be prepared neatly and tidily so that they clearly concisely and logically show the schedules,
  results of tests etc. They should be headed with the client's name and file number, period end, subject of working paper
  reference of working paper within files, initials of preparers and date of preparation plus initials of reviewer and date of
  review.

Working papers are usually divided between two files;-

a) **The current file:**

The current file will contain the work performed for the current period; Typical contents need not be memorised but
it is important to understand the type of information held on this file.
All working papers which records tests must be concluded by the person undertaking the test with a summary of the
result of the test and a conclusion (opinion) on its effectiveness.
Schedules supporting a figure in the balance sheet or profit and loss account should
- consist of a summarised schedule (a lead schedule) showing the make-up of the figures in the balance sheet, an
  be supported by backing schedules showing the make-up of those figures on the lead schedule;
- have extensive cross-referencing between the backing schedules, lead schedules and the accounts themselves to
  facilitate explanation of any figure in the accounts or working paper,
- give comparative figures for the previous year so that the auditor can explain and satisfy himself on movement
  differences between the years
- Be adjusted if any final adjustments are made to the accounts
- Show the tests carried out to verify the figures on the schedules.

Note:

If the client on his own does not, but could, prepare schedules, he should be encouraged to do so and the

auditor will only have to satisfy himself as to their reliability. This saves on audit time and costs.

Where matters are raised during audit, the replies thereof must be recorded and the fact that the query has been cleared for audit purposes indicated.

TYPICAL CURRENT AUDIT FILE'S CONTENTS

Section	Title	Information contained
1	Index	
2	Accounts	I) Copy of draft accounts ii) Copy of final signed accounts
3	Reports and final papers to client	I) Copies of all draft and final reports issued ii) Comments received from client and letter of representation iii) Points on accounts and paints carried forward to next year iv) Management letters v) Final journal entries vi) Company accounts chechlist - Directors' report vii) Reporting partner's review viii) Audit completion report
4	Job administration and planning	I) Planning programme ii) Budget and fee estimate iii) Time and cost summary iv) Briefing notes v) copy of planning letter to client vi) Points forward from previous years
5	Balance sheet profit and loss account and cash flow statement	I) Lead schedules ii) Audit programmes iii) Detailed working papers and conclusions iv) Company accounts and accounting standard checklists v) Queries raised and explanations received vi) Third party confirmations and certificates
6	Systems testing	I) Audit programmes (tests of control and substantive) ii) Detailed working papers and conclusions iii) Queries raised and explanations received iv) Weaknesses identified and copy of letters of weakness to client
7	Accounts preparation	I) Schedules ii) Trial balance iii) Cross-reference to audit work performed

8	Extracts from minutes	I) Directors' meetings ii) Members' meetings
9	Statistical information	Performance indicates collected which have a bearing on the extent, nature, timing of substantive tests (permanent audit files should be updated accordingly).

PERMANENT FILE:
Contains that information which is more static and/or is of recurring value to the audit. It will be updated with new information of continuing importance.

Typical permanent audit file contents

Section	File	Information contained
1.	Index	-
2	Constitution	I) Copies of MOA and AOA detailing the legal form, business objects, borrowing powers ii) Partnership agreement or iii) Trust deed
3	Background and organisation	I) Nature and history of business ii) Ownership iii) Registered office iv) Management structure - including organisation chart, client's v) Industry size, economic factors affecting the industry, seasonal fluctuations and demands. v) Premises and plant - Locations, extent of facilities, owned or leased, age, capital expenditure budgets. vi) Products - Volumes, main suppliers vii) Sales - volumes, main customers, methods of distribution, pricing policies, exports

		viii) Personnel departments, or	- numbers, analyses, by function, method of remuneration, contracts, union agreements, person schemes.
4	Systems (For large audits this section could be held on a separate file)	I) Detailed method of accounting ii) List of accounting records and where kept iii) Flow charts and specimen of accounting documents and accounting codes iv) Accounting manuals v) Statistical information how they performance accounting ratios)	- Manual, EDP - Costing systems - Composition of reserves arose and movements - A 5 year comparison of indicators (major - Industry statistics
6	Contracts agreements minutes	I) Leases ii) Title deeds inspected annually by auditor iii) Royalty agreements iv) Minutes of continuing importance v) Prospectuses vi) Stock exchange undertakings	- Extracts - Details - Extracts - Directors' meetings - Members' meetings - Copies - Copy
7	Group	I) Group structure ii) Primary/secondary auditors	
8	Taxation	I) Special concessions with inland revenue ii) VAT information iii) Group elections	
9	Other professional advisors	I) Bankers ii) Solistors iii) Stock brokers iv) Registrars	
10	Job administration	I) Letter of engagement ii) Letter of authority iii) Job administration - Time budgets and costing	
11	Control	I) Control schedule of rotation tests	

ii) Control view branch and site visits
iii) Deed examination
iv) Review of other auditors on group audits
v) Copies of management letters

12 Miscellaneous Details of other client information of a permanent nature.

STANDARDISED WORKING PAPERS

These offer the following advantages:-
a) They improve the efficiency of the preparation and review of working papers
b) They facilitate the delegation of work
c) They provide a means of control of the quality of work
d) They are useful for routine documentation such as checklists for financial reporting standards, statements of standard accounting practice and specimen letters. However, it is never appropriate to follow mechanically a standard approach to the conduct and documentation of the audit without regard to the needs to exercise professional judgement.

Confidentiality, safe custody and ownership of working papers
SAS 230.4 states that "Auditors should adopt appropriate procedures for maintaining the confidentiality and safety of their working papers.'

There are no specific statutory requirements regard the period of retention of audit working papers. Auditors exercise judgement to determine the appropriate period of retention bearing in mind possible needs of their client, for example prospectus at some future date, and their own needs, including any regulatory requirements.

Prior to their destruction, auditors consider whether there is likely to be a need to refer to them again.
Working papers are the property of the auditors. They are not a substitute for, nor part of, the entity's accounting records.

Auditors comply with ethical guidance as to the confidentiality of working papers. Portions of, or extracts from, the working papers may be made available to the entity at the discretion of the auditors, provided such disclosure does not undermine the independence or the validity of the audit process. Information is generally not made available to other third parties (including parent comaries or subsidiary undertakings or their auditors without the permission of the entity.

QUALITY CONTROL AND REVIEW PROCEDURES:
SAS 240.1 requires that quality control policies and procedures should be implemented both at the level of the audit firm and on individual audits.

The audit firms should establish and monitor quality control policies and procedures designed to ensure that all audits are conducted in accordance with the auditing standards and should communicate those policies and procedures to their personnel in a manner designed to provide reasonable assurance that the policies and procedures are understood and implemented (SAS 240.2)

The nature, timing and extent of auditors' quality control policies and procedures depend on a number of factors such as the size of the practice, geographic dispersion, organisation and appropriate cost/benefit consideration.

The quality control policies to be adopted by auditors usually incorporate the following ;-

a) Professional requirements - i.e ethical requirements

Personnel adhere to the principles of independence, integrity, objectivity, confidentiality and professional behaviour.

b) Skills and competence

Personnel have attained and maintain the technical standards and professional competence required to enable them to fulfil their responsibilities with due care. In use should be manuals, standardised documentation and programmes and regular update of procedures.

Including effective recruitment of personnel with suitable qualifications and any necessary expertise in specialised areas.

Other facilities include technical libraries, appropriate training arrangements, attendance at professional courses, professional publications and relevant legislations.

c) **Acceptance and retention of clients**

Prospective clients are evaluated and existing clients are reviewed on an ongoing basis. In making a decision to accept or retain a client, the auditors' independence and ability to serve the client properly and the client's management are considered.

d) **Assignment**

Audit work is assigned to personnel who have the degree of technical training and proficiency required in the circumstances.

e) **Delegation**

Sufficient direction, supervision of work and review at all levels is carried out in order to provide confidence that the work performed meets appropriate standards of quality.

f) **Consultation**

Whenever necessary within or outside the audit firm occurs with those who have appropriate expertise and

g) **Monitoring**

The continued adequacy and operational effectiveness of quality control policies and procedures are monitored.

This may include periodic review of a sample of the firm's audit files by independent reviewers; the firm having set levels of competence of or partners and staff who participate in the review, establish procedures to resolve disagreements which may arise between the reviewers and audit staff and have procedures for selection of particular audits for review.

Review of audit work takes a number of different forms.

i) **Hot review:** Working papers produced by a member of the audit staff are checked by a more experienced member of the staff who initials the papers.

ii) **Post-audit review (cold review)**

At the end of the audit before the audit report is signed, the manager or partner reviews that audit file an final
accounts

iii) **Audit review department**

This team review in detail the work performed by an audit group and ensures that the audit has been conducted in
accordance with the firm's standard procedures.

iv) **Real review**

One firm of auditors reviews the working practices of another firm and reports to the partners of the investigated
firm on the ways in which their procedures might be improved.

INDIVIDUAL AUDITS

For each audit, the audit engagement partner (person who assumes ultimate responsibility for the conduct of the audit and for issuing an opinion on the financial statements) should apply quality control procedures appropriate to the particular audit which ensures compliance with auditing standards (SAS 240.3).

Any work delegated to assistants should be directed, supervised and reviewed in a manner which provides reasonable assurance that such work is performed competently. The audit engagement partner and personnel with supervisory responsibilities consider the professional competence of assistants performing work delegated to them when deciding the extent of direction, supervision and review appropriate for each assistant.

Appropriate direction to assistants involves informing them of their responsibilities and the objectives of the procedures they are to perform. This also involves informing them of matters such as the nature of the entity's business and possible accounting or audit problems which may affect the nature, timing and extent of audit procedures. Audit directions may be communicated by manuals or checklists as well as audit programmes and the overall audit plan.

Supervision

Personnel with supervisory responsibilities perform the following functions during the audit;-

- Monitor the progress of the audit to consider whether assistants have the necessary skills and competence to carry on
  their assigned tasks, understand the audit directions and the work is being carried out in accordance with the overall
  audit plan and the audit programme.
- Become informed of and address significant accounting and auditing questions raised during the audit, by assessing
  their significance and modifying the overall audit plan and programme as appropriate and
- Resolve any differences of professional judgement between personnel and consider the level of consultation that is
  appropriate.

Review

Work performed by each assistant is reviewed by personnel of appropriate experience to consider whether;

- the work was performed in accordance with the audit programme

- the work performed and the results obtained have been adequately documentated
- any significant audit matters have been resolved or are reflected in audit conclusions
- the objective of the audit procedure have been achieved
- the conclusions expressed are consistent with the results of the work performed and support the audit opinion.

The following are reviewed on a timely basis;
The overall audit plan and the audit programme, the assessment of inherent and control risks, the documentation obtained from substantive procedures and conclusions drawn there from including the results of consultations and the financial statements, proposed audit adjustment and proposed auditor's report.

SMALL COMPANY AUDITS

Characteristics

a) These employ very few staff and hence there is very little scope for division of responsibilities
b) The accounting systems are often relatively unsophisticated and possibly dominated by one person.
c) The owners of the business are frequently heavily involved in the day-to-day running of the business.

Internal controls

The restricted scope of division of responsibilities and the domination of the accounting function by one person constrain the effective internal control. However, the extent of management supervision in day-to-day operations is critical.

While the day-to-day supervision is an important check by management employees, there is little check on management itself.

In small but rapidly expanding business, much of the proprietor's time is taken up with steering the business along an expansion path that the extent and effectiveness of day-to-day supervision is very much reduced.

Auditing considerations for small companies:-

1. **The engagement letter**

The remove misunderstandings the client may have as to auditors' responsibilities and to make clear the distinction
between audit and accountancy.

2. **Substantive procedures**

Since controls are weak, tests on debtors and stock verification will be very much intensified though no amount of
substantive procedures will offer the auditor the necessary assurance where controls are very poor e.g where there
are large amounts of cash receipts not accorded accurately. Most of the time audit reports for small companies are
qualified for this reason.

3. **Management representations**

These are to be relied on to a far greater extent. These representations should be backed up by supporting evidence.

4. **Overall review**

Accounting records may be fairly simple and management information such as monthly accounts budgets non
existent and hence limit the extent of analytical procedures.

Audit techniques and small companies
Planning and recording are simple with a small client, but needed. The need to record the work done and evidence obtained is equally great.

Accounting system:- Not well developed
Internal control: Not to be relied on
Audit evidence: Harder to obtain
Review of financial statements: should be reviewed as much as large company.

Audit independence and small companies
The auditor tends to perform more than just the audit. He is looked upon for advise and guidance and may be involved in preparation of accounts for taxation matters. Audit fee is likely to be larger.

Arguments against audit of small companies
1. Audited accounts serve only a compliance function and add little to management's knowledge and understanding of the business.
2. The resources expended by the company on the audit could be used to obtain more useful financial advice.
3. Banks and other financiers are generally in a position to make specific conditions for providing finance, and therefore have little need for a statutory audit.
4. Abbreviated accounts filed ten months after the year end are of little value to trade suppliers and customers in establishing a trading relationship.

Arguments for small company audits:
1. Most auditors consider that it is perfectly possible to audit a small company and produce a satisfactory audit report.
2. If banks and other creditors required their own independent audit, the result might be to increase, not reduce, the costs of a small company.
3. The audit is necessary to protect creditors which is important in view of limited liabilities of the shareholders
4. Shareholders, particularly minority shareholders are entitled to full and reliable information about the position of their company.

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Course Name	: Policy Analysis and Management

Course Description

The Course details the nature of policy analysis, different approaches in policy making, and various models in policy designing, characteristics of policy. It further explores numerous steps in policy making, features of policy management, and benefits of policy management.

Course Objectives

- To equip students with knowledge and skills about policy analysis.
- To provide them with a perspective of the country's economic, social and political policies.
- To enable students engage in constant discussions of how different policies should be formulated, managed and implemented.

Course Content

Policy Analysis

- Meaning of Policy analysis
- Approaches of Policy analysis
- Models of policy designing
- Characteristics of policy
- Characteristics of policy questions

Steps in policy making

- Verify, define and define the problem
- Establish evaluation criteria
- Identify alternative policies
- Evaluate alternative policies
- Display and distinguish among alternative policies
- Monitoring the implemented policy

Policy Management

Features of policy management

- Centralize and normalize policies
- Rationalization of policies and control standards
- Communicating policies
- Track acceptance and assessing comprehension
- Managing policy exceptions
- Support enterprise and compliance initiatives
- Report on policy management program

Benefits of policy Management

- Information and Process Centralization
- Time and Cost Savings
- Significant Efficiencies
- Greater Visibility
- Quick Time to Value

- Deployment Flexibility

Mode of delivery, Face to face lectures
Assessment
Coursework 40%
Exams 60%
Total Marks 100%

Introduction

Policy analysis is "determining which of various alternative policies will most achieve a given set of goals in light of the relations between the policies and the goals".[1] However, policy analysis can be divided into two major fields. Analysis **of** policy is analytical and descriptive—i.e., it attempts to explain policies and their development. Analysis **for** policy is prescriptive—i.e., it is involved with formulating policies and proposals (e.g., to improve social welfare).[2] The area of interest and the purpose of analysis determines what type of analysis is conducted. A combination of policy analysis together with program evaluation would be defined as Policy studies.

Policy Analysis is frequently deployed in the public sector, but is equally applicable to other kinds of organizations. Policy analysis has its roots in systems analysis as instituted by United States Secretary of Defense Robert McNamara during the Vietnam War.[4]

Approaches to policy analysis

Although various approaches to policy analysis exist, three general approaches can be distinguished: the analycentric, the policy process, and the meta-policy approach.[2]

The **analycentric** approach focuses on individual problems and their solutions; its scope is the micro-scale and its problem interpretation is usually of a technical nature. The primary aim is to identify the most effective and efficient solution in technical and economic terms (e.g. the most efficient allocation of resources).

The **policy process** approach puts its focal point onto political processes and involved stakeholders; its scope is the meso-scale and its problem interpretation is usually of a political nature. It aims at determining what processes and means are used and tries to explain the role and influence of stakeholders within the policy process. By changing the relative power and influence of certain groups (e.g., enhancing public participation and consultation), solutions to problems may be identified.

The **meta-policy approach** is a systems and context approach; i.e., its scope is the macro-scale and its problem interpretation is usually of a structural nature. It aims at explaining the contextual factors of the policy process; i.e., what are the political, economic and socio-cultural factors influencing it. As problems may result because

of structural factors (e.g., a certain economic system or political institution), solutions may entail changing the structure itself.

Methodology

Policy analysis is methodologically diverse using both qualitative methods and quantitative methods, including case studies, survey research, statistical analysis, and model building among others. One common methodology is to define the problem and evaluation criteria; identify all alternatives; evaluate them; and recommend the best policy agenda per favor.

Models

Many models exist to analyze the creation and application of public policy. Analysts use these models to identify important aspects of policy, as well as explain and predict policy and its consequences.

Some models are:

Institutional model

Public policy is determined by political institutions, which give policy legitimacy. Government universally applies policy to all citizens of society and monopolizes the use of force in applying policy. The legislature, executive and judicial branches of government are examples of institutions that give policy legitimacy.

Process model

Policy creation is a process following these steps:

- Identification of a problem and demand for government action.
- Formulation of policy proposals by various parties (e.g., congressional committees, think tanks, interest groups).
- Selection and enactment of policy; this is known as **Policy Legitimation**.
- Implementation of the chosen policy.
- Evaluation of policy.

This model, however, has been criticized for being overly linear and simplistic. In reality, stages of the policy process may overlap or never happen. Also, this model fails to take the multiple actors attempting the process itself as well as each other, and the complexity this entails.

Rational model

The rational model of decision-making is a process for making logically sound decisions in policy making in the public sector, although the model is also widely used in private corporations. Herbert Simon, the father of rational models, describes rationality as “a style of behavior that is appropriate to the achievement of given goals, within the limits imposed by given conditions and constraints”.[6] It is

important to note the model makes a series of assumptions in order for it to work, such as:

- The model must be applied in a system that is stable,
- The government is a rational and unitary actor and that its actions are perceived as rational choices,
- The policy problem is unambiguous,
- There are no limitations of time or cost.

Indeed, some of the assumptions identified above are also pin pointed out in a study written by the historian H.A. Drake, as he states:

In its purest form, the Rational Actor approach presumes that such a figure [as Constantine] has complete freedom of action to achieve goals that he or she has articulated through a careful process of rational analysis involving full and objective study of all pertinent information and alternatives. At the same time, it presumes that this central actor is so fully in control of the apparatus of government that a decision once made is as good as implemented. There are no staffs on which to rely, no constituencies to placate, no generals or governors to cajole. By attributing all decision making to one central figure who is always fully in control and who acts only after carefully weighing all options, the Rational Actor method allows scholars to filter out extraneous details and focus attention on central issues.[7]

Furthermore, as we have seen, in the context of policy rational models are intended to achieve maximum social gain. For this purpose, Simon identifies an outline of a step by step mode of analysis to achieve rational decisions. Ian Thomas describes Simon's steps as follows:

1. Intelligence gathering— data and potential problems and opportunities are identified, collected and analyzed.
2. Identifying problems
3. Assessing the consequences of all options
4. Relating consequences to values— with all decisions and policies there will be a set of values which will be more relevant (for example, economic feasibility and environmental protection) and which can be expressed as a set of criteria, against which performance (or consequences) of each option can be judged.
5. Choosing the preferred option— given the full understanding of all the problems and opportunities, all the consequences and the criteria for judging options.[8]

In similar lines, Wiktorowicz and Deber describe through their study on ‘Regulating biotechnology: a rational-political model of policy development’ the rational approach to policy development. The main steps involved in making a rational decision for these authors are the following:

1. The comprehensive organization and analysis of the information

2. The potential consequences of each option
3. The probability that each potential outcome would materialize
4. The value (or utility) placed on each potential outcome.[9]

The approach of Wiktorowicz and Deber is similar to Simon and they assert that the rational model tends to deal with “the facts” (data, probabilities) in steps 1 to 3, leaving the issue of assessing values to the final step. According Wiktorowicz and Deber values are introduced in the final step of the rational model, where the utility of each policy option is assessed.

Many authors have attempted to interpret the above mentioned steps, amongst others, Patton and Sawicki who summarize the model as presented in the following figure (missing):

1. Defining the problem by analyzing the data and the information gathered.
2. Identifying the decision criteria that will be important in solving the problem. The decision maker must determine the relevant factors to take into account when making the decision.
3. A brief list of the possible alternatives must be generated; these could succeed to resolve the problem.
4. A critical analyses and evaluation of each criterion is brought through. For example strength and weakness tables of each alternative are drawn and used for comparative basis. The decision maker then weights the previously identified criteria in order to give the alternative policies a correct priority in the decision.
5. The decision-maker evaluates each alternative against the criteria and selects the preferred alternative.
6. The policy is brought through.

The model of rational decision-making has also proven to be very useful to several decision making processes in industries outside the public sphere. Nonetheless, many criticism of the model arise due to claim of the model being impractical and lying on unrealistic assumptions. . For instance, it is a difficult model to apply in the public sector because social problems can be very complex, ill-defined and interdependent. The problem lies in the thinking procedure implied by the model which is linear and can face difficulties in extra ordinary problems or social problems which have no sequences of happenings. This latter argument can be best illustrated by the words of Thomas R. Dye, the president of the Lincoln Center for Public Service, who wrote in his book `Understanding Public Policy´ the following passage:

There is no better illustration of the dilemmas of rational policy making in America than in the field of health…the first obstacle to rationalism is defining the problem. Is our goal to have good health — that is, whether we live at all (infant mortality), how well we live (days lost to sickness), and how long we live (life spans and adult mortality)? Or is our goal to have good medical care — frequent visits to the doctor, wellequipped and accessible hospitals, and equal access to medical care by rich and poor alike?[11]

The problems faced when using the rational model arise in practice because social and environmental values can be difficult to quantify and forge consensus around.[12] Furthermore, the assumptions stated by Simon are never fully valid in a real world context.

However, as Thomas states the rational model provides a good perspective since in modern society rationality plays a central role and everything that is rational tends to be prized. Thus, it does not seem strange that "we ought to be trying for rational decision-making".[8]

Decision Criteria for Policy Analysis — Step 2

As illustrated in Figure 1, rational policy analysis can be broken into 6 distinct stages of analysis. Step 2 highlights the need to understand which factors should be considered as part of the decision making process. At this part of the process, all the economic, social, and environmental factors that are important to the policy decision need to be identified and then expressed as policy decision criteria. For example, the decision criteria used in the analysis of environmental policy is often a mix of —

- Ecological impacts — such as biodiversity, water quality, air quality, habitat quality, species population, etc.
- Economic efficiency — commonly expressed as benefits and costs.
- Distributional equity — how policy impacts are distributed amongst different demographics. Factors that can affect the distribution of impacts include location, ethnicity, income, and occupation.
- Social/Cultural acceptability — the extent to which the policy action may be opposed by current social norms or cultural values.
- Operational practicality — the capacity required to actually operationalize the policy. For example,
- Legality — the potential for the policy to be implemented under current legislation versus the need to pass new legislation that accommodates the policy.
- Uncertainty — the degree to which the level of policy impacts can be known.[13]

Some criteria, such as economic benefit, will be more easily measurable or definable, while others such as environmental quality will be harder to measure or express quantitatively. Ultimately though, the set of decision criteria needs to embody all of the policy goals, and overemphasising the more easily definable or measurable criteria, will have the undesirable impact of biasing the analysis towards a subset of the policy goals.[14]

The process of identifying a suitably comprehensive decision criteria set is also vulnerable to being skewed by pressures arising at the political interface. For

example, decision makers may tend to give "*more weight to policy impacts that are concentrated, tangible, certain, and immediate than to impacts that are diffuse, intangible, uncertain, and delayed*."^8. For example, with a cap-and-trade system for carbon emissions the net financial cost in the first five years of policy implementation is a far easier impact to conceptualise than the more diffuse and uncertain impact of a country's improved position to influence global negotiations on climate change action.

Decision Methods for Policy Analysis — Step 5

Displaying the impacts of policy alternatives can be done using a policy analysis matrix (PAM) such that shown in Table 1. As shown, a PAM provides a summary of the policy impacts for the various alternatives and examination of the matrix can reveal the tradeoffs associated with the different alternatives.

Table 1. Policy analysis matrix (PAM) for SO2 emissions control.

Once policy alternatives have been evaluated, the next step is to decide which policy alternative should be implemented. This is shown as step 5 in Figure 1. At one extreme, comparing the policy alternatives can be relatively simple if all the policy goals can be measured using a single metric and given equal weighting. In this case, the decision method is an exercise in benefit cost analysis (BCA).

At the other extreme, the numerous goals will require the policy impacts to be expressed using a variety of metrics that are not readily comparable. In such cases, the policy analyst may draw on the concept of utility to aggregate the various goals into a single score. With the utility concept, each impact is given a weighting such that 1 unit of each weighted impact is considered to be equally valuable (or desirable) with regards to the collective well-being.

Weimer and Vining also suggest that the "*go, no go*" rule can be a useful method for deciding amongst policy alternatives^8. Under this decision making regime, some or all policy impacts can be assigned thresholds which are used to eliminate at least some of the policy alternatives. In their example, one criterion "*is to minimize SO2 emissions*" and so a threshold might be a reduction SO2 emissions "of at least 8.0 million tons per year". As such, any policy alternative that does not meet this threshold can be removed from consideration. If only a single policy alternative satisfies all the impact thresholds then it is the one that is considered a "go" for each impact. Otherwise it might be that all but a few policy alternatives are eliminated and those that remain need to be more closely examined in terms of their trade-offs so that a decision can be made.

Case Study Example of Rational Policy Analysis Approach

To demonstrate the rational analysis process as described above, let’s examine the policy paper “Stimulating the use of biofuels in the European Union: Implications for climate change policy” by Lisa Ryan where the substitution of fossil fuels with biofuels has been proposed in the European Union (EU) between 2005–2010 as part

of a strategy to mitigate greenhouse gas emissions from road transport, increase security of energy supply and support development of rural communities.

Considering the steps of Patton and Sawicki model as in Figure 1 above, this paper only follows components 1 to 5 of the rationalist policy analysis model:

1. Defining The Problem – the report identifies transportation fuels pose two important challenges for the European Union (EU). First, under the provisions of the Kyoto Protocol to the Climate Change Convention, the EU has agreed to an absolute cap on greenhouse gas emissions; while, at the same time increased consumption of transportation fuels has resulted in a trend of increasing greenhouse gas emissions from this source. Second, the dependence upon oil imports from the politically volatile Middle East generates concern over price fluctuations and possible interruptions in supply. Alternative fuel sources need to be used & substituted in place of fossil fuels to mitigate GHG emissions in the EU.
2. Determine the Evaluation Criteria – this policy sets Environmental impacts/benefits (reduction of GHG's as a measure to reducing climate change effects) and Economical efficiency (the costs of converting to biofuels as alternative to fossil fuels & the costs of production of biofuels from its different potential sources)as its decision criteria. However, this paper does not exactly talk about the social impacts, this policy may have. It also does not compare the operational challenges involved between the different categories of biofuels considered.
3. Identifying Alternative Policies – The European Commission foresees that three alternative transport fuels: hydrogen, natural gas, and biofuels, will replace transport fossil fuels, each by 5% by 2020.
4. Evaluating Alternative Policies – Biofuels are an alternative motor vehicle fuel produced from biological material and are promoted as a transitional step until more advanced technologies have matured. By modelling the efficiency of the biofuel options the authors compute the economic and environmental costs of each biofuel option as per the evaluation criteria mentioned above.
5. Select The Preferred Policy – The authors suggest that the overall best biofuel comes from the sugarcane in Brazil after comparing the economic & the environmental costs. The current cost of subsidising the price difference between European biofuels and fossil fuels per tonne of CO_2 emissions saved is calculated to be €229–2000. If the production of European biofuels for transport is to be encouraged, exemption from excise duties is the instrument that incurs the least transactions costs, as no separate administrative or collection system needs to be established. A number of entrepreneurs are producing biofuels at the lower margin of the costs specified here profitably, once an excise duty rebate is given. It is likely that growth in the volume of the business will engender both economies of scale and innovation that will reduce costs substantially.[15]

Group model

The political system's role is to establish and enforce compromise between various, conflicting interests in society.

Elite model

Policy is a reflection of the interests of those individuals within a society that have the most power, rather than the demands of the mass.

Six-step model

1. Verify, define and detail the problem
2. Establish evaluation criteria
3. Identify alternative policies
4. Evaluate alternative policies
5. Display and distinguish among alternative policies
6. Monitor the implemented policy

Policy studies

Policy Studies is the combination of policy analysis and program evaluation.[1] It "involves systematically studying the nature, causes, and effects of alternative public policies, with particular emphasis on determining the policies that will achieve given goals."[2]

Policy Studies also examines the conflicts and conflict resolution that arise from the making of policies in civil society, the private sector, or more commonly, in the public sector (e.g. government).

It is frequently focused on the public sector but is equally applicable to other kinds of organizations (e.g., the not-for-profit sector). Some policy study experts graduate from public policy schools with public policy degrees. Alternatively, experts may have backgrounds in policy analysis, program evaluation, sociology, psychology, philosophy, economics, anthropology, geography, law, political science, social work, environmental planning and public administration.

Traditionally, the field of policy studies focused on domestic policy, with the notable exceptions of foreign and defense policies. However, the wave of economic globalization, which ensued in the late 20th and early 21st centuries, created a need for a subset of policy studies that focuses on global governance, especially as it relates to issues that transcend national borders such as climate change, terrorism, nuclear proliferation, and economic development. This subset of policy studies, which is often referred to as international policy studies, typically requires mastery of a second language and attention to cross-cultural issues in order to address national and cultural biases. For example, the Monterey Institute of International Studies at Middlebury College offers Master of Arts programs that focus exclusively on international policy through a mix of interdisciplinary and cross-cultural analysis called the "Monterey Way".[3]

Public policy

This article is about government action. Policy, both public and private, is a broader concept. The article on public policy doctrine discusses the use of the phrase 'public policy' in legal doctrine. For other uses, see Public policy (disambiguation).

Public policy as government action is generally the principled guide to action taken by the administrative or executive branches of the state with regard to a class of issues in a manner consistent with law and institutional customs. In general, the foundation is the pertinent national and substantial constitutional law and implementing legislation such as the US Federal code. Further substrates include both judicial interpretations and regulations which are generally authorized by legislation.[1]

Other scholars define it as a system of "courses of action, regulatory measures, laws, and funding priorities concerning a given topic promulgated by a governmental entity or its representatives."[2] Public policy is commonly embodied "in constitutions, legislative acts, and judicial decisions." [3]

In the United States, this concept refers not only to the result of policies, but more broadly to the decision-making and analysis of governmental decisions. As an academic discipline, public policy is studied by professors and students at public policy schools of major universities throughout the country. The U.S. professional association of public policy practitioners, researchers, scholars, and students is the Association for Public Policy Analysis and Management

Government actions

Shaping public policy is a complex and multifaceted process that involves the interplay of numerous individuals and interest groups competing and collaborating to influence policymakers to act in a particular way. These individuals and groups use a variety of tactics and tools to advance their aims, including advocating their positions publicly, attempting to educate supporters and opponents, and mobilizing allies on a particular issue.[4]

As an academic discipline

As an academic discipline, public policy brings in elements of many social science fields and concepts, including economics, sociology, political economy, program evaluation, policy analysis, and public management, all as applied to problems of governmental administration, management, and operations. At the same time, the study of public policy is distinct from political science or economics, in its focus on the application of theory to practice. While the majority of public policy degrees are master's and doctoral degrees, several universities also offer undergraduate education in public policy.

Policy schools tackle policy analysis differently. The Harris School of Public Policy Studies at the University of Chicago has a more quantitative and economics approach to policy, the Heinz College at Carnegie Mellon uses computational and empirical methods, while the John F. Kennedy School of Government at Harvard

University has a more political science and leadership based approach. The Indiana University School of Public and Environmental Affairs provides traditional public policy training with multidisciplinary concentrations available in the environmental sciences and nonprofit management.

The Jindal School of Government and Public Policy in India offers an interdisciplinary training in public policy with a focus on the policy making processes in developing and BRIC countries. In Europe, the School of Government of LUISS Guido Carli offers a multidisciplinary approach to public policy combining economics, political sciences, new public management and policy analysis.

Traditionally, the academic field of public policy focused on domestic policy. However, the wave of economic globalization, which ensued in the late 20th and early 21st centuries, created a need for a subset of public policy that focuses on global governance, especially as it relates to issues that transcend national borders such as climate change, terrorism, nuclear proliferation, and economic development.[5] Consequently, many traditional public policy schools had to tweak their curricula to adjust to this new policy landscape.

Policy Management

Centrally manage policies, map them to objectives and guidelines, and promote awareness to support a culture of corporate governance.

RSA Archer Policy Management provides the foundation for a best-in-class governance, risk and compliance program with a comprehensive and consistent process for managing the lifecycle of corporate policies and their exceptions. The solution offers a centralized infrastructure for creating policies, standards and control procedures and mapping them to corporate objectives, regulations, industry guidelines and best practices. It allows you to communicate policies across your enterprise, track acceptance, assess comprehension and manage exceptions. Powered by the RSA Archer eGRC Platform, the Policy Management software solution gives you a meaningful understanding of what governs your business, and it enables you to formulate policies appropriately to aid in achieving corporate objectives and demonstrating regulatory compliance.

- Features
- Benefits
- Learn More

- **Centralize and Normalize Your Policies**

  Centralize your existing policies, standards and control procedures, establishing the foundation for risk monitoring and compliance measurement activities. Also take advantage of the pre-loaded RSA Archer eGRC Content Library, which provides best-practice policies, control standards, control procedures, authoritative sources and assessment questions.

- **Rationalize Your Policies and Control Standards**

  Map policies and standards to your corporate objectives and authoritative sources, such PCI, ISO/IEC, COBIT, FFIEC, HIPAA, NIST and privacy legislation. Also add objectives and sources over time as your business evolves and new regulations, best practices and internal requirements emerge.

- **Communicate Policies, Track Acceptance and Assess Comprehension**

  Communicate policies through dashboards, prompts at login, and email notifications that are relevant to specific roles, departments and business functions. Also promote policy comprehension and attestation through targeted Training and Awareness campaigns, and report results to senior management and regulators.

- **Manage Policy Exceptions**

  Initiate and manage requests for policy exceptions automatically using built-in workflow and alert notifications. Also report on exceptions across the enterprise, monitoring them by control, department, severity or other meaningful criteria.

- **Support Enterprise Compliance Initiatives**

  Issue questions from the RSA Archer eGRC Content Library within the RSA Archer Risk Management, Vendor Management and Compliance Management solutions to deliver targeted, online assessment campaigns that map to internal controls and external requirements.

- **Report on Your Policy Management Program**

  Use real-time reports and dashboards to display policies and control standards mapped to specific regulatory requirements, identify gaps between your policies and the authoritative sources that govern your business, and monitor policy exceptions enterprise-wide.

Advocacy evaluation

Advocacy evaluation, also called *public policy advocacy design, monitoring, and evaluation,* evaluates the progress or outcomes of advocacy, such as changes in public policy. This is different from policy analysis, which generally looks at the results of the policy, or mainstream program evaluation, which assesses whether programs or direct services have been successful. Advocacy strives to influence a program or policy either directly or indirectly; therefore, the influence is being evaluated, rather than the results of that influence. Advocacy evaluators seek to understand the extent to which advocacy efforts have contributed to the advancement of a goal or policy. They do this in order to learn what works, what

does not, and what works better in order to achieve advocacy goals and improve future efforts.

Goals of advocacy (dependent variables)

In order to evaluate something, one must know the goals of the program/activity, in this case - advocacy efforts. Policy advocacy evaluation focuses on the contribution towards achieving policy, and not on the results of that policy. Policy advocacy evaluators look at these dependent variables (many of which interrelate significantly with movement in the policy cycle):

Intermediate Goal Examples:

- Increased awareness of constituents about the need for policy (Problem Identification -> Agenda Setting)
- Change in rate of key-words use by politicians, sometimes starting from 0 (Problem Identification -> Agenda Setting)
- Increase in ratio of policy being implemented according to the adopted legislation (Adoption->Implementation)
- Developed capacity of advocacy actor or network of actors to conduct advocacy efforts

Ultimate Goals

- Policy change itself in the desired direction (of the policy cycle). This is the highest level intermediate outcome, and as an inherent best practice, is the goal of most policy advocacy efforts. Policy Advocacy works to move a policy through the policy cycle.

Distinct challenges of advocacy evaluation

- Contribution vs. attribution: Since multiple actors campaign simultaneously for and against any given policy, it is difficult to ascertain attribution. Evaluating contributions is preferred in this case as it allows multiple actors to influence the degree of success.
- Long term nature of advocacy: Since many advocacy goals are long term, measuring impact can be a challenge. Instead, outcomes, interim progress, and intermediary goals are the preferred measures of influence.
- Shifting strategies: Since the context that advocates work within is ever-changing, advocates adapt their strategies, which creates a difficult environment in which to monitor progress.
- Complexity and theories of change: logic models and theories of change for advocacy campaigns are inherently complex; for example: protests+lobbying+media campaigns -> contribution to policy change. These kinds of theories of change have so many layers, nuances, and uncontrollable factors to them that intra and inter organizational agreement is difficult, making strategic planning, and evaluation all the more challenging.

Typology of policy advocacy

Direct Advocacy (Directly trying to influence policy makers):

- Lobbying (also known as direct lobbying) is the act of attempting to influence decisions made by government officials, most often legislators or members of regulatory agencies. Various people or groups, from private-sector individuals or corporations, fellow legislators or government officials, or advocacy groups use lobbying.

Indirect Advocacy (Indirectly influencing policymakers by getting their constituents to advocate):

- Grassroots lobbying (also known as indirect lobbying) is a form of lobbying that focuses on raising awareness of a particular cause at the local level, with the intention of reaching the legislature and making a difference in the decision-making process. Grassroots lobbying is an approach that separates itself from direct lobbying through the act of asking the public to contact legislators and government officials concerning the issue at hand, as opposed to conveying the message to the legislators directly.
- Activism consists of intentional efforts to promote or prevent social, political, economic, or environmental change. Activism can take a wide range of forms including, from writing letters to newspapers or politicians, political campaigning, economic activism such as boycotts or preferentially patronizing businesses, rallies, street marches, strikes, sit-ins, and hunger strikes.
- Astroturfing supports political, organizational, or corporate agendas, and is designed to give the appearance of a "grassroots" movement. The goal of such campaigns is to disguise the efforts of a political and/or commercial entity as an independent public reaction to some political entity—a politician, political group, product, service, or event.

Think tank

A **think tank** (or **policy institute**) is an organization that conducts research and engages in advocacy in areas such as social policy, political strategy, economics, military, technology issues and in the creative and cultural field. Most think tanks are non-profit organizations, which some countries such as the United States and Canada provide with tax exempt status. Other think tanks are funded by governments, advocacy groups, or businesses, or derive revenue from consulting or research work related to their projects.

The following article lists global think tanks according to continental categories, and then sub-categories by country within those areas. These listings are not comprehensive, given that more than 4,500 think tanks exist world wide. In general, this article is an introduction to the think tank landscape, and provides a way to quickly navigate to those of interest.

History

While the term "think tank" originated in the 1950s such organizations date to the 19th century. The Institute for Defence and Security Studies (RUSI) was founded in 1831 in London. The Fabian Society in Britain dates from 1884. The Brookings Institution began in Washington in 1916.

After 1945, the number of think tanks grew, as many smaller new think tanks were formed to express various issue and policy agendas. Until the 1940s, most think tanks were known only by the name of the institution. During the Second World War, think tanks were referred to as "brain boxes" after the slang term for the skull. The phrase "think tank" in wartime American slang referred to rooms where strategists discussed war planning. The term think tank itself, however, originally referred to organizations that offered military advice—most notably the RAND Corporation, founded originally in 1946 as an offshoot of Douglas Aircraft, and which became an independent corporation in 1948.

For most of the 20th century, independent public policy think tanks that performed research and provided advice on public policy were an organizational phenomenon found primarily in the United States, with a much smaller number in Canada and Western Europe. Although think tanks existed in Japan for some time, they generally lacked independence, having close ties to government ministries or corporations. There has been a veritable proliferation of “think tanks” around the world that began in the 1980s as a result of the forces of globalization, the end of the Cold War, and the emergence of transnational problems. Two-thirds of all the think tanks that exist today were established after 1970 and over half were established since 1980.[2]

The impact of globalization on the think tank movement is most evident in regions such as Africa, Eastern Europe, Central Asia, and parts of Southeast Asia, where there was a concerted effort by the international community to support the creation of independent public policy research organizations. A recent survey conducted by the Foreign Policy Research Institute’s Think Tanks and Civil Societies Program underscores the significance of this effort and documents the fact that most of the think tanks in these regions have been established in the last 10 years. Today there are over 4,500 of these institutions around the world. Many of the more established think tanks, having been created during the Cold War, are focused on international affairs, security studies, and foreign policy.[2]

Also see the United Nations Development Programme definition.

Types

Think tanks vary by ideological perspectives, sources of funding, issue focus and prospective audience.[3] Some think tanks, such as the Heritage Foundation, which promotes conservative principles, and the Center for American Progress on the progressive front, are more partisan in purpose. Others, including the Tellus Institute, which focuses on social and environmental topics, are more issue-oriented groups. Still others, such as the Cato Institute, promote libertarian social and

economic theories based on Friedrich von Hayek's idea of free markets and individual liberty.

Funding sources and the targeted audiences also define the workings of think tanks. Some receive direct government support, while others rely on private individual or corporate donors. This will invariably affect the levels of academic freedom within each think tank and to whom or what the institution feels beholden. Funding may also reflect who or what the institution wants to influence; in the United States, for example, "Some donors want to influence votes in Congress or shape public opinion, others want to position themselves or the experts they fund for future government jobs, while others want to push specific areas of research or education."[3]

A new trend, resulting from globalization, is collaboration between think tanks across continents. For instance, the Carnegie Endowment for International Peace operates offices in Washington, D.C., Beijing, Beirut, Brussels and Moscow.[3]

The Think Tanks and Civil Societies Program (TTCSP) at the University of Pennsylvania annually rates think tanks worldwide in a number of categories and presents its findings in the "Global Go-To Think Tanks" rating index.[4] However, this approach to the study and assessment of think tanks has been criticised by think tank researchers such as Enrique Mendizabal and Goran Buldioski, Director of the Think Tank Fund, supported by the Open Society Institute.[5][6]

Several authors have outlined a number of different ways of describing think tanks in a way that takes into account regional and national variations. For example from Diane Stone Diane Stone (2005):

- Independent civil society think tanks established as non-profit organisations – ideologically identifiable or not[7]
- Policy research institutes located in or affiliated with a university
- Governmentally created or state sponsored think tank
- Corporate created or business affiliated think tank [8]
- Political party think tanks and legacy or personal think tanks
- Global (or regional) think tanks (with some of the above)

Alternatively, one could use some of the following criteria:

- Size and focus: e.g. large and diversified, large and specialised, small and specialised[9]
- Evolution of stage of development: e.g. first (small), second (small to large but more complex projects), and third (larger and policy influence) stages[8]
- Strategy, including: Funding sources (individuals, corporations, foundations, donors/governments, endowments, sales/events)[9] and business model (independent research, contract work, advocacy);[10][11][12][13][14] The balance between research, consultancy, and advocacy; The source of their arguments: Ideology, values or interests; applied, empirical or synthesis research; or theoretical or academic research (Stephen Yeo); The manner in which the research agenda is developed—by senior members of the think tank or by individual researchers, or by the think tank of their funders;[15] Their

influencing approaches and tactics (many researchers but an interesting one comes from Abelson[16]) and the time horizon for their strategies: long term and short term mobilisation;[9][12] Their various audiences of the think tanks (audiences as consumers and public -this merits another blog; soon) (again, many authors, but Zufeng[17] provides a good framework for China); and Affiliation, which refers to the issue of independence (or autonomy) but also includes think tanks with formal and informal links to political parties, interest groups and other political players.[18]

Functional approach in Latin America

Research done by Enrique Mendizabal[19] shows that Latin American think tanks play various roles depending on their origins, historical development and relations to other policy actors. In this study, Orazio Bellettini from Grupo FARO suggests that they:[20]

1. Seek political support for policies.
2. Legitimize policies – This has been clearer in Ecuador, Bolivia and Peru. New governments in Ecuador and Peru have approached think tanks for support for already defined policies. In Bolivia, the government led by Evo Morales has been working with NGOs and other research centres to do the same. However, in the Chilean context, many think tanks during the 1990s appeared to support and maintain the legitimacy of policies implemented during the previous decade by the dictator Augusto Pinochet.
3. Spaces of debate – In this case think tanks serve as sounding boards for new policies. In Chile, during the Pinochet dictatorship, many left wing intellectuals and researchers found 'asylum' in think tanks. In Ecuador, think tanks are seen as spaces where politicians can test the soundness of their policies and government plans.
4. Financial channels for political parties or other interest groups – In Ecuador and Bolivia, German foundations have been able to provide funds to think tanks that work with certain political parties. This approach has provided support to the system as a whole rather than individual CSOs.
5. Expert cadres of policy-makers and politicians – In Peru after the fall of the Fujimori regime, and in Chile after the fall of Pinochet, think tank staff left to form part of the new governments. In the U.S., the role of leading think tanks is precisely that: host scholars for a few months or years and then see them off to work in policy.

How a think tank addresses these largely depends on how they work, their ideology vs. evidence credentials, and the context they operate in (including funding opportunities, the degree and type of competition they face, their staff, etc.).

This functional approach addresses the inherit challenge of defining a think tank. As Simon James aptly noted in 1998, "Discussion of think tanks...has a tendency to get bogged down in the vexed question of defining what we mean by 'think tank'—an exercise that often degenerates into futile semantics.[21] It is better (as in the Network Functions Approach) to describe what the organisation should do. Then the shape of the organisation should follow to allow this to happen. The following framework

(based on Stephen Yeo's description of think tanks' mode of work) is described in Enrique Mendizabal's blog "onthinktanks":

First, think tanks may work in or based their funding on one or more ways, including:[22]

1. Independent research: this would be work done with core or flexible funding that allows the researchers the liberty to choose their research questions and method. It may be long term and could focus on 'big ideas' with no direct policy relevance. On the other hand, it could focus on a key policy problem that requires a thorough research and action investment.
2. Consultancy: this would be work done through commissions with specific clients and addressing one or two key questions. Consultancies often respond to an existing agenda.
3. Influencing/advocacy: this would be work done through communications, capacity development, networking, campaigns, lobbying, etc. It is likely to be based on research based evidence emerging from independent research or consultancies.

Second, think tanks may base their work or arguments on:

1. Ideology, values or interests
2. Applied, empirical or synthesis research
3. Theoretical or academic research

According to the National Institute for Research Advancement, a Japanese think tank, think tanks are "one of the main policy actors in democratic societies ..., assuring a pluralistic, open and accountable process of policy analysis, research, decision-making and evaluation".[23] A study in early 2009 found a total of 5,465 think tanks worldwide. Of that number, 1,777 were based in the United States and approximately 350 in Washington DC alone.[24]

Criticism

In some cases, corporate interests have found it useful to create "think tanks." For example, The Advancement of Sound Science Coalition was formed in the mid 1990s to dispute research finding a link between second-hand smoke and cancer.[25] According to an internal memo from Philip Morris referring to the United States Environmental Protection Agency (EPA), "the credibility of the EPA is defeatable, but not on the basis of ETS (environmental tobacco smoke) alone. It must be part of a larger mosaic that concentrates all the EPA's enemies against it at one time."[26]

According to the left-wing non-government organization Fair.org, right-wing think tanks are often quoted and rarely labeled. The result is that sometimes think tank "experts" are depicted as neutral sources without any ideological predispositions when, in fact, they represent a particular perspective.[27] In the field of education, think tank publications are subjected to expert review by the National Education Policy Center's "Think Twice" think tank review project

A think tank is often a "tank", in the intellectual sense: discussion only in a closed circle protected from outside influence isolates the participants, subjects them to several cognitive biases (groupthink, confirmation bias) and fosters members' existing beliefs. This leads to surprisingly radical and even unfeasible ideas being published. Many think tanks, however, purposefully attempt to alleviate this problem by selecting members from diverse backgrounds.

Eightfold Path (policy analysis)

The **Eightfold Path** is a method of policy analysis assembled by Eugene Bardach, a professor at the Goldman School of Public Policy at the University of California, Berkeley.[1] It is outlined in his book *A Practical Guide for Policy Analysis: The Eightfold Path to More Effective Problem Solving*, which is now in its fourth edition.[2] The book is commonly referenced in public policy and public administration scholarship.[3]

Bardach's procedure is as follows:

1. Define the Problem
2. Assemble Some Evidence
3. Construct the Alternatives
4. Select the Criteria
5. Project the Outcomes
6. Confront the Trade-offs
7. Decide
8. Tell Your Story

A possible ninth-step, based on Bardach's own writing, might be "Repeat Steps 1 - 8 as Necessary."

The New York taxi driver test

The New York taxi driver test is a technique for evaluating the effectiveness of communication between policy makers and analysts. Bardach contends that policy explanations must be clear and down-to-earth enough for a taxi driver to be able to understand the premise during a trip through city streets. The New York taxi driver is presumed to be both a non-specialist and a tough customer.

Policy Management

Centrally manage policies, map them to objectives and guidelines, and promote awareness to support a culture of corporate governance.

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guidelines and best practices. It allows you to communicate policies across your enterprise, track acceptance, assess comprehension and manage exceptions. Powered by the RSA Archer eGRC Platform, the Policy Management software solution gives you a meaningful understanding of what governs your business, and it enables you to formulate policies appropriately to aid in achieving corporate objectives and demonstrating regulatory compliance.

- Features
- Benefits
- Learn More

- **Information and Process Centralization**

  The ability to author policy content, communicate it to end users, conduct training campaigns and view exceptions all from a single web portal

- **Time and Cost Savings**

  Reduction in the time and effort required to create and update policies, manage exceptions and demonstrate compliance with multiple regulations

- **Significant Efficiencies**

  Dynamic, flexible workflows that allow you to distribute content to appropriate subject-matter experts for review and approval

- **Greater Visibility**

  The ability to map your policy content to the RSA Archer control framework and easily see gaps when new authoritative sources are rolled out

- **Quick Time to Value**

  Rapid return on your investment from a solution that you can implement out of the box (using predefined access roles, workflow, reports, dashboards, etc.) or easily tailor to your needs through point-and-click configuration

- **Deployment Flexibility**

  The freedom to choose an on-premise or software as a service (SaaS) deployment and to move the solution from one environment to another as your needs change

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Further reading

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Course Name	: Research Methods

Course Description
This Course explores basic philosophy of research, its types and variables, its defines sampling design, research design, methods/tools of data collection, planning the survey as a tool of data collection, the structure of a research proposal , modes of analysis, interpretation and validation.

Course Objectives

- To provide students with descriptive and exploratory skills required in research.
- To help them develop writing skills in relation to research discoveries from different research studies undertaken.
- To provide students with a better analytical perspective on the findings acquired from the field.
- To expose students to the field experiences in attempts to collecting data.

Course content
Introduction

- Definition of research
- Different forms of research
- Distinguish between qualitative and quantitative variables
- Differences between qualitative and quantitative research
- Concepts that relate broadly to both quantitative and qualitative research

Sample Design

- Definition of sampling
- Different types of both random and non-random sampling

Research Design

- Meaning of a research design
- Types of research design i.e descriptive designs, co relational designs, case study designs
- How to design and conduct a case study

Methods of data collection

- Observation method
- Survey
- Group interviews (Focus Group Discussions)
- Questionnaires
- Advantages and disadvantages of each stated method/tool

Planning the survey as a data collection tool

- Hypotheses
- Determine the respondents
- Questionnaire, interview or telephone survey
- Format issues
- Rules for asking good questions
- Analyzing survey data

The structure of a research proposal

- Title
- Table of contents
- An abstract
- Chapter one: Background to the problem
- Chapter two: Literature review
- Chapter three: Methodology
- Chapter four: Results/findings of the study
- Chapter five: Discussion, conclusion and recommendations
- References
- Appendices

Assessment
Coursework 40%
Exams 60%
Total Mark 100%

Introduction

This module generally focuses on the various health research methods used in public health, with these methods various techniques are applied to identify issues. By the end of this module one should be in position to identify the various research methods and explain them efficiently as well as knowing their relevancies

Course work

a) Through proper explanations and illustrations briefly explain ten medical research methods used in public health.

b) What is the importance's of research to the profession of Public health and the health fraternity as a whole

What Are Health Services Research Methods? Why Are They Important?

In the 1960's, the field of health services research was created by combining several study sections at the National Institutes of Health to create the Health Services Research Study Section. The HSR study section sought to define HSR as a distinct field of scientific inquiry at the intersection of public health and medical care, informed by disciplinary perspectives. Since that time, the field has evolved to encompass multiple disciplinary perspectives, including methods from cognate disciplines such as economics, statistics, political science, sociology, and many other schools of thought. The field has also developed new models and techniques to address research questions in specialized areas of inquiry such as patient safety and access to care.

Due to the breadth of the field, two terms are critical to defining the scope of health services research methods. These are: 1) health services research, and 2) methodology.

The Academy Health definition of health services research, developed in 2000 by Kathleen Lohr and Don Steinwachs, is as follows:

Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviours affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and populations.

An additional definition of health services research is provided by *Lexikon*:

Research concerned with the organization, financing, administration, effects, and other aspects of health services. Health services research is often concerned with the relationships among need, demand, supply, use, and outcomes of health services. Structure, process, and outcome of health services may be evaluated. Evaluation of structure is concerned with resources, facilities, and manpower; process, with matters, such as where, by whom, and how health care is provided; and outcome, with the results of the services (such as the degree to which individuals receiving health services actually experience measurable benefits).

Methodology is the collection or study of methods (practices, procedures, and rules) used by those who work in a discipline or engage in an inquiry, as in the methodology of measuring, assessing, and improving performance. Methodology addresses the full range of issues confronted by empirical work in health services research, including conceptualization, modelling, literature review, study design, sampling, data collection, measurement, and research ethics.

By combining the definitions above, it is apparent how wide the scope of methods employed by health services researchers is. HSR methods encompass a variety of study frameworks, designs, and analytic techniques. These include a spectrum of methods, from understanding of various epistemological perspectives on research, to study designs including focus groups and randomised controlled trials, to specific analytic techniques such as longitudinal data analysis.

To help organise the array of HSR methods, core and desired resources have been divided into 18 major topic areas, including:

Economics & Cost Effectiveness
Epidemiology
Ethics
Evaluation
Health Services Research Applied Methods
Information Technology
Management Sciences
Medicine
Outcomes Research
Policy
Psychology
Public Health
Qualitative Research
Quality and Safety
Sociology
Statistics, Biostatistics & Econometrics

Survey Research
Trials

Reviewing the topic areas above, it is apparent that HSR methods are not confined to disciplinary methods, but rather, are unique in their approach to medical and health care delivery questions because the field was developed to facilitate study of applied questions. These include:

- Who has access to health care?
- Do patients in large urban areas receive the same level of services as those in rural areas?
- At different levels of care, which patients have the best outcomes?

Many of these types of questions have policy implications. As a result, funding for health services research has often been linked to political interests. Yet, HSR studies are girded by the same methods as many other disciplines. As discussed above, econometric, epidemiological, survey research, and other widely accepted methods form the backbone of HSR.

A related challenge for health services researchers is that the types of questions of interest to the field rely on the ability to generalise from data to the population at large. In order to collect information that may be generalised to the population, it is often necessary to draw associations from existing sources of data such as claims databases or large population surveys - frequently referred to as observational data. Observational data is collected in situations when it would be unethical or impractical to randomize participants to one condition or another - such as having or not having health insurance. Because the data is not randomised, it is not possible to assume that an intervention causes a particular outcome; rather, researchers rely on statistical analyses to draw associations between factors in a study.

Despite concerns about the shortcomings of using non-randomised data in HSR studies, there are major benefits to studying the implications of care delivery or policy at the population level. The scope of HSR studies often allows for greater understanding of an intervention's effectiveness, or effect in a real-world population, as opposed to randomized controlled trials, which are better at assessing efficacy -- the outcome in an ideal, controlled population. In addition, HSR studies have always been closely linked to policy considerations, and as such, have the potential to enhance understanding of health care systems and impact care delivery for large numbers of individuals.

For librarians it is becoming increasingly important to create a collection of materials that address the types of applied questions that health services research addresses. This is a daunting task because of the breadth and depth of the disciplines and subjects encompassed by HSR. As the list of disciplines and topic areas relevant to HSR demonstrates, a wide array of disciplines are included in the health services research methodological 'toolkit'.

Librarians may wish to utilise the module by choosing specific content areas that will benefit their personal library needs. Likewise, faculty developing new courses may look to this list for suggested current textbooks in the field. The organisation of the list is intended to facilitate understanding of the array of options in different disciplines.

This list of resources is not intended to define the full range of HSR methods texts, rather, to provide a set of resources considered valuable by librarians and academics in the field of health services research.

The field of health services research is continually expanding and developing new methods to apply to health care and health care delivery questions. Due to the fact that the field is growing rapidly, we recommend that users of this list search for updated versions of the resources cited here in order to ensure the most recent information on methodological topics.

They are basically two main types of research methods which is quantitative and qualitative, which all the methods lie under

Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications." Thus research is a careful and systematic investigation in some field of knowledge such as culture of people, religion, etc (Neon 1995)

Variable: Variables are properties or characteristics of some event, object, or person that can take on different values or amounts (as opposed to constants which do not vary). When conducting research, experimenters often manipulate variables. For example, an experimenter might compare the effectiveness of four types of antidepressants. In this case, the variable is the "type of antidepressant" I.e. attributes which take on different values from time to time e.g.

- Height
- Weight
- Age etc

The following are the types of variables

1: Independent variable

When a variable is manipulated by an experimenter

2: Dependent variable

The experiment seeks to determine the effect of the independent variable on relief from depression. In this example, relief from depression is called a dependent variable.

In general the independent variable is manipulated by the experimenter and its effects on the dependent variable are measured.

Or

Dependent variable: a variable in a logical or mathematical expression whose value depends on the independent variable; "if f(x) =y, y is the dependent variable"

Consider age with beauty of an individual: beauty deterioration of an individual is caused by advancement in age .Age is an independent variable and beauty is the dependent variable.

3:Extraneous variable; this is the characteristics whose effects are not needed in the study like noise, for the case if one is studying the causes of lack of concentration in a given computer class or any other class.

4: Active variables characteristics that can be manipulated e.g. study environment or teaching methods etc

5; Assigned variables, certain characteristics assigned by nature and can not be changed or manipulated like height, sex of individual, age etc

Qualitative **and Quantitative Variables**

Qualitative variables: These are variables that express a qualitative attribute. Some examples of qualitative variables are hair color, eye color, religion, favorite movie, gender, and so on. The values of a qualitative variable do not imply a numerical ordering. Values of the variable "religion" differ qualitatively; no ordering of religions is implied. Qualitative variables are sometimes referred to as categorical variables. Values on qualitative variables do not imply order, they are simply categories

Quantitative variables: These are variables that are measured in terms of numbers, Some examples of quantitative variables are height, weight, and shoe size.

Discrete and Continuous Variables: *Variables such as number of children in a household are called discrete variable.*

Discrete variables: These are variable with possible scores of discrete points on the scale e.g a household could have three children or six children, but not 4.53 children. Other variables such as "time to respond to a question" are continuous variable

Continuous variable: These are variables where the scale is continuous and not made up of discrete steps e.g. The response time could be 1.64 seconds, or it could be 1.64237123922121 seconds. Of course, the practicalities of measurement preclude most measured variables from being truly continuous.

Random selection: is how you draw the sample of people for your study from a population.

Random assignment is how you assign the sample that you draw to different groups or treatments in your study. It is possible to have both random selection and assignment in a study. Let's say you drew a random sample of 100 clients from a population list of 1000 current clients of your organization. That is random sampling. Now, let's say you randomly assign 50 of these clients to get some new additional treatment and the other 50 to be controls. That's random assignment

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Concepts that relate broadly to both quantitative and qualitative research

Association:

Sometimes there is a relationship between two variables but the relationship may not be causal i.e., neither variable is dependent upon the other. It may be seen that short men are more assertive than taller men but it does not follow that being short causes men to be assertive and we can not state that being assertive make a man short; there is no causal relationship

Bias:
Distortion of the findings resulting from an undesirable influence.

Causality / Causal relationship:

A relationship in which one action brings about (causes) a particular consequence. More correctly, (since research can only hope to disprove a theory rather than prove it), a relationship in which failure to do 'x' means that 'y' will not follow. E.G., We can be less certain that bathing in the sun for two hours around midday causes skin to burn, than we can know that keeping out of the sun for the two hours around midday is unlikely to cause skin to burn.

Hawthorn Effect:
A psychological response in which subjects alter their behaviour because they are aware of their participation in the study

Piloting:

A small-scale trial of the research method to ensure that the design is feasible, Although only a small number of subjects may be used, a variety of practical questions may be determined. E.g., can the subjects understand the questions they are being asked?

Population:
Literally means "all the people" and in research the term is most commonly used to refer to a specific group of people. However, in a research context, population refers to all the members or objects of any defined group which might be taken or about which information might be given. A research population refers to the entire group to which the research results apply e.g., a relevant age group, or equipment group such as syringes.

Sample:
Refers to the segment of the population that is selected for investigation (the subset of the population)

Sampling frame: it is the listing of all the units in the population from which the sample will be selected

Census: this is a complete enumeration of an entire population

Reliability:
Is concerned with the accuracy (consistency, stability and repeatability) of a measure in representing the true score of the subject being assessed on a particular dimension, the same results must be achieved, as far as possible, regardless of whom is doing the measuring. e.g., several nurses weighing the same patient on the same set of scales, in quick succession, should gain the same results. Reliability of measurement reduces influence or bias on the part of the person(s) doing the measurement, to a minimum.

Representative:
Refers to the extent to which a sample reflects the "truth" for the whole population in the study. The sampling technique should aim to ensure that the views of the population are reflected by the sample.

Validity:
Refers to whether a particular instrument actually measures the construct it is designed to assess. e.g., a cardiac monitor is not a valid tool for measuring the peripheral pulse. A cardiac monitor is a valid tool for measuring the electrical activity of the heart.

Internal validity:
The extent to which the effects detected in a study are a true reflection of what is real, e.g., if the detected effect is that better nutrition leads to greater height gain in infants, internal validity exists if the height gain can not be attributed to another factor. (NB this other factor may be referred to as a confounding or extraneous variable).

External validity:
"The extent to which study findings can be generalised beyond the sample used in the study" (Burns and Grove 1993) e.g., One study may find that better nutrition leads to increased height gain in infants but external validity exists only if this finding is found with other samples.
NB the concept "Variable" appeared on the glossary of the previous session

SAMPLE DESIGN
The way of selecting a sample from a population is known as sample design. It describes various sampling techniques and sample size. It refers to the technique or procedure the researcher would adopt in selecting items for the sample.

Sampling:

Sample; Sampling; method of selecting a certain number of units from a total population (Macleod Clark J and Hockey L. 1981)
The way a sample is selected should be clearly demonstrated in a research report. The aim of a sample is that it should be as unbiased a cross section of the "parent" population as possible, i.e., a sample of subjects needs to be as representative as possible of the population under study.
To obtain a cross section we need to devise a sampling frame to define the boundaries (limits) within the context of the study and to reflect the organization within which the sampling is taking place.
The larger the size of the sample, the lower is the likelihood of it failing to represent the population under study. However, the law of diminishing returns tells us that there is, for each study, a desirable sample size under which their may fail to be accuracy yet above which there is no better a reflection of the parent population.
Sampling may be

a) Random and non random sampling.
b) Non random: In a nonrandom sample, members are selected on the basis of a particular set of characteristics, rather than a random chance of being included and certainly it introduces bias.

Random- Random sampling is completely based on chance. For example, one might identify all members of a population, (n=250) write their names on separate pieces of paper, and then draw 25 names out of a hat to determine who is actually to be included in the study and every individual has a chance of being included in the study.
Types of random sampling
Systematic

Is a statistical method involving the selection of every k^{th} element from a sampling frame, where *k*, the sampling interval, is calculated as:
k = population size (*N*) / sample size (*n*)

- Stratified
- cluster sampling

Stratified sample
In a stratified sample the sampling frame is divided into non-overlapping groups or strata, e.g. geographical areas, age-groups, genders. A sample is taken from each stratum, and when this sample is a simple random sample it is referred to as stratified random sampling. Where there is heterogeneity in the population this can be reflected in the strata, i.e., each stratum can be weighed to reflect the heterogeneity. In this way a proportional representation of the whole population can be gained.
Cluster sample
Best used where there is a wide geographical spread. Clusters may be chosen subjectively to be representative of the whole. The clusters can be further stratified. E.G., if we want to know about all A&E patients in the country we need to take a sample from a variety of A/E's. Each department can bring a number of patients into the sample according to whether they meet the stratification criteria and it is often used in marketing research
Multistage sampling
This is the use of sampling methods that are considerably more complex than these other methods. The most important principle here is that we can combine the simple methods described above in a variety of useful ways that help us address our sampling needs in the most efficient and effective manner possible. When we combine sampling methods, we call this multi-stage sampling.

Concepts strongly associated with quantitative research

Survey:

Involves the study of a large number of subjects drawn from a defined population

Randomisation:

A method for controlling possible extraneous variables involving assigning objects (subjects, treatments etc.,) to a group or condition in such a way that every object has an equal probability of being assigned to any particular condition. Randomisation can also be applied in other settings for research e.g., within a questionnaire there may be a sequence of questions, which, if reordered randomly, may evoke different responses because the previous question does not then influence the current question.

Control:

In order to increase the probability that findings accurately reflect the reality of the situation being studied, the study needs to be designed in such a way as to maximise the amount of control over the research situation and variables. Through control the influence of extraneous variables, variables which are not being studied but which could influence the results of the study by interfering with the action of the ones being studied, is reduced.

Manipulation:

Refers to the fact that we can create artificial divisions and circumstances in order that we can test a particular hypothesis, In experimental research the "causative" variable must be amenable to manipulation by the investigator; i.e., the researcher "does something" to

subjects in the experimental condition. Subjects in the control group are not "manipulated" in the way that subjects in the "experimental group" are manipulated.

Treatment Group: The portion of a sample or population that is exposed to a manipulation of the independent variable is known as the treatment group. For example, youth who enroll and participate in recreation programs are the treatment group, and the group to which no recreation services are provided constitutes the control group

Confounding Errors

Errors: are conditions that may confuse the effect of the independent variable with that of some other variable(s).

1. Premeasurement and interaction errors
2. Maturation errors
3. History errors
4. Instrumentation errors
5. Selection bias errors
6. Mortality errors

Measurement (levels)

Nominal: Subjects of research are differentiated by possessing or not possessing a given characteristic, e.g., pass/fail, single/married, and divided into a number of categories but the difference between the categories is not measurable in any real sense. This is the least sophisticated level of measurement.

Ordinal: Subjects are ranked in order from greatest to least or best to worst. Again there is no precisely measurable difference between the ranks.

Interval: Genuinely quantitative measurement such as that of temperature is measured at the interval level of measurement. Here the difference between 10 and 11 degrees centigrade is the same as the difference between 11 and 12degrees centigrade.

Ratio: In a scale of measurement where the difference between points on the scale is precise (as in the measurement of height and weight,) *and the scale starts at zero* the level of measurement is referred to as ratio. Height and weight start at zero. You can not weigh less than 0.00kg and cannot be less than 0.00mm in length/height; these are ratio scales. You can however record temperatures of the weather in terms of minus *x* degrees centigrade and this is why the scale is interval and not ratio.

Research Design

Research design can be thought of as the *structure* of research -- it is the "glue" that holds all of the elements in a research project together or plan for a study that guides the collection and analysis of the data

We often describe a design using a concise notation that enables us to summarize a complex design structure efficiently. What are the "elements" that a design includes?

Types of design:- Experimental design , Quasi-experimental design, Survey design, cross-sectional design, Case studies, comparative study etc

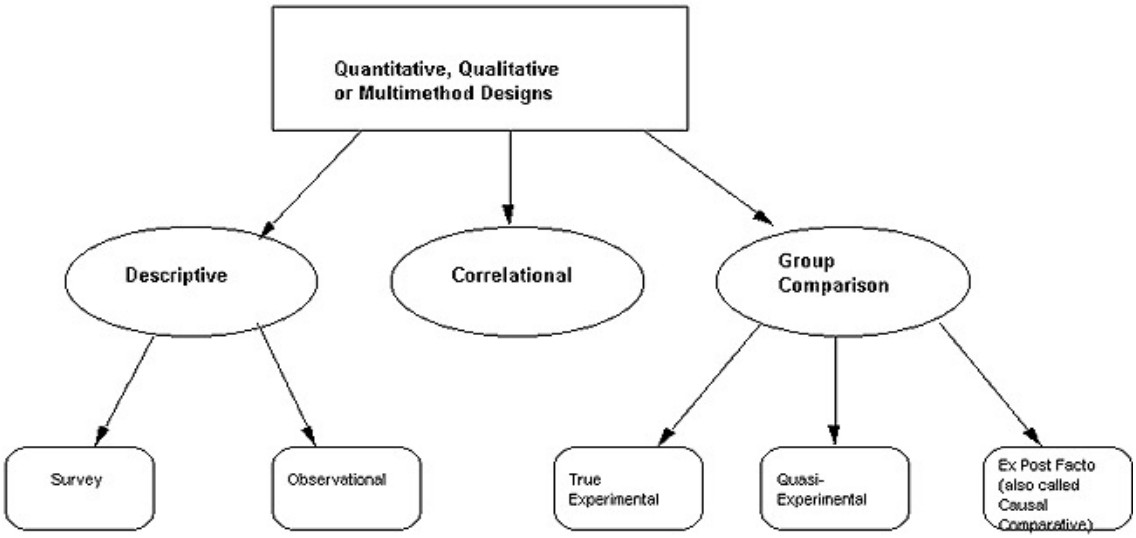
The research design:

(1) Is driven by there search problem
(2) Depends upon how much is known about the problem

For example, if you are doing a study where you will be *rating* students (numerically) on their performance of a sensory-motor skill AND also *interviewing* these students (data in words) to determine how they perceive their own skill levels (if one does that !), *then at least one "design methodology label" that would apply is "multimethod*."

Now, some design labels apply only to qualitative studies -- while others could apply to a study that's any of the of designs. We'll look at the qualitative labels in a future follow-up lesson. For now, let's look at the possibility: families of design methodology labels that could apply to any/all of the above 3 possibilities.

Figure 2.



Design Methodology
That Correspond To Quant/ Qual/ Multi method Studies

Most of these, as we'll see, "link" to certain "keywords" in the research question or problem statement!

I. **Descriptive Designs**

Example: This study is to *identify* the perceived barriers to successful implementation of the Career Ladder Teacher Incentive & Development Program in X School District.

"Identify"/"what is - what are" (the perceived barriers) - > Descriptive problem statement AND also descriptive research design methodology!

Two "sub-types" (add'l. design methodology labels that could apply to "descriptive designs):"

Survey - This label also applies to any study in which data or responses (be they quant/qual/both) are recorded via any form of what we think of as "survey instrumentation."

You've probably seen (more than you care to think about! if you've been 'approached' by a 'needy dissertation stage doctoral student' to participate in his/her study!) such surveys. They can take many forms:

A. Check-off items (e.g., gender, position);
B. Fill-in-the-blank items;
C. Likert-type scales (e.g., on a 5-point scale, say, from "strongly disagree" to "strongly agree," you're asked to circle or check your opinion regarding a statement such as, "The Career Ladder Teacher Incentive and Development Program provides ample opportunity for teacher advancement in my district")
D. Open-ended fill-in items (you're asked to give a response in your own words, using the back of the survey sheet or extra paper if necessary; something like "Please state the

three main reasons you chose to apply for the Career Ladder Teacher Incentive and Development Program this year.")

Types of Survey Research

While often these surveys are paper-&-pencil in nature (e.g., you're handed one or receive it in the mail & asked to fill it out and return it to the researcher), they are sometimes "administered" orally in a face-to-face or telephone interview (e.g., the researcher records your answers him/herself).

Some Guidelines for Interviews

There are other variations on survey-type questions; the above are just examples of the most common forms and scaling of such responses.

If the responses to our earlier example were collected in the form of a survey -- be it, say, Likert-scaled attitudinal items and/or open-ended questions where the teachers are asked to share the perceived barriers in their own words -- then the study would be characterized as a *descriptive survey design methodology*.

E. **Observational** - In these design methodologies, instead of administering a survey instrument, the researcher collects data by observing/tallying/recording the occurrence or incidence of some outcome -- perhaps with the aid of assistants.

He/she might want to identify the most frequently occurring type(s) of disruptive behavior in a particular classroom. With clear prior agreement on what constitutes such "disruptive behavior" (operational definitions of our variables are important, remember?! It becomes an issue of "reliability," or verifiability that "we saw what we saw" vs. "our own bias" of what constitutes this disruptive behavior!), the researcher could develop a listing of such behaviors and observe and record the number of times each one occured in a particular observation session in a classroom. (Again, he/she might wish to 'compare notes' with assistants in order to enhance reliability or verifiability -- e.g., as a cross-check for accuracy).

This type of research would warrant the design methodology label of not only "descriptive" (due to the 'identify/what is - what are [the most frequently occurring ...]?') but also "observational" due to the recording/tallying protocol.

(By the way, qualitative-type observations can also be recorded. They don't have to be strictly numeric tallies. Examples that come to mind include case notes of counselors, where they record their perceptions in words.)

II. Correlational Designs

We've seen these too! Just as in the case of "descriptive" designs, these "link" to the keywords of "association," "relationship," and/or "predictive ability" that we've come to associate with "correlational" research questions or problem statements!

Correlational Research

III. Group Comparisons

We've briefly talked about "experiments" generally, in terms of "key features" such as the following:

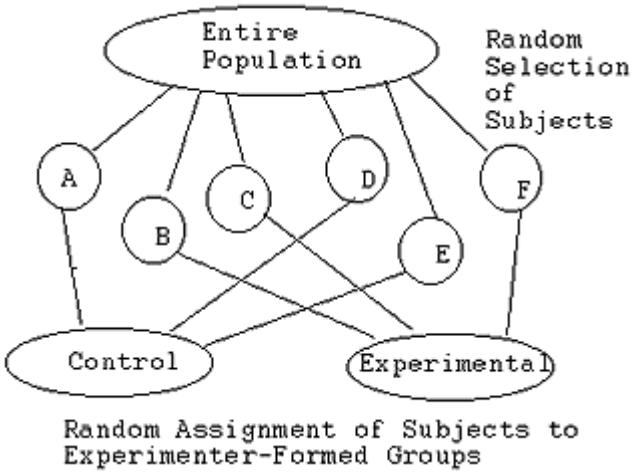
a. **tight control** (the researcher attempts to identify in advance as many possible 'contaminating' and/or confounding variables as possible and to control for them in his/her design -- by, say, building them in and balancing on them -- equal numbers of boys and girls to 'control for gender' -- or 'randomizing them away' by drawing a random sample of subjects and thereby 'getting a good mix' on them -- e.g., all levels of 'socioeconomic status')

b. because of the preceding control, the 'confidence' to **make 'cause/effect statements'**

That is, we begin to get the idea of ***2 or more groups, as balanced and equivalent as possible on all but one "thing:" our "treatment"*** (e.g., type of lesson, type of counseling). ***We measure them before and after this treatment and if we do find a difference in the group that 'got the treatment,' we hope to attribute that difference to the treatment only*** (because of this tight control, randomization, and so forth).

Now ... there are actually two "sub-types" of experimental designs. Plainly put, they have to do with how much 'control' or 'power' you as the researcher have to do the above randomization and grouping!

A. **True experimental** - If you can BOTH randomly draw (select) individuals for your study AND then randomly assign these individuals to 2 or more groups (e.g., 'you have the power to make the groups' yourself!), then you have what is known as a true experiment.'



In the preceding scenario, the researcher first:

1. Randomly selected subjects A through F from the larger population; AND
2. Then randomly assigned these individuals to (experimenter-formed) groups. In our example, by coin-flipping or some other random procedure, Subjects A, D & E "landed" in the control group (e.g., the class that will get the traditional lecture), while Subjects B, C, & F "landed" in the experimental or treatment group (e.g., the researcher-formed class that will get the hands-on science instruction, say).

The two levels of "randomization" help to ensure good control of those pesky contaminating or confounding variables, don't they?! You're more likely to get a "good mix" on all those other factors when you can randomly draw your subjects and also randomly assign them to groups that you as the researcher have the "power" to form!

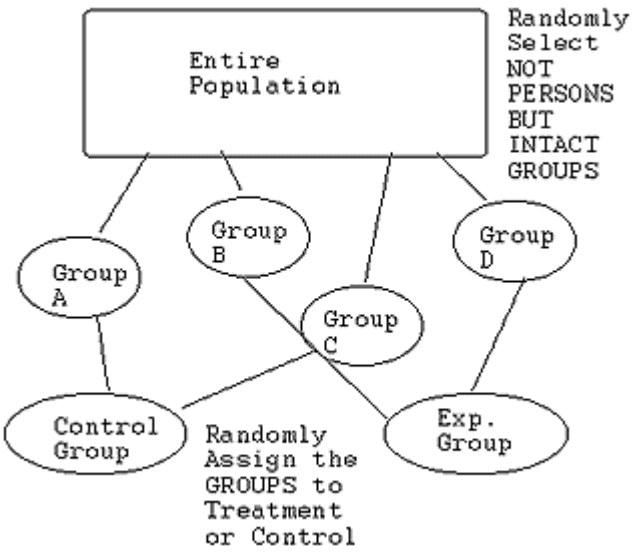
Ah...but ivory-tower research is one thing; real life quite another !

What if you get the OK to do your research within a school district, but the sup't. says, "Oh no! I can't let you be disrupting our bureaucratic organization here and "making your own 4th grade classrooms" for your study! That's way too disruptive! No, no, the best you can do is to randomly select INTACT existing 4th grade classrooms and then go ahead and use all the kids in those randomly drawn GROUPS instead!"

The True Experiment and Quasi-Experiment

Which brings us to the 2nd variant of "experimental designs:"

B. **Quasi-experimental - what you are 'randomly drawing' (selecting) is NOT INDIVIDUALS but INTACT (pre-existing) GROUPS**! These could be existing classrooms, clinics, vocational education centers, etc. In other words, you "lose" the power to "make your own groups" for your study!



Here (for the quasi-experiment), you randomly draw intact groups (e.g., from all the 4th grades in the district, you draw 4 of them at random) and then flip a coin or use some other random procedure to assign the pre-existing 4th grades to either the "treatment" or "control" conditions. (In our example Grades A and C "land" in the traditional lecture method (control), while Grades B and D end up in the hands-on science instruction (e.g., the "treatment" or the "experimental" group).

Do you see how this is different from the "true" experiment? In the "true" experiment, you selected the children themselves (subjects) at random and then "had the power" to in essence "form" your own "4th grades" by assigning the individual kids themselves randomly to either the control or the experimental conditions.

Here, though, the 'best you can do' (again, often for practical reasons such as access to sites, permission, etc.) is draw not individual kids but the GROUPS themselves (pre-existing 4th grade classrooms) at random and then in step # 2 assigning NOT the INDIVIDUAL KIDS but rather the WHOLE GROUPS to either the treatment or control conditions.

Quasi-Experimental Design

See how ***this one-step loss of randomization may mean a bit less control over those pesky contaminants***?! By forming your own groups you have a greater likelihood of "getting a good mix on all other stuff". But here, you've got to "live with the existing groups as is." And suppose that in the above scenario, 4th Grades B & D also happen (quite by accident, but welcome to 'real life!') to have a higher average I.Q. of 15 points than A & B! Now we've got a contaminant! Did the kids do better because of the hands-on science lesson -- or because of their inherently higher aptitude, intelligence or whatever?!

But at least we still have that last step: random assignment to either the experimental or control conditions!

Remember ... again...

1. For true experiments, we're randomly assigning individuals to treatment vs. control; and
2. For quasi-experiments, we're randomly assigning intact/pre-existing groups to treatment vs. control.

Well -- we lose that "random assignment" property in the 3rd "family" of group comparison design methodologies!

Ex post facto (also called "causal comparative") - <u>really no 'random anything!'</u> <u>We identify some sort of outcome and wonder 'what makes it vary like that</u>?' <u>Could it be some pre-existing grouping</u>? For instance, if we 'divided' or 'pile-sorted' the responses by gender, would that account for the difference we see?

Thus, <u>there is no treatment</u> either! Simply an attempt <u>to see if a grouping that we had no prior control over seems to "make a difference" on some outcome(s)</u>!

The keyword "difference" (by grouping) and no treatment would be the tip-off to an ex post facto or causal-comparative study design.
And -- regarding the grouping -- maybe this rather silly example will make the point! And help you to identify if you are in such a situation of "no-control-over-grouping:"
You wish to study whether preschoolers from single-parent homes are different in terms of emotional readiness for kindergarten than those of two-parent homes.
Now ... you couldn't go to prospective subjects' homes and say, "OK, now you've got to get divorced ... and YOU have to stay married ... 'cuz that's how you came up in the random assignment!"
I don't think so...!!! Same thing with "gender:" you took it "as is" (e.g., those subjects in essence 'self-selected into their gender grouping). You had no prior control over 'making' them 'be' one gender or the other but rather took those groups 'as is' and kind of pile-sorted some response(s) by gender to see if it 'made a difference' on some outcome! Indeed ... the ***literal Latin translation of "ex post facto" is "after the fact."*** This shows YOUR role in the 'grouping' process as the researcher! You didn't 'assign' them into any one group, randomly or otherwise. Instead, you came in "after the fact" and wished to see if that self-determined grouping made a difference on some outcome(s) that you are studying!
As you can imagine -- even bigger problems with contaminating variables! There is no randomization or control here!
Thus the name "causal comparative" is sort of a misnomer. You are indeed "comparing" two or more "pre-formed" groups on some outcome(s). But due to that *lack of randomization and control*, you can't really use this design to study "cause/effect" types of research questions or problem statements. There are generally *too many uncontrolled, unrandomized contaminating variables* that may have entered the picture to confidently make 'strong' cause/effect statements!
Nonetheless, given the circumstances, this type of design might be "the best you can do." Group differences on some outcome(s) might indeed be interesting to study even though you had little or no "control" in the situation.

To summarize, for the "group comparison" family of designs:

Kind of Study	**Method of Forming Groups**
Ex Post Facto (Causal Comparative)	Groups Formed
True Experiment	Random Assignment of Individual to "Researchr-Made" Groups
Quazi-Experiment	Random Assignment of Intact Groups

Case study design

It is a useful tool for investigating trends and specific situations in many scientific disciplines, especially social science, psychology, anthropology and ecology

Basically, a case study is an in depth study of a particular situation rather than a sweeping statistical survey. It is a method used to narrow down a very broad field of research into one easily researchable topic
Though it does not answer a question completely, it gives some indications and allows further elaboration and hypothesis creation on a subject.
The case study research design is also useful for testing whether scientific theories and models actually work in the real world. You may come out with a great computer model for describing how the ecosystem of a rock pool works but it is only by trying it out on a real life pool that you can see if it is a realistic simulation.
For psychologists, anthropologists and social scientists they have been regarded as a valid method of research for many years. Scientists are sometimes guilty of becoming bogged

down in the general picture and it is sometimes important to understand specific cases and ensure a more holistic approach to research.

Its advantage, (case study research design) is that you can focus on specific and interesting cases. This may be an attempt to test a theory with a typical case or it can be a specific topic that is of interest. Research should be thorough and note taking should be meticulous and systematic. In a case study, you are deliberately trying to isolate a small study group, one individual case or one particular population.

For example, statistical analysis may have shown that birthrates in African countries are increasing. A case study on one or two specific countries becomes a powerful and focused tool for determining the social and economic pressures driving this

How To Design And Conduct A Case Study

It is best if you make yourself a short list of 4 or 5 bullet points that you are going to try and address during the study. If you make sure that all research refers back to these then you will not be far wrong.
With a case study, even more than a questionnaire or survey, it is important to be passive in your research. You are much more of an observer than an experimenter and you must remember that, even in a multi-subject case, each case must be treated individually and then cross case conclusions can be drawn

How To Analyze The Results

Analyzing results for a case study tends to be more opinion based than statistical methods. The usual idea is to try and collate your data into a manageable from and construct a narrative around it.
Use examples in your narrative whilst keeping things concise and interesting. It is useful to show some numerical data but remember that you are only trying to judge trends and not analyze every last piece of data. Constantly refer back to your bullet points so that you do not lose focus.
It is always a good idea to assume that a person reading your research may not possess a lot of knowledge of the subject so try to write accordingly.
In addition, unlike a scientific study which deals **with facts,** a case study is based on **opinion** and is very much designed to provoke reasoned debate. There really is no right or wrong answer in a case study.

Cross-sectional design

A research design where **subjects are assessed at a single time** in their lives, A cross sectional study is fast and can study a large number of patients at little cost or effort. Also, you don't have to worry about patients dropping out during the course of the study. This study is efficient at identifying association, but may have trouble deciding cause and effect. With data at only one time point, you don't know whether the chicken or the egg came first. Here are two examples of cross sectional designs
In Zureik et al (BMJ 2002 Aug 24;325(7361):411), a group of 1132 adults with asthma were given respiratory function tests to assess the severity of their asthma. They were also given skin prick tests to assess their sensitization to mold, pollen, dust mites, and cats. In this study, those patients with reactions to mold were much more likely to have severe asthma.

Types Of Research

Research can also be classified on the basis of its purpose its intended to achieve and examples of such researches include:

Evaluative research:

This is the study that focuses on whether an intervention was properly implemented and whether the intended outcomes of a given programme or project have been realized or not. (Mouton, 2001) Evaluation studies are both quantitative and qualitative in nature and it requires an understanding of the project objectives so that the performance of the project can be measured against the set objectives.

Predictive research

This type of research takes on several variables and tries to predict the likely outcome. It asks 'what if questions. Thus it is based on predictions which themselves grow out of repeated actions and events which have been studied. It is based on probability and can be used to predict the likelihood of an event occurring (Wisker, 2001)

Historical research

These are studies which attempt to reconstruct the past and chronology of events (mouton 2001) and aim at arriving at an accurate account of the past so as to gain a better understanding of the present and fore cast what the future is likely to be.

Historical research is also referred to as analytical research. Common methodological characteristics include a research topic that addresses past events, review of primary and secondary data, techniques of criticism for historical searches and evaluation of the information, and synthesis and explanation of findings. Historical studies attempt to provide information and understanding of past historical, legal, and policy

Meta-Analysis

Meta-analysis combines the results of studies being reviewed. It utilizes statistical techniques to estimate the strength of a given set of findings across many different studies. This allows the creation of a context from which future research can emerge and determine the reliability of a finding by examining results from many different studies. Researchers analyze the methods used in previous studies, and collectively quantify the findings of the studies. Meta-analysis findings form a basis for establishing new theories, models and concepts.

Thomas and Nelson (1990) detail the steps to meta-analysis:

1. Identification of the research problem.
2. Conduct of a literature review of identified studies to determine inclusion or exclusion.
3. A careful reading and evaluation to identify and code important study characteristics.
4. Calculation of effect size. Effect size is the mean of the experimental group minus the mean of the control group, divided by the standard deviation of the control group. The notion is to calculate the effect size across a number of studies to determine the relevance of the test, treatment, or method.
5. Reporting of the findings and conclusions.

Exploratory research:

These are studies intended to carry out preliminary investigation into relatively unknown areas of research (Terre Blanch and Durrheim). They employ open, flexible and inductive approach to research as they attempt to look for new insights into phenomena. They generate speculative insights, new questions and hypothesis. They ask both 'what and why 'questions (Wiker, 2001, and Mbaaga, 1990) and this type of research is more flexible.

Descriptive research

Descriptive reseach are designed to gain more information about a particular characteristic within a particular field of study. A descriptive study may be used to, develop theory, identify problems with current practice, justify current practice, make judgements or identify what others in similar situations may be doing.
There is no manipulation of variables and no attempt to establish causality. They are qualitative in nature and produce descriptive data i.e they use people's own written and spoken words as well as observable behaviour to describe a phenomenon or event so that it can be understood better.

- Descriptive research requires the clear specification of...
  WHO, ***WHAT***, ***WHEN***, ***WHERE***, ***WHY***, and ***HOW***

-- Before data collection can begin

- Exploratory research is very flexible; descriptive research is **MUCH** more rigid

Causal research

This is a type of research that tries to find out the cause and effect of phenomenon (Leedy, 1997). The possibility of causal inference derives from the use of randomization techniques, experimental and comparative groups and repeated measures over time. Thus it aims at establishing cause-effect relationships between the research variables.

Other classification of research

It may also be categorized into the following

- Quantitative versus qualitative research
- Basic versus applied research
- Empirical and non empirical research

Qualitative and Quantitative Research

Quantitative research is:
"a formal, objective, systematic process in which numerical data are utilized to obtain information about the world" (Burns and Grove cited by Cormack 1991 p 140). There is massive use of mathematics, statistical tools and the samples are comparatively large.
In general, qualitative research generates rich, detailed and valid (process) data that contribute to in-depth understanding of the context. Quantitative research generates reliable population based and gereralizable data and is well suited to establishing cause-and-effect relationships

Quantitative research is research involving the use of structured questions where the response options have been predetermined and a large number of respondents is involved.
By definition, measurement must be objective, quantitative and statistically valid. Simply put, it's about numbers, objective hard data.

The sample size for a survey is calculated by statisticians using formulas to determine how large a sample size will be needed from a given population in order to achieve findings with an acceptable degree of accuracy. Generally, researchers seek sample sizes which yield findings with at least 95% confidence interval (which means that if you repeat the survey 100 times, 95 times out of a hundred, you would get the same response) and plus/minus 5 percentage points margin error. Many surveys are designed to produce smaller margin of error.

Qualitative Research is collecting, analyzing, and interpreting data by observing what people do and say. Whereas, quantitative research refers to counts and measures of things, qualitative research refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things.

Qualitative research is much more subjective than quantitative research and uses very different methods of collecting information, mainly individual, in-depth interviews and focus groups. The nature of this type of research is exploratory and open-ended. Small numbers of people are interviewed in-depth and/or a relatively small number of focus groups are conducted.

Participants are asked to respond to general questions and the interviewer or group moderator probes and explores their responses to identify and define people's perceptions, opinions and feelings about the topic or idea being discussed and to determine the degree of agreement that exists in the group. The quality of the finding from qualitative research is directly dependent upon the skills, experience and sensitive of the interviewer or group moderator.

This type of research is often less costly than surveys and is extremely effective in acquiring information about people's communications needs and their responses to and views about specific communications.

Basically, quantitative research is objective; qualitative is subjective. Quantitative research seeks explanatory laws; qualitative research aims at in-depth description. Qualitative research measures what it assumes to be a static reality in hopes of developing universal laws. Qualitative research is an exploration of what is assumed to be a dynamic reality. It does not claim that what is discovered in the process is universal, and thus, replicable. Common differences usually cited between these types of research include.

Characteristics of quantitative and qualitative research

Quantitative	**Qualitative**
Objective	Subjective
Research questions: How many? Strength of association?	Research questions: What? Why?
"Hard" science	"Soft" science
Literature review must be done early in study	Literature review may be done as study progresses or afterwards
Test theory	Develops theory
One reality: focus is concise and narrow	Multiple realities: focus is complex and broad
Facts are value-free and unbiased	Facts are value-laden and biased
Reduction, control, precision	Discovery, description, understanding, shared interpretation
Measurable	Interpretive
Mechanistic: parts equal the whole	Organismic: whole is greater than the parts
Report statistical analysis.	Report rich narrative, individual;

Basic element of analysis is numbers	interpretation. Basic element of analysis is words/ideas.
Researcher is separate	Researcher is part of process
Subjects	Participants
Context free	Context dependent
Hypothesis	Research questions
Reasoning is logistic and deductive	Reasoning is dialectic and inductive
Establishes relationships, causation	Describes meaning, discovery
Uses instruments	Uses communications and observation
Strives for generalization Generalizations leading to prediction, explanation, and understanding	Strives for uniqueness Patterns and theories developed for understanding
Highly controlled setting: experimental setting (outcome oriented)	Flexible approach: natural setting (process oriented)
Sample size: n	Sample size is not a concern; seeks "informal rich" sample
"Counts the beans"	Provides information as to "which beans are worth counting"

The decision of whether to choose a quantitative or a qualitative design is a philosophical question. Which methods to choose will depend on the nature of the project, the type of information needed the context of the study and the availability of recourses (time, money, and human).
It is important to keep in mind that these are two different philosophers, not necessarily polar opposites. In fact, elements of both designs can be used together in mixed-methods studies. Combining of qualitative and quantitative research is becoming more and more common.

Every method is different line of sight directed toward the same point, observing social and symbolic reality. The use of multiple lines of sight is called triangulation.
It is a combination of two types of research. It is also called pluralistic research.
Advantages of combining both types of research include:

1. research development (one approach is used to inform the other, such as using qualitative research to develop an instrument to be used in quantitative research)
2. Increased validity (confirmation of results by means of different data sources)
3. Complementarity (adding information, i.e. words to numbers and vice versa)
4. Creating new lines of thinking by the emergence of fresh perspectives and contradictions.

Barriers to integration include philosophical differences, cost, inadequate training and publication bias.

Qualitative data analysis

Qualitative analysis involves a continual interplay between theory and analysis. In analyzing qualitative data, we seek to discover patterns such as changes over time or possible causal links between variables.
Examples of approaches to discovery and explanations of such patterns are Grounded Theory Method (GTM), semiotics, and conversation analysis.
Qualitative researchers sometimes attempt to establish theories on a purely inductive basis. This approach begins with observations rather than hypothesis and seeks to discover patterns and develop theories.

Qualitative data Processing

The processing of qualitative data is as much art as science. Three key tools for preparing data for analysis *are coding, memoing*, and *concept mapping.*
Coding is classifying or categorizing individual pieces of data.
If you are testing hypothesis, then the codes could be suggested by the theory, in forms of variables. Open coding – codes are suggested by the researcher‘s examination and questioning of the data.
Example: 2 passages from Book Leviticus (Revised Standard version): religious bases for homophobia.
18:22 You shall not lie with male as with a woman, it is an abomination.
20:13 If a man lies with a male as with a woman, both of them have committed an abomination; they shall be put to death, their blood is upon them.
Homosexuality – key concept
Lying implies having sex
Male homosexuality
Prohibited behavior
Abomination
Put to Death
Male homosexuality is not the only abomination. Most of the abominations have to do with dietary rules and mishandling of ritual artifacts. **Thus, Dietary Rules and Ritual Artifacts are additional codes**.

Death penalty is broadly applied by Leviticus: everything from swearing to murder, including male homosexuality somewhere in between.
An extended analysis of prohibited behavior, short of abomination and death, and also turns up a lengthy list. Among them are slander, cursing the deaf, putting stumbling blocks in front of the blind people, and so forth.
Memoing writing memos or notes to yourself and others involved in the project.It is appropriate at several stages of data processing to capture code meaning, theoretical ideas, preliminary conclusions, and other thoughts that will be useful during analysis.
Concept mapping uses diagrams to explore relationships in the data graphically

Basic Research And Applied

Basic Research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.
Applied research is also an original investigation undertaken to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.

Experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience that is directed to producing new materials, products

or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed."

Content In The Proposal

What follows is more information about what is required in the various sections of your evolving research proposal.

I. **The Problem**. You should begin by stating what the problem is that you are going to research. You should give the reader an idea of the project you intend to undertake.

II. **Importance to the Discipline**. Not every topic is worth researching. What should guide your choice of a topic is that it is important and relevant to the field in which you are engaged. You must convince the reader that your topic is important. It is here that you need to integrate some theory that supports the need to investigate your topic.

III. **Literature Review**. Your review should follow the introduction of the problem and should include a logically organized review of the relevant literature. You should give a summary of the theory that guides your work, as well as discuss what others have found who have done the same or similar research. If you are proposing to replicate someone else's work, you should say why. For example, do you wish to extend the generalizability of their findings, or are you hoping to improve on their methodology? Tell why. There is no need for you to rediscover the wheel; therefore, be careful in your search of the literature.

List Questions/Hypotheses. Your review of the literature should lead you to your research questions. In other words, these questions should be a natural outgrowth of your review of others' work. State these questions concisely. Be clear about what you are going to try to prove or disprove. If the reader cannot understand what you are proposing, then you are not making a strong argument

Hypothesis: A statement that specifies how two or more measurable variables are related.

e.g

(H1): Women are more likely than men to make impulse purchases of our brand.

(H2): Decreasing price by 10% will increase unit sales by 30%.

(H3): Adoption of our new product will be greater in Northern states than in Southern States.

IV. **Method of Research**. While there are various methods by which one can approach social research, there are certain parameters which must be taken into consideration and addressed in your proposal. If the parameter does not appear to be relevant to your proposed research, you must address why that may be the case. What follows below is a list of parameters which might be considered in the writing of a research proposal. During the course of the semester, we will address these and other components of a research proposal.

A. **Operationalization of the Variables**: If your question is "Is job security related to job satisfaction?" you must tell what you mean by both job security and job satisfaction, and be very specific. Will these concepts be measures by a response to a question? What is that specific question? If you are asking more than one question to capture a concept, will you form a scale measure? What kind of scale measure? Each variable must have specific operations (hence, operationalization) attached to is so that the reader knows exactly how the variable will be measured in the proposed research.

B. **Design**: Specify what research design your study will take, and why. Is it an experimental design? Will you look at one group once or on several different occasions? Will you look at more than one group? Will you

be comparing different groups? Why? Will you use a case study approach?

C**. Sample**: How will you draw your sample? What is the method(s) you will employ? How many will be in your sample? Why? Will you use probability sampling or non-probability sampling? Why?

D. **Data Gathering Method**: How will you actually gather the data that measures your variables? Will you use a survey? Will you interview people? you use existing data? Which data? If you are using specific instruments,include copies of them in an appendix to the proposal. Will you use focus groups?

E. **Ethical Considerations**: What impact might your study have on your "subjects?" What risk, if any, might you impose on the population you study by conducting the research? What are some different ways in which
the findings of your research might be utilized by others? Are there any possible political uses and what might be some implications of those uses? How your findings might be utilized differently from your research intentions?

F. **Political Considerations** : To what political ends might the findings of your research be used? It is important to be aware that one's findings,regardless of what was hypothesized, can be put to political use. If the costs of political use outweigh the benefits of the research (which is also true of ethical considerations), one must question whether to conduct the proposed research

G. **Validity and Reliability**: How will you know if you are measuring what you say you are measuring? How will you know if your data is valid? What checks for validity will you provide? Are your measuring tools reliable? How will you know if they are reliable? What will you do that will convince the reader that you have addressed validity and reliability?

H**. Limitations to the Proposed Study**: You should tell the reader some of the limitations you foresee for your study. If you are using a specific sample and this limits generalizability, you should say so. If you are testing a group that might change the effectiveness of your measuring instrument, you need to address it. Anything that might limit the knowledge gained,in any way, should be mentioned. None of us cond uct the perfect research project; therefore, it is important the we address possible limitations.

V**. Data Analysis**: How do you propose to analyze the data you would collect from this proposed research? If you posit a relationship between some of the variables, how will you determine if there really is a relationship? What statistical techniques might you use? While you are not actually going to do any statistical analysis at this point, you must have an idea of what types of analyses would be appropriate for both your variables and your research questions.

VI. **Reference List**: Any of the studies you cite in the literature review, or any other relevant works that you use in the proposal, must be included in a proper reference list. (See Writing Guidelines) Note that a reference list should include only those items actually referenced in the body of the paper. If you do not use it in the body of the paper, you should not include it inthe reference list.

VII. **Appendices:** You should attach a copy of any relevant supplemental materials, such as questionnaires, interview schedules, scoring keys (code sheets),.

Grading Points for Proposal Papers

Consider the following criteria used in grading to increase your skills in project proposal writing

GRADING: Stage 1 is worth 120 points. Stage 2 is worth 280 points and the next pages detail the grading criteria for each paper.

RESEARCH PROPOSAL –
STAGE 1 – EVALUATION SHEET
MECHANICS (10%) – 12 POINTS
1. Grammatical and spelling errors (possible 8 points): Average number of errors per page: 0 = 8 pts;
1 = 6 pts;
2-3 = 4 pts;
4-5 = 2 pts;
6-7 = 1 pts;
8 or more = 0 pts. _____

2. Follows required writing guidelines, including spacing, margins, and citation of sources. (4 points) _____

ORGANIZATION (30%) – 36 POINTS
1. Presents critical thought on the topic; i.e., does not merely provide Descriptions or lists. (12 points) _____
2. Shows evidence of careful, logical planning and presentation, with use of appropriate headings throughout proposal. (12 points) _____
3. Shows evidence of careful writing, with clear articulate use of language. (12 points) _____

CONTENT (60%) – 72 POINTS
1. Statement of the problem that clearly describes the topic that is being proposed for research. (10 points) _____
2. Demonstrates the importance of the topic for research and for the respective discipline. (10 points) _____
3. Integrates scholarly material and own ideas in the development and discussion of the topic. (25 points) _____
4. Uses scholarly references and shows a clear link to the existing professional literature and relevant theory. (12 points) _____
5. Poses appropriate and clear research questions/hypotheses. (15 pts

The following are the methods of data collection

Observation method
Observational research is used for studying nonverbal behaviors (gestures, activities, social groupings, etc).
Sommer & Sommer (1986) developed the list shown below to assist in observation research.

1. Specify the question(s) of interest (reason for doing the study).
2. Are the observational categories clearly described? What is being observed and why?
3. Design the measurement instruments (checklists, categories, coding systems, etc.).
4. Is the study designed so that it will be 'Valid (i.e., does it measure what it is supposed to measure, and does it have some generalizability)?

5. Train observers in the use of the instruments and how to conduct observational research.
6. Do a pilot test to (a) test the actual observation procedure and (b) check the reliability of the categories of observation using at least two independent observers.
7. Revise the procedure and instruments in light of the pilot test results. If substantial changes are made to the instrument, run another pilot test to make sure changes will work under the field conditions.
8. Collect, compile, and analyze the data and interpret results.

Casual observation is normally done like unstructured interviews. During the early stages of a research project, casual observation allows the researcher(s) to observe subjects prior to designing questionnaires and/or interview formats.

Types of Observation Studies

Ethnographies which are observations of groups
Grounded theory which uses multi-staged data collection Phenomenological studies which studying subjects over a period of time through developing relationships with them and reporting findings based on research "experiences".
Case studies which use various data to investigate the subject over time and by activity
Each research method has its strengths and weaknesses. When designing a research study it is important to decide what the outcome (data) the study will produce then select the best methodology to produce that desired information.

SURVEY: This is the method used to describe a method of gathering information from a sample of individuals in a population in order to learn something about the larger population from which the sample is drawn.

Types of surveys: descriptive statistics which is largely conducted by the government to obtain major descriptive information about the population and its density, the composition of the labor force, national health statistics etc.

Survey for social research: mainly used by social scientists to gather and a analyze information about the social and economic conditions of the population or segments of the population and leads to the better understanding of human beings in their social settings.

Market research survey: this is carried on by business in consumer market research to determine consumer needs and the effectiveness of marketing programs.

The Steps In A Survey Project

1. Establish the goals of the project or what you want to learn
2. Determine your sample –whom you will interview
3. Choose interviewing methodology-how you will interview
4. Create your questionnaire –what you ask
5. Pretest the questionnaire, if practical test the questions
6. conduct interviews and enter data
7. Analyse the data and produce the report

Interviews; this may be defined as a deliberate conversation between the interviewer and an informant conducted for the purpose of collecting information. It may take the form of face

to face interview schedule or telephone survey by Mbaaga (Ibid.). it may be formal or informal interview

Formal interview: this type involves the pre determined list of questions that are asked to all the interviewees in the same order. They may be structured with standardized questions or semi-structured with some degree of flexibility and the more structured the interview, the easier it is to quantify the results.

Group Interview: (Focus Group Discussion) FGD

Richard Krueger (1988), describe the focus group as a special type of group in terms of purpose, size, composition, and procedures. A focus group is typically composed of seven to twelve participants who are unfamiliar with each other and conducted by a trained interviewer. These participants are selected because they have certain characteristics in common that relate to the topic of the focus group.

The researcher creates a permissive environment in the focus group that nurtures different perceptions and points of view, without pressuring participants to vote, plan, or reach consensus. The group discussion is conducted several times with similar types of participants to identify trends and patterns in perceptions. Careful and systematic analyses of the discussions provide clues and insights as to how a product, service, or opportunity is perceived.

A focus group can be defined as a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non threatening environment. It is conducted with approximately seven to twelve people by a skilled interviewer. The discussion is relaxed, comfortable, and often enjoyable for participants as they share their ideas and perceptions. Group members influence each other by responding to ideas and comments in the discussion.

Characteristics Of Focus Groups
Focus group interviews typically have four characteristics:

1. Identify the target market (people who possess certain characteristics);
2. Provide a short introduction and background on the issue to be discussed;
3. Have focus group members write their responses to the issue(s);
4. Facilitate group discussion;
5. Provide a summary of the focus group issues at the end of the meeting.

Other types of group processes used in human services (delphic, nominal, planning, therapeutic, sensitivity, or advisory) may have one or more of these features, but not in the same combination as those of focus group interviews.

<u>Key Data Collection Techniques</u>
Face to Face or personal interviews
Telephone interviews
Mail / postal interviews
E-mail interviews
Internet/ intranet (WEB PAGE)
How ever the above techniques may have advantages and disadvantages

The above techniques may be applied using a questionnaire,
Questionnaire: Is a predetermined written list of questions, which may be answered, by a subject or respondent.

The type of population, the nature of the research question and resources available determines the type of questionnaire to be used.

Planning the Survey

I. Hypotheses

- Descriptive hypotheses best answered by this method
- If you don't consider your hypotheses before writing your survey, you may be Overwhelmed with data and End up with data that doesn't address your concerns
- Good to go through several different scenarios of outcome from survey to see whether different outcomes would indeed have different implications for: Your hypotheses and What action you will take (if survey is to address applied issue)

II. After determining precisely what you want to find out, determine who you want to ask

A. Defining your population
B. Determining whether to use the population or to sample
C. Types of samples
1. Convenience samples
2. Quota samples
3. Random samples: Allow you to use inferential statistics to determine how closely your results reflect their population
4. Stratified random samples: The advantage of random samples, but with a smaller sample and/or greater accuracy

III. Questionnaire, Interview, or Telephone Survey?

A. Issues to consider
1. Cost
2. Response rate
3. Honesty of responses
4. Standardization
B. The case for the telephone survey

IV. Format issues:

A. Format of questions
1. Dichotomous versus continuous
2. Fixed versus open-ended

B. Format of survey
1. Structured
2. Semi-structured
3. Unstructured

C. Why a novice might be better off with fixed alternative questions and a structured survey:
1. Data is easily coded
2. Structure may reduce investigator bias: Data on hypothesis-confirming bias (Snyder, 1984, Snyder, 1981, Snyder and Cantor, 1979)

V. Rules for asking good questions

A. Use words a third-grader would understand
B. Use words that won't be misinterpreted
C. Avoid personal questions
D. Make sure your sample has the information you seek
E. Avoid leading questions
F. Avoid questions loaded with social-desirability

G. Avoid double-barreled questions negation
H. Keep questions short and concise
I. Avoid negations barrel
J. Avoid irrelevant questions
K. Pretest the questions

VI. Analyzing survey data
A. Summarizing data
B. Summarizing interval data
C. Summarizing ordinal or nominal data
D. Using inferential statistics
1. Parameter estimation with interval data
2. Hypothesis testing with interval data
a. Relationships among more than two variables
b. More complicated procedures
E. Using inferential statistics with nominal data
1. Estimating overall percentages in population
2. Relationships between variables

A. Literature review
1. To avoid doing a study that has already been done
2. To learn from others' mistakes and successes

B**. Ethical concerns**
1. Assessing potential gain:
- Is it a test of theory?
- Does it address a practical problem?
- Does it open up new lines of inquiry?
- Be sure you're **not** trying to prove the null hypothesis or unwittingly replicating a study that has been done before.
- Peer review

2. Assessing potential harm:
- Are ethical principles compromised?
- Peer review
- Review by professor
- Review by ethics committee
- Practical concerns

Should scientific principles be used to study humans and other animals?
Only if:
A. The potential benefits exceed the potential harm.
B. The potential for harm has been minimized
II. Maximizing benefits
A. Getting a good, useful idea to test.
B. Providing a valid test of that idea. The study should have at least one of the following three types of validity. The type or types needed depend on the research question.

Documentary Analysis

This is also known as the study of documents where documents are the materials which contain the information we wish to study. It is important to note that all studies begin by a review of related literature and certain documents; this may become a method of data collection if the research based on available documents.

Documents are divided into two broad categories namely primary (eye witness account written by people who experienced the particular event or behavior) and secondary documents (accounts written by those who were not present during the event but received the necessary information for compiling the documents by interviewing the eyewitnesses or reading the primary documents.

Primary documents may include things like letters, agendas, committee minutes, financial accounts and diaries. Secondary documents may include things like books, newspapers, journals articles etc.

Forms of documentary Analysis: Historical, Literature, Meta-Analysis Diaries and Content Analysis

Content Analysis

Content analysis systematically describes the form or content of written and/or spoken material. It is used to quantitatively studying mass media. The technique uses secondary data and is considered unobtrusive research.
The first step is to select the media to be studied and the research topic. Then develop a classification system to record the information. The techniques can use trained judges or a computer program can be used to sort the data to increase the reliability of the process.
Content analysis is a tedious process due to the requirement that each data source be analyzed along a number of dimensions. It may also be inductive (identifies themes and patterns) or deductive (quantifies frequencies of data). The results are descriptive, but will also indicate trends or issues of interest.

Experimental Designs

1. True Designs
2. Quasi Designs
3. Ex Post Facto Designs

True Designs - Five Basic Steps to Experimental Research Design

1. Survey the literature for current research related to your study.
2. Define the problem, formulate a hypothesis, define basic terms and variables, and operationalize variables.
3. Develop a research plan:
    a. Identify confounding/mediating variables that may contaminate the experiment, and develop methods to control or minimize them.
    b. Select a research design as seen already above
    c. Randomly select subjects and randomly assign them to groups.
    d. Validate all instruments used.
    e. Develop data collection procedures, conduct a pilot study, and refine the instrument.
    f. State the null and alternative hypotheses and set the statistical significance level of the study.
4. Conduct the research experiment(s).
5. Analyze all data, conduct appropriate statistical tests and report results.

Quasi Designs

The primary difference between true designs and quasi designs is that quasi designs do not use random assignment into treatment or control groups since this design is used in existing naturally occurring settings.
Groups are given pretests, then one group is given a treatment and then both groups are given a post-test. This creates a continuous question of internal and external validity, since the subjects are self-selected. The steps used in a quasi design are the same as true designs.

Ex Post Facto Designs

An ex post facto design will determine which variables discriminate between subject groups.
Steps in an Ex Post Facto Design

1. Formulate the research problem including identification of factors that may influence dependent variable(s).
2. Identify alternate hypotheses that may explain the relationships.
3. Identify and select subject groups.
4. Collect and analyze data

Ex post facto studies cannot prove causation, but may provide insight into understanding of phenomenon.

Data Analysis

The data collected in a given research can be analyzed either qualitatively or quantitatively depending on the nature of the data collected. In analysing the data,you need to develop skills in finding patterns in the data and to have the ability to isolate critical facts and information from other information that is not so important. Although the analysis depends on the type of data collected, how the data collected depends on the type analysis anticipated.

Qualitative Data Analysis

Its normally analyzed continuously during and after data collection (Mbaaga 1990). The analysis involves a pure description of events, places, people or objects. This will enable the reader to know what happened, what it was like from the participant's activities etc. In most cases qualitative analysis does not go beyond the measure of central tendency and measure of dispersion (mean, mode, median, range, and standard deviation)

Thus the analysis takes place simultaneously during and after the data collection (Merrian et al 1995), this enables the researcher to make adjustments, restructure and if possible examine emerging concepts not originally in the study design.
How ever NVivo 8 is a software package for analysis of qualitative data, such as transcripts of in-depth interviews, focus groups and field notes.

Quantitative Data Analysis

This type of data can be analyzed by use of statistical procedures after the researcher has measured the relevant variables. The first step in quantitative data analysis is to prepare the raw data and transform them into a data set in machine readable format (in a form that can be read by a computer

Raw data is a collection of unprocessed measurements such as pile of completed questionnaires, strings of numerical codes applied to written texts etc these are then transformed into ordered data set before they can be analysed. The data preparation process involves three important tasks namely;

- Coding
- Entering and
- creating

Coding where the data is grouped into certain categories and assigned specific codes and process involves translating verbal responses into numerical codes that facilitates data manipulation. Then after the data is coded it is entered into computer for analysis using the appropriate statistical package. How ever before the analysis, data has to be cleaned i;e the

information has to be edited or cross checked for errors if good results are to be expected and Following data entry, some data manipulation is usually needed to manipulate the entered ("raw") data into structures that are suitable for analysis. Typically, data manipulation tasks include

- *Copying data*
- *Selecting subsets of the data*
- *Restructuring the data to make analysis easier*
- *Transforming data*
- *Merging data at different levels*

Copying data

To avoid confusing the entry and the management, we suggest that you copy the raw data to a second sheet. This is easily done in Excel by creating a new worksheet (Insert => Worksheet), using Edit => Copy to copy the original data to the clipboard, and then Edit => Paste Special (rather than Paste) and clicking the Paste Link button. This ensures that the data in the new sheet are linked to the original data, so that any subsequent changes to the original are reflected automatically in the copy.

It is a good idea to get into the habit of naming sheets. In general your analysis will be simpler to follow if you use more sheets, rather than putting all your information together in a few sheets. But you then need to give them meaningful names so you can easily find them and retrieve the information that you want.
Also, you can take advantage of Excel's facility for naming cells or areas of cells (Insert => Name => Define). This makes it much easier to refer to your data, rather than using cell addresses.

Selecting subsets of the data

It is often useful to look at subsets of the cases (rows) in your data, for example to concentrate on female subjects, or on cases that show abnormally large values for a particular variable. Excel has some excellent filtering facilities for selecting rows of interest, in particular the automatic filter (Data => Filter => Autofilter). This allows you to display only those rows containing particular values of one or more variables. By using the Custom option, you can specify up to two specific criteria for each variable. All rows that do not meet the criteria are hidden from view (but are not deleted). More complex filtering can be achieved using the Advanced Filter facility (Data => Filter => Advanced Filter), but this is more difficult to use.

Restructuring data

It is often necessary to extract some of the data and convert them to a different structure. The most common requirement is to split a data column into several columns, one for each level of a factor (or combination of factors). For example, we may wish to separate data for males and females, so that we can process them separately or compare them.
We call this process "unstacking", since in list format the data for a variable are held in a single column for all levels of a factor (i.e. stacked on top of each other).

Transforming data

You will commonly need to perform some transformations of the original data (for example, taking logarithms or converting from grammes per plot to tonnes per hectare). This is easily achieved by adding a new column to a copy of the data, and using a suitable Excel formula to transform the data contained in an existing column. The need to add new columns to your data is one of the reasons that we recommend taking a copy of your original data.

Merging data at different levels

When you have data at multiple levels, you may wish to incorporate data about one level in the data at a more detailed level. For example, records about individuals may contain an indication of which household they belong to. You may wish to add some details about the households to the individual data.

This can be achieved using the Excel lookup function. For each column of household information that you want to incorporate, you should create a new column in the individual table and use lookup to extract the appropriate information from the household data for each individual.
The analysis can be done at three levels depending on the investigation of the study namely;

At univariate level of Analysis: frequency tables to provide an enumeration of activity of people that have pre-specified characteristic. Percentages can also be presented so as to show the distribution of people that have certain characteristics within the total population of the study.

Suitable aids to visualizing your data fall generally into the following categories:
Graphics, which give a picture of the structure of your data and the relationships within them
Tables, which enable you to compare values, frequency counts, etc between levels of factors.
Other univariate descriptive statistics include measures central tendency (e.g. mean, median, mode),deciles, quartiles and measures of dispersion(e.g. ,range, mean deviation, standard deviation, coefficient of variation).

At The Bivariate this involves making contingency tables between the dependent variable and the independent (explanatory variables). In order to establish relationship between the independent and the dependent variable Pearson -chi square test statistics can be used to measure the degree of association.

At multivariate can be used to carry out further investigation to establish the relative importance of the dependent variable.

NB programs we teach most statistical packages used in analysis like SPSS, STATA

Difference Between Research Proposal And Project Proposal

A research proposal	A project proposal
Exclusively written by academics and students in institutions of higher learning	Not restricted to academics
Review of related literature is emphasized	Literature review section is absent
Focuses on collecting data on a problem which will be analyzed for drawing conclusion and making recommendation	Makes use of the recommendations of a study to solve the problems of a given community
Bibliography and references are a must	Bibliography and reference may not be necessary
May be written and presented in chapters	Written and presented in sections
Proposals especially written by students may not necessarily be presented to seek financial assistance	The primary aim is to seek financial assistance
May not need a follow up action	Emphasizes a follow up action
Evaluation plan not necessary	Evaluation plan a must

The structure of a research report

- **Title**
- **Table of content**
- **An abstract**
- **Chapter one: Background to the problem**
- **Chapter two: Literature review**
- **Chapter three: Methodology**
- **Chapter four : Results /findings of the study**
- **Chapter five: Discussion, Conclusion and Recommendations**
- **References**
- **Appendices**

    - Timetable
    - Budget
    - Research instruments
    - Field photograps
    - Introduction letters
    - Any other important document

Appendix

WRITING UP RESEARCH

This is how method fits into your thesis:

	Introduction: introduction of research problem introduction of objectives introduction of how objectives will be achieved (methodology), optional introduction of main findings and conclusions, optional
	Literature review: review of previous work relating to research problem (to define, explain, justify) review of previous work relating to methodology (to define, explain, justify) review of previous work relating to results (particularly reliability, etc.) i.e identify weaknesses and success
	Method (how the results were achieved): explanation of how data was collected/generated · explanation of how data was analyzed explanation of methodological problems and their solutions or effects
	Results and discussion: presentation of results interpretation of results discussion of results (e.g. comparison with results in previous research, effects of methods used on the data obtained)
	Conclusions: has the research problem been "solved"? to what extent have the objectives been achieved? what has been learnt from the results? how can this knowledge be used? what are the shortcomings of the research, or the research methodology? etc.

	analysis: classes of data are collected and studies conducted to discern patterns and formulate principles that might guide future action
	Case study: the background, development, current conditions and environmental interactions of one or more individuals, groups, communities, businesses or institutions is observed, recorded and analyzed for stages of patterns in relation to internal and external influences.
	Comparison: two or more existing situations are studied to determine their similarities and differences.
	Correlation-prediction: statistically significant correlation coefficients between and among a number of factors are sought and interpreted.
	Evaluation: research to determine whether a program or project followed the prescribed procedures and achieved the stated outcomes.
	Design-demonstration: new systems or programs are constructed, tested and evaluated
	Experiment: one or more variables are manipulated and the results analyzed.

	Survey-questionnaire: behaviors, beliefs and observations of specific groups are identified, reported and interpreted.
	Status: a representative or selected sample of one or more phenomena is examined to determine its special characteristics.
	Theory construction: an attempt to find or describe principles that explain how things work the way they do.
	Trend analysis: predicting or forecasting the future direction of events
	Descriptive narration tells the story from beginning to end in chronological order, utilizing limited generalizations and synthesized facts.
	Interpretive analysis relates one event to another event. The event is studied and described within a broader con- text to add meaning and credibility to the data. For example, an examination of the development of a local jurisdiction's ability to dedicate land for parks may be related to the urbanization and loss of open space in our communities.
	Comparative analysis examines similarities and differences in events during different time periods-for example, the budget-cutting priorities and procedures of the Proposition 13 era of the early 1980s in parks and recreation as compared to the budget-cutting priorities and procedures of today
	Theoretical and philosophical analysis utilizes historical parallels, past trends, and sequences of events to suggest the past, present, and future of the topic being researched. Findings would be used to develop a theory . For example, an analysis of public recreation agency goals and objectives of previous eras can be used to describe the future in the context of social, political, economic, technological, and cultural changes in society.

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African Population Institute
P. O. Box 10842, Kampala Uganda
Website: www.africapopulation.net Email: info@africapopulation.net
Tel:+256-772/712-836998

Course Name	: Information Technology

Course Description

The Course deals with the introduction, background and significance of computers, computer hardware and software, networking and the internet, the various computer devices and their applications such as operating systems, input/output devices etc, to students. The Course explains some practical applications such as Ms Word, Ms excel, Power point and their presentation and browsing the internet. It provides prior knowledge to computer language program which can be helpful at further stages of Computer studies.

Course objectives

- To help students attain basic knowledge of the computer
- To help students to become familiar with the use of internet and browse the World Wide Web through routine practice.
- To enable students develop foundational skills for information technology.

Course content

Introduction to computers

- Information management
- Why were office systems less beneficial than computerized systems
- Why computers are better than people
- Limitations of computers
- Effects of office automation on business
- Definition of computers
- Characteristics of computers
- Types of computers

Hard ware concepts

- The processor and its elements
- Manual input devices that include keyboard, web camera, the monitor, mouse
- Automatic input devices that include modems, magnetic ink character recognition, optical mark reading, magnetic stripe cards
- Output devices that include VDU, speakers, printers,
- Storage devices that include; hard disks, floppy disks, Flash disks, tape storage

Networks and data communications

- Configurations that include; centralized, decentralized and distributed processing as well as key features of distributed processing
- Networks that include: Local Area Network(LANs), Wide Area Networks(WANs),Metropolitan Area Network(MAN), storage Area Networks
- Client-server computing
- Data communication that include; oral, paper and electronic data communication
- Data transmission equipment that include; coaxial cables, modems, multiplexers

Software Concepts

- Definition of software
- Operating system Assessment

Course work 40%

Exams 60%
Total Mark 100%

COMPUTER TECHNIQUES

CHAPTER FIVE

SYSTEMS DEVELOPMENT LIFE CYCLE (SDLC)

5:0 INTRODUCTION

Under this Chapter we shall look at the following:
- ♦Feasibility study
- ♦Systems investigation
- ♦Systems analysis
- ♦Systems design
- ♦Systems implementation
- ♦Review and maintenance

A company or an organisation of any sort will normally have a strategic plan.
This strategic plan could be probably increasing sales by say 30% in the next 5 years.

When such a plan is in place, departments in the organisation will also set their strategies, to ensure that they contribute as required to the overall strategic plan. These departments may include; Production, Marketing, Sales, IT, Human Resource, etc.

Definition

A strategy is a general statement of a business's long-term objectives and goals and the ways by which these will be achieved.

5:1 THE IT STRATEGY
This will always deal with the organisational needs from IT, the organisation's current use of IT and the potential opportunities that IT can bring.
During the evaluation of current use of IT in the organisation, Gaps (differences) can be identified. E.g. does the system meet the desired requirements, are users happy, is the system reliable, etc.

5:2 STAGES IN THE SYSTEMS DEVELOPMENT LIFE CYCLE

This is the cycle that any system, which can be used in an organisation, can be developed through. It is called a cycle because the stages involved in the development will always be continuous and repeat themselves in the same way.

The stages involved in the systems development life cycle include the following in their order

- ♦Problem identification
- ♦Feasibility study
- ♦Systems investigation
- ♦Systems analysis
- ♦Systems design
- ♦Systems implementation
- ♦Review and maintenance

Definition
A system is a collection of activities and elements organised to accomplish a goal.

A computer information system (CIS) is a collection of hardware, software, people procedures and data that work together to provide information essential to running an organisation.
Life cycle -This implies t hat the system changes continually, in other words that, development of computer information system within an organisation is an ongoing activity.

PROBLEM IDENTIFICATION
The SDLC typically begins by identifying a problem or need. It involves a preliminary investigation of a proposed project to determine the need for a new information system.

An end user usually requests this or manger who wants something done that is not presently being done.

The exact problem or flow in the system should be known e.g. slowness resulting in the incompetence of the system, too heavy work than is manageable effectively by the system and areas of poor performance being identified by management which increase the level of indirect expenses.

Possible plans or suggestions with alternative arrangements to the present ones are then forwarded to management in a report - to decide whether to pursue the project further.

If so then management hands the terms of reference to the system analyst. Once the analyst get a go ahead, he conducts a feasibility study within the limits of the terms of reference.

FEASIBILITY STUDY
This is a forma study to decide what type of system can be developed which meets the needs of the organisation.

It involves a brief review of the existing system and the identification of a range of possible alternative solutions.

The systems analyst here will estimate the costs and benefits of the systems with greater accuracy.
The alternative that promises a significant return on the investment will be accepted.

Feasibility study comprises the following:
♦Technical feasibility
♦Operational feasibility
♦Financial feasibility
♦ Economic feasibility
♦Social feasibility or organisational feasibility

1. Technical feasibility
The requirements, as defined in the feasibility study, must be technically achievable. This means that any proposed solution must be capable of being implemented using available hard ware, soft ware and other equipment.

2. Financial feasibility
The certified public accountant will have an in depth role to play at this stage in proceedings. The economic contribution of the whole system must be assessed.

At this level, the cost-benefit analysis will be carried out on all the possible alternatives, to identify the one with best returns.

There are three principal methods of evaluating a capital project

i) Payback Period
This method of investment appraisal calculates the length of time a project will take to recoup the initial investment - that is, how long a project will take to pay for itself. The method is based on cash flows.

ii) Accounting Rate of Return
This method, also called return on investment, calculates the profits that will be earned by a project and expresses this as a percentage of the capital invested in the project. The higher the rate of return, the higher a project is ranked. This method is based on
accounting results rather than cash flows.

iii) Discounted Cash Flow (DCF)
This method can be sub divided into two

♦Net Present Value (NPV)
This considers all relevant cash flows associated with a project over the whole of its life and adjusts those occurring in future years to 'present value' by discounting at a rate called the 'cost of capital'.

♦ Internal rate of return (IRR)
This involves comparing the rate of return expected from the project calculated On a discounted cash flow basis with the rate used as the cost of capital. Projects

with an IRR higher than the cost of capital are worth undertaking.

3. Organisational feasibility
The culture of the organisation, its structure, working practices, behavioural patterns and social systems need to be considered.

After the outlined project specifications are prepared these are presented to users who, with the assistance of technical staff will evaluate each option and make a final choice.

The results of this are included in a feasibility report.

SYSTEMS INVESTIGATION
The systems investigation is a detailed fact finding exercise about the area under consideration.

The following will be considered here by the project team;
♦Determine the inputs, outputs, processing methods and volumes of the current system
♦Examining controls, staffing and costs and also reviews the organisational structure.
♦Also considers the expected growth of the organisation and its future requirements.

The stages involved in this phase of systems development are as follows:

a) Fact finding by means of questionnaires, interviews, observation, reading handbooks, manuals, organisational charts.
b) Fact recording using flow charts, decision tables, narrative descriptions, etc.
c) Evaluation, assessing the strengths and weaknesses of the existing system.

Methods used in obtaining facts about the existing system:

♦Interviews
If interviews are conducted effectively, they allow the interviewer to provide information as well as obtain it. This method is the most appropriate for senior management, as other approaches may not be appropriate at executive levels.

♦Questionnaires
The use of questionnaires may be useful whenever a limited amount of information is required from a large number of individuals, or where the
organisation is decentralised with many 'separate entity' locations. Questions are normally set in such a way that each one is equal to another and the evaluation is done by simply adding the number of 'yes' and 'no'.

♦Observation
Here the investigator simply observes/watches the procedures as they occur. The problem here is that people normally tend to behave abnormally especially if they know that they are being watched.

♦Document Review
The systems analyst must investigate the document that are used in the system., e.g. organisational charts, procedures mammals and standard operational forms.

The overriding risk is that staff do not follow documented policies and procedure or that these documents have not been properly updated, so this method is best used within other techniques.

SYSTEM ANALYSIS
At this phase, a full documentation of the current system, oftenly using data flow diagrams is done. The ways in which the system can be changed to improve it are then considered, and diagrams are redrawn to reflect the required system.
Definition
A data flow diagram is a recording of the ways in which data is processed, without bothering with the equipment used.

SYSTEMS DESIGN

This involves the detailed systems specification draw up.
The selection of the suitable hardware, software and any required human - computer interface is done at this level.

Hard ware

In general terms, the choice of computer hardware will depend on the following factors:

♦User requirements - will the hardware suite in with the user's requirements.
♦Power - the computer power should be sufficient for the current and future requirements.
♦Reliability - there should be a low expected 'break down' rate. Back-up facilities should be available.
♦Simplicity - simple systems are probably best for small organisations.
♦Ease of communication - the system (hard ware and soft ware) should be able to communicate well with the user.
♦Flexibility - the hardware should be able to meet new requirements as they emerge, especially more powerful CPUs.
♦Cost - it must be affordable.

Soft ware
There are several points to consider while choosing a suitable package. They include the following:
♦User requirements
Does the package fit the user's particular requirements? E.g. report production, anticipated volume of data, etc.
♦Processing times
Is the processing times fast enough?

♦Documentation

The documentation should be full and clear to the user e.g. the manuals should easily be understood.

♦Controls - what controls are included in the package e.g. pass words, data validation checks, spell checks, etc.

♦Compatibility - will the package run on the user's computer?

♦Support and maintenance - what support and maintenance services will the software supplier provide?

♦User friendliness

Is the package easy to use? E.g. with means and clear on-screen prompts for the Key board operator.

♦Cost

Comparative costs of different packages should be a low priority. The company Should obtain what it needs for efficient operation. Off-the-shelf packages are a little cheaper that tailor made packages (bespoke).

A key question regarding software is whether to develop a system specially or buy what is already available (off-the-shelf)

Bespoke Packages

These are designed and written either 'in-house' by the IS department or externally by a software house. They are normally developed according to the customer specifications.

Off-the shelf packages

These are packages that are developed and sold to lots of users and intended to handle the most common user requirements.

Advantages of bespoke packages include:
i) The company owns the software and may be able to sell it to other potential users.
ii) The company can be able to do things with its software that competitors cannot do with theirs.
iii) It is likely that the package will be able to do all that is required it to do both now and in the future.

Disadvantages
a) The soft ware may not work at all.
b) There may be long delay before the soft ware is ready.
c) The cost is relatively high compared to off-the-shelf packages.

Advantages of using off-the shelf packages
a) It is available now and ready for use.
b) It is almost certainly cheaper than a specially commissioned product.
c) Expected high quality because software specialist writes them.
d) The software manufacturer will continually update a successful package, and so the version that a customer buys should be up-to-date.
e) Other users will have used the package already, and a well established package should be error-free.
f) These packages (good) are usually well-documented with easy to follow user manuals.

Disadvantages
a) A computer user gets a standardised solution to a data processing task. This may not well suite in the individual user's particular needs.
b) The user is dependent on the supplier for maintenance of the package.

c) There is always no competitive advantage as the competitors can use the same package.

Systems prototypes are likely to be developed here.

Definition
A prototype is a diagrammatic representation of the actual proposed system. It includes the number of hardware required, its configuration, information flow, staff, etc.

SYSTEMS INSTALLATION AND IMPLEMENTATION

Under this phase, the following stages are normally followed;

a) Installation of hardware and software
b) Testing

c) Staff training and production of documentation
d) Conversion of files and database creation
e) Change over

The items/stages in the list above do not necessarily happen in a set chronological order, and some can be done at the same time - for example staff training and system testing can be part of the same operation.

Installation of equipment

Installing a mainframe computer or a large network is a major operation that is carried out by the manufacturer/supplier.

Installation of a PC and other peripheral equipment will need a little bit of planning.

♦They should not be put in small, hot rooms since they generate some heat.
♦Large desks may be advisable, to accommodate a screen and keyboard and leave some free desk space for the officer worker to use.
♦There should be plenty of power sockets-enough to meet future needs as t he system grows, not just immediate needs.
♦If noisy printers are being purchased, it may be advisable to locate these in a separate printer room to cut down the noise for office workers.
♦There should be a telephone near the computer, for communicating with the dealer that provides systems support and advice if there is a problem.
♦The cabling for network connections should consider possible future changes in office key out or in system requirements.

After the installation of hardware, then software can be installed too. The can be done very fast there days since software is available on CD-ROMs and DVDs.

Back up copies of the software may also be got.

Testing

Programs must be thoroughly tested as they are being written and the whole system should also be thoroughly checked before implementation, otherwise there is a danger that the new system will go live with faults that might prove costly.
'Test data' is normally used here.
Test data is fed into the computer/new system and the results from the new system are compared with the already existing/pre-determined results from the old system.
Any deviations can be used to make decisions as to whether the system has passed or failed the test.

Training and documentation

Staff training in the use of information technology is as important as the technology itself. There is no use in having it if people don't know hoe to use it. This can be done through, lectures, discussion meetings, handbooks, trials/tests, internal company magazines, courses, manuals, etc.

Conversion of files
This means converting existing files into a format suitable for the new system.
Large organisations may use conversion software to change over:

Once the new system has been fully and satisfactorily tested, thechange over can be made. This may be according to one of four approaches.

- ♦ Direct change over
- ♦Parallel running
- ♦Pilot tests
- ♦ 'Phased' or 'Stayed' implementation

Direct change over
This is the method of changeover in which the old system is completely replaced by the new system in one move.

This may be unavoidable where the two systems are substantially different, or where extra staff to over seed parallel running are unobtainable.

It is very cheap, but very risky as well and it is best used in business slack periods e.g. Christmas, holidays, etc.

Parallel running
This is a form of changeover where by the old and new systems are run in parallel for a period of time, both processing current data and enabling cross checking to be done.

It is a bit safe (less risky), but if the two systems are different, then cross-checking may be hard or impossible. Also, there is a delay in the cultural implementation of the new system and also a need for more staff to run the two system - an indication of high expenses.

Pilot Operation
This may involve a complete logical part of the whole system being chosen and run as a unit on the new system. If that is shown to be working well, the remaining parts are then transferred.

Gradually the whole system can be transferred in this piece meal fashion.
This method is cheaper and easier to control than parallel running, and provides a greater degree of safety than does a direct change over.

Phased Implementation
This involves a parallel running or direct change over done to a system of a particular section, say a branch of a company.

This method is suitable for very large projects and/or those where distinct parts of the system are geographically dispersed.

At this phase/stage (systems installation) of the SDLC, the internal auditors role is usually very important, especially during the testing of the new system.

This is because the facts he obtains at the testing stage can be used in future evaluation of the system and any audits that may be carried out.

A reference can always be made to the facts generated by the auditor at the testing stage to ensure there are no illegal amendments to the system.

SYSTEMS MAINTENANCE AND REVIEW

Maintenance

This is geared towards keeping the system running smoothly and achieving the intended goals.

There are three types of maintenance activities,

- ♦Corrective maintenance
- ♦ Perfective maintenance
- ♦Adaptive maintenance

Corrective maintenance

Is carried out when there is a systems failure of some kind, for example in processing or in an implementation procedure. Its objective is to ensure that systems remain operational.

Perfective maintenance

Is carried out in order to perfect the software, or to improve software so that the processing inefficiencies are eliminated and performance is enhanced.

Adaptive maintenance

Is carried out to take account of anticipated changes in the processing environment. E.g. the new taxation legislation might require change to be made to payroll software.

Post Implementation Review

This is devoted to uncovering problems in the system so as they can be fine tuned. Also it reviews t he activities involving methods used in developing the system. It is of two steps:

- ♦**Development review**

Here the problems that arose during the development phases of the life cycle are analysed. Major discussions focus on expenditure and the period taken to complete

the new system. Positive or negative variances in the expenditures are analysed. Mistakes resulting to negative variances are noted and are unlikely to be repeated in the future likewise positive variances.

Also mistakes that led to the delay are noted and avoided in the future.

♦**Implementation Review**
This step investigates the specific successes and problems of system operations. These activities take some time after systems implementation say 1½ years. It is Intended to ensure that the system meets the desired goals it was implemented for.

In summary still, the systems development life cycle follows these stages and it is very examinable.
1. Problem identification
2. Feasibility study
3. Systems investigation - detailed
4. Systems analysis
5. Systems design
6. Systems implementation
7. Systems maintenance and review

Question:
a) In the SDLC, which stage go you think directly involves a certified public accountant like you, and what would you be required for?
b) Describe for methods of system change over.
c) Distinguish between off-the shelf and bespoke software.
d) What is feasibility study?

CHAPTER SIX

THE DATA PROCESSING CYCLE

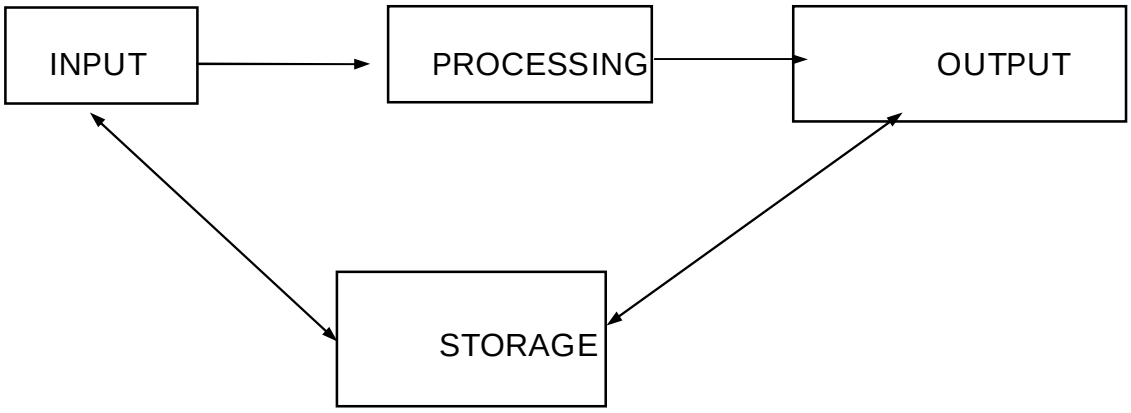
6:0 INTRODUCTION
Under this Chapter we shall look at the following:
♦Processing cycle
♦ Processing operations
♦Storage and retrieval systems
♦Classification of files

6:1 DATA PROCESSING CYCLE
Data processing, whether it is done manually or by computer, follows a cycle of input, process, output and storage.

Data processing is the acquisition, arrangement, storage and maintenance of data. The use of the computer is just to speed up and allow the use of complicated models compared to other methods.

A cycle refers to a sequence of activities performed in order, that produces expected dependable results.

The DP Cycle



The input function;
This involves gathering/collecting needed data items and entering the items into the information system for processing. This is done by the computer input devices.

Inputs can come from multiple sources. The quality, accuracy and completeness of data will affect the quality of the resulting information.

The processing function
This involves any method for using, handling, processing operations transforms transform data into meaningful information.

Processing creates new information which in turn is returned to files for updating and, or communicated to people.

The output information
Output delivers the results of processing i.e. information which can in turn be communicated to the people known as users of computers or information. This is normally done by the output devices.

The storage information
An information system needs a massive supply of data records and files. In this sense, storage is a vital part of an information system. The storage function also involves updating files to incorporate processed data. Storage can be done into the various types of storage peripherals that you already know.

6:2 DATA PROCESSING OPERATIONS

Files are used to store data and information that will be needed again in future or for the current use.
A file is a collection of records with similar characteristics.

The main types of data processing operations involving files are file updating, file maintenance and file enquiry or file interrogation.

Both manual and computer data processing can be divided into two broad types:
- ♦Batch processing
- ♦Real-time processing

Batch Processing

This is the processing as a group of a number of transactions of a similar kind which have been entered over a period of time to a computer system. Data is entered first, and then gets processed at a go as a group.

E.g. you may enter all the names into the system and then command it to arrange them in alphabetical order.

Transaction is any updating work on a database file. This can include entry of a new record, amending a record, deleting a record, etc.

Real-time processing

This is the continual receiving and rapid processing of data so as to be able or more less instantly to feed back the results of that input to the source of the data.

Real-time processing uses an 'on-line' computer system to interrogate or update files as requested rather than batching such requests together for subsequent processing.

On-line

On-line refers to a machine, which is under the direct control of the principal central processor for that hardware configuration.

Modern computers such as PCs are on-line by definition and likewise PCs in a network have permanent access to the server.

6:3 FEATURES OF A STORAGE AND RETRIEVAL SYSTEM

Whatever form documents and recorded information take, if they are to be of any use, they must be kept in a suitable way so that:

a) Authorised people can get to the information they require quickly and easily;
b) Information can be added to, updated and deleted as necessary;
c) Information is safe from fire loss or handling damage as long as it is required;
d) Accessibility, flexibility and security are achieved as cheaply as possible.

Classification of Files

Accessibility is a key point. When information is filed, it has to be filed in such a way that its users know where it is and how to retrieve it later when it is needed.

This means having different files for different types of information, and then holding each file in a particular order. Information might be divided into categories and then held in a particular order within each category.

There are various ways in which information can be grouped together, or classified.

a) By name (for example correspondence relating to a particular person)
b) By geography (for example all documents relating to a particular country, area or city).
c) By subject matter (for example all document relating to a particular contract, transaction or problem).
d) By date (for example all invoices for a certain month or year).
e) By department (for example profits or costs for each department or employee of each department).

Once broad classifications are established, the material can be put into a sequence which will make individual items easier to retrieve.

Again there are various systems for arranging files

a) Alphabetical order - for example customers listed in name order
b) Numerical order - for example invoices listed in numerical order of invoice numbers.
c) Alpha-numerical (A1, A2, A3, B1, B2, and so on).
d) Chronological order -f or example letters within a subject file listed by the date they were written.

CHAPTER SEVEN

SECURITY ISSUES

7:0 INTRODUCTION

Under this topic we shall look at the following,

- ♦Risks to the computer user
- ♦Risks to hardware
- ♦Physical access control
- ♦Controls over personnel
- ♦Risks to storage media
- ♦Risks to data
- ♦Back-up procedures
- ♦Telecommunication risks

A computer system consists not only of hardware, software, data and procedures but also of people.

Because of people, computer systems may be used for both good and bad purposes.

7:1 RISKS TO THE COMPUTER USER

If you have ever worked for long periods at a computer, you may have experienced some discomfort. This might have been caused by your use of the screen or the keyboard.

The VDU
If the screen is too bright, it can cause eyestrain. There are two ways of dealing with the problem. The first is to turn down the brightness; all monitors have a brightness and a contrast switch.
The second is to fit some kind of anti glare filter. All VDUs must have a swivel and tilt capability.

The physical health matters related to computer that have received the most attention recently are the following:-

1. Eye strain and headache
VDUs require using the eyes at close range for a long time, this can create eye strain, headaches and double vision.

And this is normally when the screen is too bright. To avoid this, take a 15 minute break every hour or two. Turn the brightness down.

Use of special anti-glare screen coatings and glare filters. Keep everything
You are
focusing on at about the same distance e.g. the screen, key board, document holder containing your work.

Clean the screen of dust from time to time.

2. Back on neck pain
Many people work at VDU screens and key boards that are in improper positions resulting in back and neck pain.

To avoid such problems;
♦**Make sure the equipment is adjustable. Your chair should be adjustable for height and angle and should have good back support.**
♦The table on which the monitor stands should be adjustable.
♦The monitor should be detachable.
♦ Document holders should be adjustable.

3. Electro magnetic fields effects
Like many household appliances, VDUs generate invisible electro magnetic fields (EMF) emissions which can pass through the human body.

Recommendations include;
♦Use of low emission monitors.
♦Computer users should sit 2 feet or more from screens and at least 3 feet from neighbouring terminals, as the strongest fields are emitted from the sides and back sides of terminals.
♦Use of glare filters which also reduce the emissions getting to an individual from the screen.

Repetitive Strain Injury (RSI)

Data entry operators in some companies may make as many keystrokes a day as possible. Some have fallen victim to a disorder known as RSI. This name is given to this disorder, which results from fast repetitive work that can cause neck, wrist, hand and arm pains.

Avoidance of RSI includes;

- Taking short rest breaks
- Getting plenty of sleep and exercise
- Loosing weight, sitting straight
- Learning stress management techniques

Other computer health risks include:

- Injury from electric shock

7:2 RISKS TO HARDWARE

Threats to hardware security are computer crimes including virus, electronic break-ins and natural, etc. Keeping information private in part depends on keeping computer systems safe from criminal acts, natural hazards and other threats.

Physical Threats

Fire and Flood

Fire is the most serious hazard to computer systems. Destruction of data can be even more costly than the destruction of hardware.

A fire safety plan is an essential feature of security procedures. It includes;

- Site preparation - appropriate building materials, fire doors, etc.
- Detection - e.g. smoke detectors
- Extinguishing - e.g. sprinklers
- Training staff in observing fire safety procedures e.g. the smoking in computer rooms

Water is a serious hazard. Flooding and water damage are often encountered following fire fighting activities else where in a building.

This problem can be countered by water proof ceiling and floors together with provision of adequate drainage. In some areas, floods are a natural hazards and therefore basements are generally not regarded as appropriate sites for computers.

Weather

The weather may be a threat. Wind, rain and storms can all cause substantial damage to buildings. Lightning and electrical storms pose an additional threat, as they can play havoc with power supply, causing power failures and power surges.

One way of combating this is by the use of un interrupted (protected) power supplies (UPS) Power failure may be solved by obtaining a separate generator.

Theft
Office break-ins are common. This can be combated by use of burglar proof windows and doors, etc.

7:3 PHYSICAL ACCESS CONTROL

The way to minimise many of the risks discussed in the above section is to introduce a series of physical access controls, to prevent intruders getting near the computer equipment or storage media. Methods of controlling human access include:

- Personnel (Security guards)
- Mechanical devices (e.g. keys, whose issues is recorded)
- Electronic identification devices (e.g. card-swipe systems, where a card is passed through a reader.

Personal identification numbers (PINs)
In some systems, the user might have a special PIN, which identifies him or her to the system. According to what the user's PIN is, the user will be allowed access to certain data and parts of the system but forbidden access to other parts.

Door locks
Connectional door locks are of value in certain circumstances, particularly where users are only required to pass through the door a couple of times a day. If the number of people using the door increases and the frequency of use is high, it will be difficult to persuade staff to lock the door every time they pass through it.

The major difficulty with this is the fact of key control. And the solution would be installing a combination door lock. This is where a numbered keypad is located outside the door and access allowed only after the correct 'code', or sequence of digits has been entered.

This will be effective if users keep the combination secret and the combination is changed frequently.

Card Entry Systems
This is a more sophisticated means of control than the use of locks, as cards can be programmed to allow access to certain parts of a building only, between certain times.

Security guards
These can be deployed at each entrance in the building to restrict access as may be required.

Video Surveillance
These (video cameras) are normally placed in certain strategic areas say corners, corridors, inside the rooms, etc. to cover any moving object. They are normally

connected to a certain surveillance room of several TVs and a person to see the moving objects on TV.

7:4 CONTROL OVER PERSONNEL

Personnel Selection

The personnel who are to operate in the IT departments need to be fully scrutinised at the recruitment state and after recruitment, they need to be managed properly.

Controls related to personnel include the following:
i) Checks and balances so that a security violation must pass through several steps before being implemented.
ii) Segregation of duties (division of responsibilities)
iii)Job rotation so that employees change jobs at random intervals.
iv) Enforced vocations
v) Access to information granted not on rank in the management hierarchy or precedent, but on a need-to-know basis.
vi)Careful selection of personnel especially those to work in the IT departments.

Fraud

Computer frauds come from disgruntled employees, organised crime and hackers. Networks make certain types of fraud easier; this is because many people/employees can have access to the computer system.

Two types of fraud can be identified

i)Single large-scale funds - usually the stealing of large amounts of money.
ii)Small-scale, but long-term frauds.

Examples of methods of fraud are given below:
i) Creation of fictitious supplier accounts and submission of false invoices, usually for services rather than goods, so that payments are sent to the fictitious supplier.
ii) Corruption and bribery, particularly where individuals are in a position of authority as regards making decisions or suppliers or selecting between tenders.
iii) Misappropriation of incoming cheques from bonafide customers.
iv) Theft of portable fixed assets.
v) Giving unauthorised discounts to customers.
i) Fictitious staff on the pay roll.

These frauds do not all involve computers in the commission, but many could be detected by appropriate use of computer controls, perusal of exception reports, analysis of expenditure ratios and the like.

7:5 RISKS TO STORAGE MEDIA

Handling floppy disks, CDs and tapes

Floppy disks and CDs should be handled with care just as you would treat a valuable CD with care.

i)They break when you bend them or you run them over with the castors of your chair.
ii) Spilling hot drinks over them and leaving them on sunny windows sills will damage them.
i) CDs should particularly be protected from dust, scratches and finger prints.
ii) For floppies write on the label before you stick it on to the disk and write only with a felt tip pen, never a ball point.
iii) Floppies are affected by magnets sot hey should be kept far from magnets.

Tapes can be snipped with scissors, or get knotted up, and they can also be damaged by magnets and heat and liquid. Treat them with the same care you would give to your favourite audio/video tape.

7:6 RISKS TO DATA

Risks to data can be in the form of deliberate or accidental:
i))Destruction (or alteration)
ii)Theft
iii) Unauthorised disclosure

There are therefore two types of controls used to restrict access.

♦Physical access controls (analysed earlier)
♦Logical access control

Basically logical access control consists of a password system. Data destruction can be protected against by taking back-ups and the risk of alteration of data minimised by a variety of basic precautions.

Passwords
Passwords are a set of characters, which may be allocated to a person, a terminal or a facility, which are required to be keyed into the system before further access is permitted.

Passwords can be applied to data files, program files and parts of a program.

i) One password may be required to read a file, but another to write new data to it.
ii) The terminal user can be restricted to the use of certain files and programs
(e.g. in a banking system, junior grades of staff are only allowed to access certain routine programs).

In order to access a system the user needs first to enter a string of characters. If what is entered matches a password issued to an authorised user or valid for that particular terminal the system permits access. Otherwise the system shuts down and may record the attempted unauthorised access.

Disadvantages of passwords

i)By experimenting with possible passwords, an unauthorised person can gain access to a program or file by guessing the correct passwords. This can usually be easy especially where users pick on to use obvious password like their names, etc.
ii) Some oneauthorised to access a data or program file may fell an unauthorised person what the password is, perhaps through carelessness.
iii)Many password systems come with standard passwords as part of the system. It is always better not to use such standard systems.
i) Passwords can be left in the open and any one gains access to them.

7:7 BEST PASSWORD PRACTICE (BPP)

These are points that have to be observed by computer users to whom passwords have been allocated.

- ♦Keep your password secret - don't reveal it to anyone.
- ♦Do not write it down as any body may come across it.
- ♦Change your password regularly.
- ♦Change and use your password discretely - some body can watch the movement of fingers to determine the password.
- ♦Do not use obvious pass words e.g. your name, etc.
- ♦Change your password if you suspect that any one else knows it.

7:8 TELECOMMUNICATIONS DANGERS

When data is transmitted over a network or telecommunications link (especially the internet) there are numerous security dangers.

a) i)Corruptions such as viruses on or single computer can spread through the network to all of the organisation's computers.
b) Staff can do damage through their own computer to data stored on other computers. E.g. transferring a file of the same name to the colleague's which may cause an over write.
c) Disaffected employees have much greater potential to do deliberate damage to valuable corporate data or systems.
d) If the organisation is linked to an external network, persons outside the company (hackers) may be able to get into the company's internal network, either to steal data, or to damage the system.
   Systems can have firewalls - these are used to prevent a particular network from intrusion from any other network e.g. a company network and the Internet.
e) Employees may down load inaccurate information or imperfect or virus-ridden software from an external network.
f) Information transmitted from one part of an organisation to another may be intercepted.
   Data can be encrypted (scrambled) in an attempt to make it meaning less to those who are not entitled for it.
g) The communications link it self may break down or distort data.

Encryption and other safety measures on telecommunication

♦Encryption involves scrambling the data at one end of the line, transmitting the scrambled data, and unscrambling it at the receivers end to the line.

Authentication

This involves adding an extra field to a record, with the contents of this field Derived from the remainder of the record by applying an algorithm that has previously been agreed between the senders and recipients of data.

Dial-back security

This operates by requiring the person wanting access to the network to dial into it and identify themselves first. The system then dials the person back on their authorised number before allowing them access.

Hacking

A hacker is a person who attempts to invade the privacy of a system. There are normally skilled programmers, and have been known to crack system passwords with consummate ease.

CHAPTER EIGHT

DATA BASE MANAGEMENT SYSTEMS

8:0 INTRODUCTION

Under this Chapter we shall look at the following:

♦Data base management system (DBMS) structures
♦Designing a data base
♦Verification and validation checks

8:1 DBMS STRUCTURES

Data within databases (or most other computerised filing systems) is organised in a specific hierarchy. The aim of the organisation method is to provide generally accepted and workable method of storing and accessing data in computer files. The basic concepts to be understood are as follows.

♦**Database** -stores information about the organisation within individual files
♦**File** - information concerning one aspect of the organisation, such as details of debtors.
♦**Record** - all the detailed information about one person or item within a file. E.g. in a debtors file, there will be information about the debtor.
♦**Field** - one item of data e.g. within the debtor's record this could be the debtor name.
♦**Byte** - one character
♦**Bit** - the smallest unit of computer storage - one area of memory, which can hold the value 0 or 1.

♦**Entry set/type** – Group of similar objects of concern to an organisation for which it maintains data transactions, courses, employees, students, non academic staff etc.
Meta data – is data used to define other data

Attributes – Characteristics of object category.
Entity- Basic units used in modelling.
Modelling – Some basic common functions.
Database – Collection of related files
Key - Single attribute
Primary key – unique entity identifier
Supper Key – Additional attributes to a primary key
Candidate Key – 2 or more attributes uniquely identifying an entity set
Secondary Key- An attributes/combination of attributes that may not be candidate keys but classifies the entity set
Meta data – Using data to describe/define data
External View of data – Highest level of application
Global view of data – lowest level of actual data storage

Naïve user
♦Not aware of DB (Database systems)
♦Responds by processing a coded Key
♦Then operations are very limited

On-Line User
♦Communicate with database directly via a user interface and application programme
♦Aware of database system (DBS)
♦Use data manipulation language
♦Need additional help like merits
There are three basic database structures having different levels of sophistication hierarchical databases, network databases and relational databases.

As hierarchical and network data bases are rare these days, we shall confine on describing the relational model.

Relations Database
The concepts behind relational databases were developed by EF Codd of IBM.

The data is stored in tables, which are derived by a mathematical form of analysis on the sources of data for the system e.g. input screens, reports.
In a relational database, data is split between different two-dimensional tables, which are linked together via a set of unique keys

Commercially available relational databases include IBM's DB2 and Oracle. Ms Access is also a relational database.

APPLICATION PROGRAMME.

- Are professional programmers
- Develop application programme user interface utilised by
- The naïve & online users
- Are programme written in general purpose programming language e.g. Assembler, COBOL, Fortran, Pascal etc.

DATA BASE MANAGEMENT SYSTEMS

Definition:
A database is a file (or files) of data so structured that many applications can use the file and update it, but which do not themselves constrain the file design or its contents.

This is of major benefits to the organisation including data sharing between applications.

DBMS
This is specialist software used to create and maintain a database.

Organisations collect and use vast amounts of data. One method of storing and accessing this data is to place it within one large store and use a DBMS to effectively control that data.

The DBMS is normally located between the main database of the organisation and the different applications that want to access and use that data.

Elements of a DBMS
A DBMS comprises three separate sections i.e.

a) Data Definition Language (DDL)
b) Data Manipulation Language (DML)
c) Data Dictionary

DDL is used to specify the content and structure of the database. The DDL defines the form of each item of data in the database so that the data can be accessed and used by the various application programs accessing the database.

Entry set/Type – Group of similar objects of concerned to an organisation for which it maintains e.g. data transactions, courses, employee, students, non-academic staff etc.

♦Defines the conceptual scheme
♦Curves details how to implement the conceptual scheme and stores data

DML is a specialist language used to manipulate data within the database. The DML is a fourth generation language.
♦Involves retrieval of data from the database
♦Inserts raw data into the database

The Data Dictionary is a program used to store and organise the data in the database. The dictionary stores key information about the data, such as who uses the data, what the access rights to data are and who owns the data and is therefore responsible for updating it. Deletes and modifies existing data.

Facilities offered by database management systems

The DBMS will offer the following facilities:
a) The ability to add, amend and delete records
b) The ability to retrieve data
c) The ability to present data in different formats and combinations as required
d) The ability to control access to records by means of passwords and other security procedures
e) The ability to allow the database to evolve without requiring modification to applications programs
f) The ability to recover from systems break down and avoid data loss
g) The ability to record transactions and identify redundant data.

8:2 DATABASE ADMINISTRATORS (DBA)

Centralised control of data base under one controller that is sole administrator.
The DBA's work can be split into strategic and organisational activities.

a) Strategic Tasks
(i) Working with strategic management to help define the organisation's present and future needs.
(ii) Choosing suitable file structure for data storage.
(iii)Analysing the data required for each application.
(iv)Preparation of a data model.
(v) Preparation, modifying and maintenance of a data dictionary.
(vi)Defining hardware needs and plan for any change and internal levels.
(vii) Administrator of internal and external view of data (3 levels)
(viii) Specifies conceptual view of various users and applications
(ix) Defines and implements the internal level and storage structure
(x) Controls changes to external Global
(xi) Custodian and controller of database structure
(xii) Defines mapping between levels structures
(xiii) Okays users of the database and their dismissal.
(xiv) Fore sees the maintenance and preservation of the integrity of the database
(xv) Defines procedures to receive and recover the database system

b) Organisational Tasks

(i) Ensuring data integrity by implementing and controlling database procedures.
(ii) Production of operating manuals.
(iii)Provision of training for users and applications programmers on a regular basis.
(iv)Assessing the ongoing performance of the database.

Benefits/advantage of database filing systems

There are basically three major benefits from database filing system; i.e. integrity, independence and integration.

Integrity

Database integrity means that data is kept secure and that amendments are only made as effectively authorised by the DBMS.

Independence

The principle of independence relates the splitting of data away fro the programs that use that data.

Making this split ensures that;

♦Applications can be written and amended independently of the data they use, and
♦Amendments can be made to the data without having to amend all the different applications that use the data.

Integration

This refers to the maintenance of data in one location rather than spreading and possibly duplicating, that data around the organisation in separate individual databases.

8:3 BENEFITS OF A DATABASE MANAGEMENT SYSTEM (DBMS)

a) Integration of data needs

Data should be shared between the different applications using it. This can mean That different applications using the DBMS can access the same data at the same time.

b) Data security

Data should be accessible only to those authorised to see it, and should be capable of modification only under controlled conditions.

c) Flexibility

The DBMS should allow for different uses with a range of applications.

d) Minimum redundancy

Duplication of data should be kept to a minimum. This achieves the benefit of reduced space and avoids inconsistent data.

e) Evolutionary capability

The DBMS must be capable of evolving to adapt to changing organisational Needs without requiring extensive modifications to application programs.

8:4 DESIGNING A DATABASE

Where an organisation uses a central database, it is crucial that the database operates effectively. This requires adequate hard ware, software and personnel, but most importantly it needs a well-designed database.

The main stages in design and use of a database are as follows;
a) Analysis of information needs
b) Logical design of the database
c) Physical design and set up of the data base
d) Data entry and upkeep
e) Data retrieval and reporting
f) Monitoring and maintenance

Analysis of information needs
In order to identify the information needs of the organisation, a fundamental understanding of its objectives is necessary.

a) The business plans of the company provide the basis of this understanding, identifying the organisation's critical success factors (CFS) and the information that is needed for these factors to be achieved.
b) An information audit will be carried out to identify the needs of particular users and groups of users.

Logical design of the database
a) The information gathering process will help to determine the data required on the database for existing and foreseeable future applications. This list of data is recorded in the data dictionary.
b) The rules relating different items of data together are determined.
c) The analyst will then determine the rules relating particular application to items in the database.

Physical design and set up of the organisation
The rules that have been specified are then programmed to support the database management system. This procedure is so specialised that it may require a special Data Description Language (DDL).

Data entry and upkeep
a) Data is added (or appended) to the database. Its integrity is ensured by validation and verification checks.
b) Existing data may be changed (or amended). This process will also be subject to validation and verification (see later in next section).
c) Existing data may be deleted from the database. This is normally a two-stage process, i.e. making and then physically deleting - this ensures that only intended data is deleted.
d) A specialised language called a Data Manipulation Language (DML) may be used to carry out the processes of addition, amendment and deletion.

Data Retrieval and Reporting
Most database systems provide a wide variety of ways in which data may be accessed and analysed.

a) Individual records may be retrieved and inspected.
b) Items may be retrieved according to a set of specific parameters.
c) Data may be sorted or indexed on any field or combination of fields. This makes lists and other outputs easier to use.
d) Simple summarises and calculations can be carried out on the data contained in the database.
e) Report generators are supplied with many databases management packages. This enables users to summarise and report data quickly and in an easily digested format.
f) A specialised language called a Structured Query Language or SQL may be used to retrieval and report information.

8:5 VERIFICATION AND VALIDATION CHECKS

The verification and validation checks have been designed to deal with the common human errors as regards data entry. This is in databases, accounting systems, spreadsheets, etc. So this means that these checks do not only apply to databases but also to accounting systems, word processors, spreadsheets, etc.

Verification is the process of ensuring that the data that has been input is the same as the data on the source document.

Validation is the process of ensuring that the data that has been input has a value that is possible for that kind of data. For example there is no month with 33 days.

Data Verification

The most common method of verification is encouraging staff to look for errors e.g. if data is input using a key board, it will be shown on the screen and visual checks on the data can be made.

Validation Checks

When a validation check identifies an error, the record concerned will probably be rejected and processed no further without correction. Rejection reports or massages will be displayed on a VDU screen.
Some of the data validation checks are outlined below:

♦**Range Checks**
These are designed to ensure that the data in a certain record field lies within predetermined limits e.g. day of a month can be from 1 to 31 not 0 or beyond 31.

♦**Limit Checks**
These check that data is not above or below a certain value.

♦**Existence Checks**
These are checks to ensure that the data is valid within a particular system. E.g. Checking items in stock.

♦**Format Checks**
These help to ensure that the format (and size) of the data in a field is correct.
E.g. check that the formal is all numeric or alphabetic, etc.

♦**Consistency checks**
These involves checking that data in one field is consistent with data in another field. For example, in a payroll system, there might be a check that if the employee is a Grade C worker, he or she must belong to department 5,6 or 9.
♦**Completeness Checks**
A check can be made to ensure that all records have been processed.
♦**Check digits**
This check is used to detect especially transposition errors.
Transposition errors are those that arise when correct digits in a figure, e.g. 123,907, are unintentionary interchanged, e.g. 132, 907.

CHAPTER NINE

OFFICE AUTOMATION

9:0 INTRODUCTION

Under this Chapter we shall look at the following:
♦Spreadsheet
♦Word Processing, DTP and Graphics
♦Communication
♦The Internet

Office automation tries to analyse the application programs that are normally used in offices and office communication.

9:1 SPREAD SHEET

A spreadsheet is a general-purpose software package for modelling. The name is derived from its likeness to a spreadsheet of paper divided into rows and columns.

♦A spreadsheet program can help you manage personal and business cash flow analysis and forecasting. General ledger, stock records, profit projections, sales projections, etc.
♦You can use the spreadsheet to perform calculations, analyse data and present information.
♦You can store large collections of information i.e. a mailing or product list.
♦Spreadsheets program include tools for organising, managing, storing and retrieving data-through a bigger control over a list stored on your computer would need a Database program.

Features of Spreadsheets
Cell is one box in a spreadsheet.
Column is a vertical line of boxes or cells. Each column is identified by a unique letter e.g. a,b,c, aa, ab, aaa, aab, etc).
Row is a horizontal lie of boxes of cells. Each row is identified by a different number (e.g. 1,2,3,11,12,13,111,112, etc).

Active cell (Current cell)
This identifies the location of each cell in a spreadsheet. It consists of a column letter followed by a row number.

Formula
In a spreadsheet, a formula helps you calculate and analyse data. When entering formulas cell references or cell addresses are used. E.g. [+D2+D4] instead of typing in the actual data whenever possible.

Calculations
Spreadsheet programs perform calculations using the following.
* - multiply, + - Add, - - Subtract, /- divide, / exponents.

Automatic Recalculation
Spreadsheets have a facility where by if you change a number used in a formula, all the other figures affected by the formula will change automatically displaying the new results.

This feature is so useful if you want to evaluate possible scenarios. E.g. how differently interest rates affect your mortgage payments.

Using parenthesis [ ]
In a formula, a spreadsheet program will calculate the data inside the parentheses then with those outside it. E .g. +A1 * [B6/B7] + A5.

Copying a Formula
After entering a formula in a spreadsheet, you can save time by copying a formula to other cells. The spreadsheet program will automatically change the cell references in the new formula for you.

Functions
A function is a ready-to-use formula that helps you to perform calculations e.g. sum, Average, Maximum, Minimum, etc.

Examples:
♦SUM [D1: D4] calculates the sum of the numbers in addresses D1 to D4.
♦AVERAGE [A6: A10] calculates the average value of the lists of numbers in addresses A6 to A10.
♦MAXIMUM[A2; A7] finds the largest value in the lists of numbers in addresses A2 to A7.

Facilities offered by a spreadsheet.

Editing
Data can easily be copied for moved from one part of the spread sheet to another using a mouse and cut and paste or drag and drop facilities.

♦Column width, row height can also be changed.
♦Rows and columns can be inserted and most operations can be reversed.

♦Modern spreadsheets can help you complete a series, e.g. type 'Monday' - it will type the rest up to Sunday.

Formatting a Spread sheet
This involves changing font (type style), number appearance, boarders, shading and colour. Data alignment centre left or right, etc. You can format the entire spreadsheet or a specified range of cells.

Charts and graphics
Most spreadsheets contain graphic and chart facilities which enable you illustrate data using a suitable chart type.

Sorting
Data can be sorted alphabetically or numerically.

File commands
Opening, naming, saving, printing and closing the spreadsheet file are the key tasks.

Potential problems/disadvantages of spreadsheets

Spreadsheets are immensely popular and can be used for a very wide range of modelling tasks. However, because they are essentially single - user packages and because each one is designed from scratch. There are risks in their use.

a) Although users are some times trained in how to use a spread sheet, they are rarely trained in spread sheet discipline or best practice. This means that spread sheets may be badly designed, increasing the risk of errors or inefficiency.

E.g. a user may put a second large table immediately below the first, rather than diagonally offset. If he or she then deletes a column of data from the first table, then data may be unintentionally lost from the second one as well.

b) Users are unlikely to document the workings of their spreadsheet, as they consider it 'obvious'. This makes it difficult for other staff to understand use or modify the model.
c) The lack of proper audit trail can be a disadvantage. Because the user works with a spreadsheet in memory (RAM), only saving it at certain intervals, it is unlikely that a record of the intermediate stages will be maintained, even if output from the intermediate stages is important.

9:2 WORD PROCESSING
WORD PROCESSORS
Word processing is the processing of text information. Typically word processing soft ware may be used for production of standard documents.

Features of a word processor
The following are some of the features of a typical word processor.

(i) Adding headers and footers
(ii) Inserting footnotes
(iii) Using different characters fonts in a variety of services.
(iv) Changing texts to bold italic, underlined, double underlined, etc.
(v) Spell checking - for spelling errors and in some programs checking for grammatical errors.

Some word processors especially modern one have additional features not available in older word processor e.g.
(i) Adding lines or boxes in a variety of width and style.
(ii) Inserting digitised photos and artwork.
(iii) Creating charts and tables with newly entered data or by linking to data that already exists in a data file.
(iv) Drug and drop editing.
(v) Creating a table of contents or index automatically.
(vi) Main merging - where automatic formats for different types of letter may exist.
(vii) Importing data from other -programs like spreadsheets.
(viii) Compatibility - where major packages are very similar and highly compatible e.g. a WordPerfect file may be opened, edited and saved in Ms Word.

9:3 DESK TOP PUBLISHING (DTP)
DTP is the use of office computers to implement computerised typesetting and composition systems. They can be used for producing master pages for a book, newspapers, leaflets, etc.

Graphics (Computer Graphics)
Another use of computers is the production of information in the form of pictures, diagrams or graphs. A widely used office package is corel draw.

9: 4MICROSOFT ACCESS
This is used to design data bases and create management reports.

9:5 COMMUNICATION
Under this topic, we shall see how telecommunication hardware is used in office work.

Telex
Telex is a service which enables users to transmit and receive printed message over a telephone line. Users have to be telex subscribers, with their own telex equipment and code number in order to send or receive messages.
Telex services started in the 1930's
Data transmission speeds are very slow with Telex as compared to other methods telecommunication and only restricted set of characters can be used in messages.

Fax (or Facsimile)
This involves the transmission of messages by a data link of exact duplicate copies of documents. The original is fed into the fax machine, which reads it and converts it into electronic form so it can be transmitted over the telephone.

It is printed by the recipient fax machine.
The latest fax machines can also be used to scan data into a PC, as printers for PC output and as photocopies.

Electronic Mail (E-mail)
The term 'electronic mail' or 'e-mail', is used to describe various systems of sending data or messages electronically via a telephone or data network and a central computer, without the need to post letters or place memos in pigeon-holes, etc.

E-mail has the following advantages
a) Speed E-mail is far faster than post or fax. It is a particular time saver when communicating with people over seas.

b) Economy (no need for stamps, envelopes, etc) it is far cheaper than fax or post.
c) Efficiency. Messages are prepared once but can be sent to thousands of employees at the touch of a button.
d) Security. Access can be restricted by the use of passwords.

Voice Mail
Voice mail systems enable the caller's message to be recorded at the recipient's voice mail box. It requires a telephone, and no keying or typing is necessary.
A voice mail message is basically a spoken memo.

THE INTERNET
The Internet is the name given to the technology that allows any computer with a telecommunications link to exchange information with any other suitably equipped computer.

Also Internet refers to the international network.

Web sites/page
As you are no doubt aware, most companies of any size now have a 'site' on the Net.
A site is a collection of screens providing information in multi media form (text, graphics and often sound and video), any of which can be viewed simply by clicking the appropriate button, word or image on the screen.

Internet Service Providers (ISPs)
Connection to the Internet is made via an Internet Service Provider (ISP). The user is registered as an Internet subscriber and pays a small monthly fee together with local telephone call charges. Examples of ISPs include American On-line (AOL), Spacenet in Uganda, Uganda Telecoms, etc.

Browsers and Search Engines

Browsers

These are programs that are used to run the internet. Example is Netscape Navigator.

Search Engine

These are used to guide the users surfing the net examples include, Yahoo! Aita Vista.

Uniform resource locator (Website address) (URL)

Each web page has a unique address called the uniform resource locator (URL)

All you need is type in the URL for the website you want to visit and enter.
An example of URL could be like http!//w.w.w.TBC.co.ug.

URL Element	Explanation
http!//	Hyper text transfer protocol, the portico used on the world-wide web for the exchange of documents produced in what is known as 'hyper text mark-up language (HTML). The forward slashes after the colon introduce the 'host name' such as www.
www	This stands for World Wide Web. As noted before, to put it simply the web (via its use of HTML), is what makes the internet user-friendly.
TBC	This is the domain name of the organisation or individual whose site is located at this URL.
Co	This part of the VRL indicates the type of the organisation concerned. The Internet actually spans many different physical networks around the world including commercial (Com or Co), schools (ac or edu) and other research networks (org, net) military (mil) net works, and government networks.
Ug	As you can possibly guess, this indicates that the organisation is located in Uganda commercial use of the Internet.

Marketing

Organisations used the Internet to provide information about their own products and services. Customers simply log on to the appropriate website and get to know the latest products on the market and so many other things.

Sales

Interactive electronic purchasing is possible with the Internet, the customer simply provides details of her/his credit card on the internet along with the order. This

facility is not yet very common here in Uganda but its very attractive in Europe and America.

Distribution
The Internet can be used to get certain products directly into people's homes. Anything that can be converted into digital form can simply be up loaded on to the seller's site and then down loaded onto the customer's PC at home. The Internet thus offers huge opportunities to producers of text, graphics/video and sound-based products. Much computer software is now distributed in this way.

Other uses of the Internet

Entertainment
A variety of quality games are available on the net.

Information
On the net you can have access to information of any subject imaginable e.g. newspapers, magazines, job listings, airline schedules, college prospectus, movies, etc.

Discussion group
You can join discussion groups on the net to meet people with similar interests. You can ask questions, discuss problems and read interesting stories.

E-mail
Exchanging email is the most popular feature on the Internet. You can exchange e-mail on computers around the world.

Problems with the Internet
Being owned by no one, there are no clear guidelines on how the internet should develop. Today you can find the good, bad and different items on the net e.g. Bible preaching and phonography.

Employees of an organisation may spend so much time on the net surfing useless sites - thus wasting the organisation's useful time.

Lack of security on the Internet is another problem. This is especially with the e-mails - information such as credit card details is not communicated comfortably.

Cost is another major problem. You need a relatively high quality PCs, which are expensive; in addition, connection fees, access time fee and web site designing fees are also high.

With much less powerful equipment e.g. a slow modern and a slow processor, gaining access to useful information becomes slow and quiet painful.

Getting connected to the Internet

You need specific equipment and program to connect to the Internet.

1. Computer - any type of computer, which is relatively strong.
2. Programs - you need special programs to use the Internet e.g. e-mail programs, etc.
3. Modems - you need a modem to connect to the Internet. A modem of at least 14,400 bps is recommended.
4. Telephone line.

Other forms of the Internet

Intranets
This is an internal Internet, available to individuals with in a specific organisation.

The intranet is used to provide a relatively quick and easy method of providing and information sharing system in an organisation.

Extranets
This is an extension of the intranet where some third party access is allowed to the internal web sites.

Uses and benefits of the intranets
Allowing access to databases, no matter where they are located with in the organisation.

This helps to support the obtaining and sharing of information between worker throughout an organisation as well as minimise the need to keep the data in more than one place.

An intranet will allow the creation of on-line catalogues, handbooks, and directories that can be accessed and up dated as necessary e.g. an internal telephone directory for an organisation of say 100,000 employees world wide will change on a daily basis as a new staff are hired and existing staff leave.

Intranet will save the organisation costs in terms of printing and distributing the paper based manuals and handbooks etc.

Some intranets can be linked to legacy system allowing older corporate data to be obtained and analysed along side more recent transaction data.

Information is provided in a more user-friendly format, which helps encourage the use of the internet.

Training costs are limited because users will already be familiar with browser technology from using the Internet.

Uses and Benefits of the Extranets
They provide on-line information for customers and suppliers provide 'added value' to the products and services provided by the organisation.

Allowing authorised buyers of the organisations' products access to information about those products to help them decide which product is appropriate for a specific use.

Linking with existing EDI (Electronic Data Interchange) applications to provide full stock control, procurement and payment systems.
Full Meanings of the words as applied in information technology/system

LIST OF ABBREVIATIONS

ABBREVIATION	ABBREVIATION IN FULL
4.GL	Fourth Generation Language
ALU	Arithmetic Logic Unit
AOL	America on Line
AS II	America National Standard Code for Inform date Interchange
ATM	Automated Teller Machine
BASIC	Beginners All Purpose Symbolic Codes
BIOS	Basic Input – Output System
BIT	Binary Digit
BTM	Business Teller Machine
CD	Compact Disk
CIS	Computer Information System
CLS	Clear Screen
COBOL	Common Business Oriented Language
CPU	Central Processing Unit
CU	Control Unit
DBMS	Database Management System
DDL	Data Definition Language
DEEP BLUE	Computers are modern computers that are an IBM computer programmed to play Chess with the world class champion, Garry Kasorok. Programmed to make 1 million moves in a second, which defected the world chess champion in the world.
DEL	Delete
Dir	Directory
Disk Drives	Media where computer programme files reside e.g., Hard disks, floppy Disks, CD-ROM, Magnetic tapes etc.
DML	Data Manipulation Language

DOS	Disk Operating System
DPC	Desktop Personal Computer
Drives	External storage medium storage capacity more than floppy and less then hard disk drive, designed with letters D...E.
DTP	Desk top Publishing
DVD	Digital Video Disk
E-mail	Electronic Mail
EMF	Electronic Magnetic Fields
EPOS	Electronic Point of Scale
EWN	Enterprise Wide Network – Any Private Network connects all of organization CPS no matter what they run or where they are located.
Expansion Slots	are access slots on the C.P.U where new computer cards can be fixed when upgrading (expanding) a computer. When adding another floppy drive, adding a CD ROM Drive a higher memory chip.
Floppy Disks Drives.	External storage medium, less storage capacity than Hard disks drive designed with letters
FORTAN	Formula Transaction
GB	Byte
GUI	Graphical User Interface - medium through user interacts with a CP
Hard Disk Drive	Internal Storage mechanism stores most computer applications. Capacity 100MB designed work letters
HLL	High Level Language
IBM	International Business Machine
ILL	Intermediate Level Language
INTERNET	International Network
IRR	Internal Rate of Return
ISP	Internet Service Provider – Provides Internet to users who register at 15 P using other dial to dedicated access.
IT	Information Technology
KB	Kilo Bytes
KIPS	Kilo Instructions Per Second - its Speed
KISS	Keep it small Simple
LAN	Local Area Network
LLL	Low Level Language
MAN	Metropolitan Area Net - Work
MB	Mega Byte
MICR	Magnetic Ink Character Recognition
MIPS	Millions Instructions per Second
MODEM	Modulation Demolecular
MS DOS	Micro Soft Disk Operating System
Ms Excel	Micro soft Excel
MULT	Multiply

NPV	Net Present Value
NT	Net Work
OCR	Optical character Recognition
OS	Operating System
OUR	Optical Work Reading
PC	Personal Computer
PIN	Personal Identification Number
Ports	Are connections (sockets) on the C.P.U which a computer components (Device) like a printer, mouse, modern etc. Can be connected.
RAM	Random Access Memory
ROM	Read only Memory
SAN	Storage Area Network
SDLC	System Development Life Cycle
SSDM	Special Standard System Development management maintenance
SSM	Special Standard System Management/maintenance
SQL	Structured Query Language
SUB	Subtract
TCP/IP	Transmission Control Protocol/internet Protocol system used to transfer information from one computer to another.
UPS	Uninterrupted Power Supply
URL	Uniform Resource Locater
VAN	Value Added Network
VDU	Visual Display Unit
W.W.W	World Wide Website
Web Server	Software that delivers web pages and contains of web sites.

African Population Institute
P. O. Box 10842, Kampala Uganda
Website: www.africapopulaation.net Email: info@africapopulation.net
Tel:+256-772/712/702-836998

AFRICA POPULATION INSTITUTE
LOCAL GOVERNMENT ADMINISTRATION
PAPER CODES: **APDIR 302, APDPA 301**

1. a) Discuss the 5 core branches/ disciplines of public administration.
b) Discuss the key features of democratic constitutions.

2. a)Discuss at least 10 different types of governments.
b) Discuss at least 5 advantages and 5 disadvantages of decentralization in the development process.

3. a)Describe the three (3) major ways through which sovereignty may be distributed in the decentralization process.
b) Outline the issues that must be considered when forming a constitution for any country.

AUDIT PRACTICE AND PROCEDURES
PAPER CODES: **APDFA 302, APDPA 302, APDLPS 302, APDBA 302**

1. a) Discuss the arguments for and against audit of small companies
b) Explain all the quality control policies that should be adopted by auditors.
c) Discuss the different forms of review.

2. a) Explain the advantages of a standardized working paper.
b) Describe the contents of a working paper.

3. a) Explain 5 techniques of gathering audit evidence and give an example of each.
b) Describe the specific control procedures
c) Discuss the auditing regulatory frameworks

POLICY ANALYSIS AND MANAGEMENT
PAPER CODES: **APDPA 303**

1. a) Policy analysis is methodologically diverse using qualitative and quantitative methods, discuss the various models of policy analysis.
b) Examine the three major approaches to policy analysis

2. a) Discuss Simon's step by step mode of analysis to achieve rational decisions
b) Explain the steps involved in policy creation

3. a) Discuss the issues involved in policy management
b) Think tanks may work in or based their funding on one or more ways, Discuss

RESEARCH METHODS

PAPER CODES: **APD(FA 303, PH 303, HR 302, IR 304, PA 304, LPS 303, SW 304, BA 303, PM 303)**

1. a) Research and experimental development comprise creative work undertaken on a systematic basis in order to increase the stock on knowledge;
Explain the different types of variables used in research.
b) Using relevant examples, explain the difference between discrete and continuous variables

2. a) Descriptive research are designed to gain more information about a particular characteristic within a particular field of study
b) Explain how it is different from exploratory research
c) What is the difference between a research proposal and a project proposal?

3. a) With some form of detail, illustrate the structure of a research report
b) Examine the different forms of experimental designs
c) Assess the different levels of data analysis

INFORMATION TECHNOLOGY

PAPER CODES: **APD --- 105**

1. Information technology always deals with organizational need
Examine the stages involved in the systems development life cycle

2. File are used to store data and information that will be needed again in future or for the current use
a) Explain the different data processing operation
b) What are the features of storage and retrieval systems?

3 a) With relevant examples, Analyse the different forms of security issues as used in information technology

b) A spread sheet is a general purpose software package for modelling
i) Explain the different applications of spread sheet
ii) What are features of a word processor?