

## Invisible Colleges and International Consortia in Higher Education

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## Deconstruction of international university co-operation

### International

- Ranges from a digitalised borderless world connected through technological means to the socio-political-economic polity between nation-states

### University

- Ranges from offering a single academic degree or many, one which is committed solely to teaching, to both teaching and research, or solely to research

### Co-operation

- Working together', but oftentimes, contains the inflexion that all have the right to work equally, jointly and with common purpose

## Variations of invisible colleges

Key Characteristics	Related Research
1) Obtain knowledge of basic research, innovation, and emerging technologies through shared social networks and/or citation networks	Grane (1972); Lievrouw (1990); Tuire & Erno (2001); Zuccala (2004)
2) Establish recognition of quality and validation through the reputation of individual and/or institutional partnerships	Whitley (1981); National Academy of Sciences (1969); Kurzman and Owens (2002)
3) Communicate new knowledge by electronic means via virtual classrooms, blogging spaces, emails, etc	Lincoln (1992); Delong (2006)
4) Seek knowledge for institutional survival and viability	Astin and Lee (1972)
5) Gain vital knowledge about major competitors and, at the same time, redefine the institution's mission, role, relevancy, and scope	Hruby (1973)

## Examples of globalising influences

STANDARDISATION	REGIONALISATION	ACCULTURATION
metric testing on student outcomes and research	trade liberalisation	student and staff mobility
transparency and accreditation of offshore education providers	preservation or maintenance of language; culture	diplomatic ties between countries; cultures
transferability and portability of academic degrees	academic social networking and funding opportunities	pedagogical approaches

## The emergence of international consortia

International consortia have been strategically designed in part:

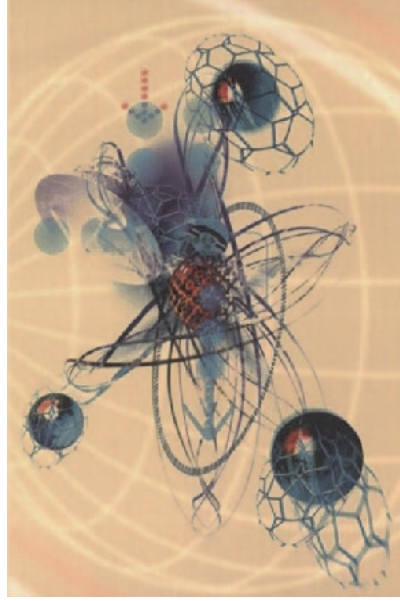
- 1) to cooperate and/or collaborate with three or more institutions to enhance, enrich, and diversify the academic programs, initiatives, and resources to students and staff; and
- 2) to cooperate to compete for economic diversification, gain, recognition, and sustainability.

## The invisible college of old



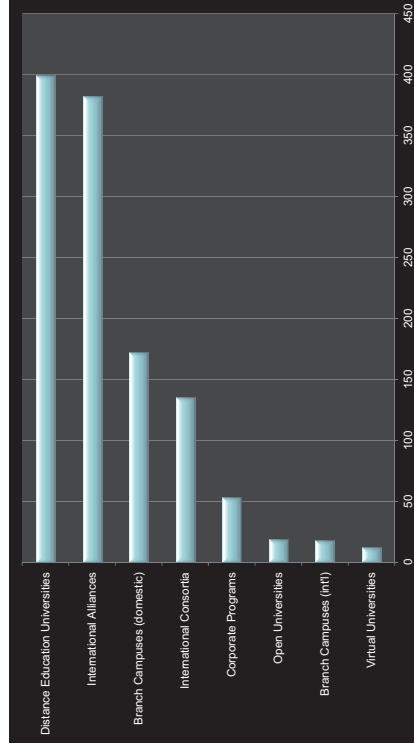
Source: <http://someofmesaid.wordpress.com/invisible-college/>. Retrieved 12 August 2010.

## The invisible college of new



Source: <http://multiblackcollege.digitallibrary.com/>. Retrieved 12 August 2010.

## Distribution of formalised international university organisations



**International consortia and the globalisation of education**

The diagram features the UNE University of New England logo in the top left. A green box labeled 'Domestic education' has three arrows pointing upwards to three blue boxes: 'Economic Growth', 'Productivity', and 'Socio-political considerations'. These three blue boxes are connected to each other by double-headed yellow arrows, indicating a reciprocal relationship between them.

**International consortia and the globalisation of education**

This diagram is identical to the one in the top-left panel, showing 'Domestic education' leading to 'Economic Growth', 'Productivity', and 'Socio-political considerations'.

**International consortia and the globalisation of education**

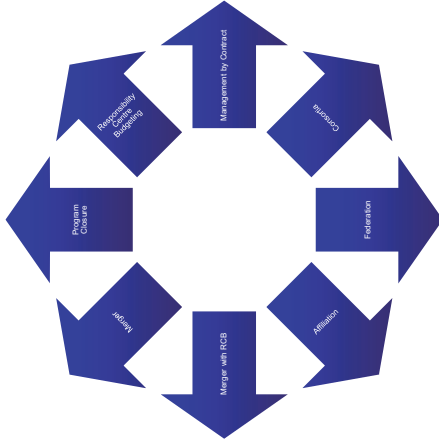
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**International consortia and the globalisation of education**

The diagram features the UNE University of New England logo in the top left. A green box labeled 'Domestic education' has three arrows pointing upwards to three blue boxes: 'Economic Growth', 'Productivity', and 'Socio-political considerations'. These three blue boxes are connected to each other by double-headed yellow arrows. An orange box labeled 'International Consortia' is positioned above the three blue boxes, with three arrows pointing downwards to each of them. To the right of the 'International Consortia' box is a vertical stack of four orange boxes: 'Transfer of new ideas', 'Improved quality', 'Increased cultural understanding', and 'Contacts/alumni & trade'. Arrows point from the 'International Consortia' box to each of these four boxes.

Modified version of APEC and International Education 08, The key ideas (1.1).  
Report for the Department of Education, Employment and Workplace, Centre for International Economics, Canberra and Sydney

## Continuum of Inter- Institutional Co-operation



Source: Modified version of (Lang 2002: 158) and Grant Harman's (1989) earlier version

## Information exchange, collaboration, and citations between professors

	The whole network		Individual professors (n=104)				Centrality mean
	Density	Centralisation	Centrality				
	%	%	0	1-10	11-20	20<	
Information	0.12	24.6	1	43	47	13	12.2
Collaboration	0.04	12.0	11	89	4	..	3.9
Citation	0.13	27.8	9	70	15	10	7.6

Source: Tuire and Erno 2001: 502

## Educational benefits or burdens

- Technology transfer
- 'Quality'
- Cultural appreciation, sensitivity
- Increased international associations and networks
- The Western-value, 'Education as investment'
- Standardisation

# Invisible Colleges and International Consortia in Higher Education

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## **Abstract:**

There are various dimensions of international university co-operation, specifically international consortia in higher education. Although opinions vary as to why they were developed, the majority of international consortia began positioning themselves after World War II have increased greatly since then. Regardless of their mission or purpose, international consortia have arguably supplemented higher educational institutions as 'invisible colleges', so characterised because the physical infrastructure of institutions has been complemented by cooperative relationships established in order to provide adequate quality and variety instruction, to monitor worldwide educational trends, and to further promote the dissemination and advancement of knowledge. The specific study encompasses 500 + such international university organisations worldwide, with particular survey data directed toward international consortia. Analysis of the data collected details the role they play in the internationalisation of higher education and their possible applications and benefits to participatory institutions.

## **Invisible Colleges - Conceptual Umbrella of Consortia**

Variations on the theme of invisible colleges can be helpful in understanding the concept. Several definitions are worth noting. In her 1972 publication, *Invisible Colleges: Diffusion of Knowledge in Scientific Communities*, Diana Crane makes reference to invisible colleges as social networks that were created among groups of academic albeit scientific collaborators. In another reference, Tuire and Erno contend that invisible colleges were established as far back as the 1640s when "...there were about ten young men, not professional scientists but well-educated in some field, who used to have informal meetings in London taverns" which later evolved into the Royal Society (2001: 497; See also Lievrouw 1990; Zuccala online). There is also Ayn Rand's *Atlas Shrugged* (1957), in which an intellectual community of a select few were chosen to collectively live and work together in order to further develop their own independent, rationalised, and 'objective' thoughts, reasons, and moralities. However, unlike Rand's thesis, many invisible colleges were also founded for altruistic purposes to generate new knowledge rather than to simply collaborate for personal if not mutual gain. Rothblatt referred to such groups as 'doers of science', but that "...there were no finely drawn communities in control of scientific knowledge and information" (1997: 422).

In certain instances, social capital may be considered synonymous with invisible colleges, particularly in relation to building informal bonds of trust and social connectedness, but patterns of evidence found in the literature seems to indicate that a divide exists between social capital's relationship with local communities and civil society viz à vis invisible colleges representing the research and teaching interests of a select group of academic scholars. As Fukuyama states:

Social capital can be defined simply as an instantiated set of informal values or norms shared among members of a group that permits them to cooperate with one another...The fact that social capital can on occasion be used for destructive purposes or can become obsolete does not negate the widely shared presumption that it is generally a good thing for a society to have. (Fukuyama 2000: 99; 100)

In another reference, Zuccala offers her definition of an invisible college:

An invisible college is a set of interacting scholars or scientists who share similar research interests concerning a subject specialty, who often produce publications relevant to this subject and who communicate both formally and informally with one another to work towards important goals in the subject, even though they belong to geographically distant research affiliates. (Zuccala: online)

Invisible colleges are thus often hidden from the public eye, are often considered as informal gatherings of scholars and, in many cases, have evolved to become more formalised networks (Tuire & Erno 2001: 497). This has often led to a high dependence on validation, based upon the acceptance of contributions as academically significant and competent (Whitley 1981), the further development of citation networks (Tuire & Erno 2001; Zuccala 2004), and the close association between advanced scholars and distinguished mentors (National Academy of Sciences 1969). As Jarvis points out:

In a sense, then, part of the research into social capital has taken us back to the ideas of the community and the community spirit, phenomena that have apparently declined tremendously as a result of the division of labour, although the same concern about the decline existed nearly a century ago. (Jarvis 2007: 120)

Lincoln's 1992 publication, *Virtual Community and Invisible Colleges: Alterations in faculty and scholarly networks and professional self-image*, identifies invisible colleges as connoting communication via technical means in order to maintain regular contact with scientific communities, particularly with those academics who do not live and work in close proximity. Delong's 2006 article, *The Invisible College*, is similar in vein, contending that the use of new online technology

(specifically blogging) has enhanced the role and elevation of stature of the academic staff member, particularly as one who can influence both students and colleagues alike through the seamless invisibility of networks on the web. Both suggest that 'invisible colleges' are innovative ways communication enhance new knowledge generation through online networks.

A more limited definition of invisible colleges is found in a book published in 1972 with the same title by Astin and Lee. However, instead of referring to collaborator networks, Astin and Lee concerned themselves only with lesser known private, higher educational institutions in the United States which were less concerned about their perceived status and selection process than they were about institutional viability and survival (Astin & Lee 1972). Immediately following Astin and Lee's publication came Hruby's *A Survival Kit for Invisible Colleges* (1973; 1980), which investigated the difficult circumstances Aquinas College had found itself in as a private, nonselective, and poorly endowed college during the 1970s. This was during a time period when there was growing pessimism about the future of higher education in general and the questionable fulfilment of needs an institution provided to it's community-at-large. In this description, invisible colleges were considered institutions that found themselves in crisis mode. Either they failed to measure up, had lost their relevance or sense of purpose, or came into disrepute.

Clearly, literature reviews reveal various characteristics of invisible colleges. Table 1 displays such characteristics put forward in the definition of these entities.

Table 1: Characteristics in the Definition of Invisible Colleges based on Literature Review

Key Characteristics	Related Research
1) Obtain knowledge of basic research, innovation, and emerging technologies through shared social networks and/or citation networks	Crane (1972); Lievrouw (1990); Tuire & Erno (2001); Zuccala (2004)
2) Establish recognition of quality and validation through the reputation of individual and/or institutional partnerships	Whitley (1981); National Academy of Sciences (1969); Kurzman and Owens (2002)
3) Communicate new knowledge by electronic means via virtual classrooms, blogging spaces, emails, etc	Lincoln (1992); DeLong (2006)
4) Seek knowledge for institutional survival and viability	Astin and Lee (1972)
5) Gain vital knowledge about major competitors and, at the same time, redefine the institution's mission, role, relevancy, and scope	Hruby (1973)

The changing characteristics of invisible colleges help to define a range of applications and specific orientations as to when and how new knowledge has been and is generated at tertiary levels. This helps to support Clark's historical

understanding of key structural aspects of the origins of the university, including the establishment of the *convictorium* in medieval times, the professorial table, and private *collegia* (Clark 2006). The *convictorium* typically housed university students who were generally poor but which differed from that of a typical residential college in that it "...possessed no endowment legally and had no corporate existence at law" (Clark 2006: 149). The professorial table, otherwise known as *Professoren Tisch*, was also an informal but important practice whereby "...many German professors took in boarders, other than their lodgers, on a semester-subscription basis" (Ibid: 151), and the private *collegia* which involved private (user-pays) classes between instructor and student.

While Clark identified informal workings of academia from its origins and which ultimately led to the establishment of medieval European universities, it is clear that in the present-day context, the structures and symbolism of old can be compared to that of new, including both invisible colleges and international consortia in higher education. The only differences identified between invisible colleges and international consortia are their degree of informality in terms of legality and structure and their *modus operandi*. In many cases, international consortia have developed as a means to consolidate and streamline administrative procedures and processes and, as such, do more for less.

### **Invisible Colleges aka International Consortia**

International consortia are new versions of invisible colleges---organisations that serve to support, expand, diversify, and perhaps more precisely, supplement inter-institutional cooperation on an international level. Although the Latin terms *consortium* (singular) and *consortia* (plural) have historically been used in higher education to identify clusters of local post-secondary institutions that share resources, curriculum, and administrative support. Significantly, *international* consortia serve a wider community by expanding across national borders. It can also be argued that international consortia are different from their local counterparts in the sense that they have been developed for different purposes. Many have been conceived to supplement existing institutional programs and initiatives in an effort to expand their market share, to broaden their course offerings, and to offer additional foreign study and research options to students and staff. As a result, many international consortial organisations have provided much needed relief in the form of additional operational support and resources to successfully execute and deliver international educational exchanges and programs.

A further distinguishing element characterising international consortia is their active engagement in cultivating partnerships from various geographical sectors which aim to serve their expanded community. This activity has fueled the incentive for consortial members to seek other avenues of funding, generally in the form of corporate, government, and foundation support as a means to help diversify



institutional finances. In some instances, the development of international consortia has strengthened ties between many institutions, thus affording the opportunity for participating institutions to jointly pursue outside funding opportunities for their own mutual benefit. As van Ginkel (1998: 40) comments:

Linking universities' competence to the needs of society not only means that we have to co-operate more with other universities and participate in networks with external partners. It also means that networks work with external partners. It also means that we have to change our internal organisational structure to be able to work together with partners from different cultures: universities in other countries, governments (local, regional, national) and their semi-autonomous agencies, and the private sector.

### **International Consortia: A working definition**

International consortia are participatory organisations or inter-institutional partnerships of higher educational institutions with a primary mission of disseminating and advancing knowledge on an international level. This dissemination and advancement of knowledge may include two or more of the following: collaborative projects and programs that are international in scope; faculty and student exchanges, curriculum-sharing; resource sharing; developmental assistance; and faculty training.

International consortia have been strategically designed in part:

- 1) to cooperate and/or collaborate with three or more institutions to enhance, enrich, and diversify the academic programs, initiatives, and resources to students and staff; and
- 2) to cooperate to compete for economic diversification, gain, recognition, and sustainability.

In addition to the above criteria, the organisations that fit within the above parameters appropriately include:

- a governing body;
- a manager;
- a mission;
- an active commitment by member institutions; and
- a funding source.

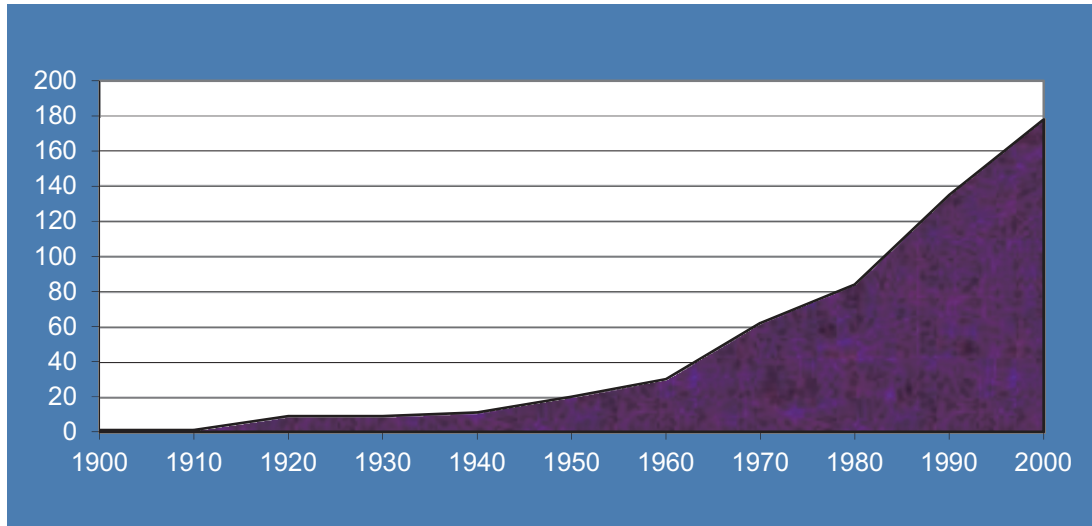
## Why did international consortia develop?

International consortia as a form of invisible colleges are recognised as formidable forces in the internationalisation of higher education may be explained by its evolving nature throughout history. If one were to relax the definitions of "international" and "university" as we know them at present, the origins of international university cooperation---at the least on an informal basis---can be traced back to medieval universities in the 15th century when Europe was designated as "a community bounded geographically" (Neave, 1997). Known at that time as a *studium generale*, medieval universities offered a uniform language of study (Latin), a uniform programme of study and exams for students with a common religious credence, and a particular focus designed to attract students from other parts of Europe (Neave 1997: 3). However, to state that they were indeed inter-institutional partnerships is somewhat misleading and untrue. The interconnectedness between institutions were directly related to academic staff who, for whatever reason, would move from place to place to set up their business to teach, with the hope of being taken care of both in terms of finances and of security.

Colonialism offered the next known wave of international university cooperation with the formation of the Association of Commonwealth Universities (ACU) in the United Kingdom in 1913. Although the inter-institutional relationships formed as a result of the ACU were mostly unilateral, the formation of such partnerships was typically designed in an effort to further develop the colonised area as a political entity or ally. It was only after World War II that international consortia, as defined in this study, began to take form. Perhaps the first of its kind in the developing world, The Colombo Plan was founded in 1951 to provide developmental assistance in the form of international educational exchange to financially disadvantaged countries. Institutions in the United States began experimenting in international consortia with the formation of the Associated Colleges of the Midwest (ACM), founded in 1958 which incorporated an international dimension with the partnership of universities in four countries.

A study of consortia which will be discussed at length in a later section of this paper documented their development as displayed in Figure 2.

**Figure 2: Development of International University Organisations, including Consortia**



Note: Data displayed in Figure 2 includes 53 of the 61 international consortia which participated in the study.

Source: Denman 2005: 402.

Considering the majority of international consortia of late, the economic benefits to be reaped have arguably taken precedence over the good-will nature of cooperative inter-institutional relationships, and although institutions may legitimise their collective involvement for furthering international co-operation--particularly in the name of internationalisation--it is the economic gains, the consolidation of costs, staff, and resources, and international recognition and visibility that determine the extent of their active participation. To a lesser extent, there are visionary leaders who see beyond the financial benefits, and although they may actively seek mutually exclusive, working relationships for purposes of a common--usually international--cause, they are under increasing pressure to be financially accountable. Ownership, or more precisely, stakeholderhood, thus becomes tantamount in terms of invested interest from the visionary leader, from the corpus of its members, and from other stakeholders who are financially accountable. International consortia then in their pure, ideological form, require an equilibrium and validation of stakeholderhood, a sharing of strategic and tactical responsibilities, and perhaps most importantly, joint outcome accountability. Lang references their development in the context of Astin and Lee's argument for institutional survival. He states:

Cooperation may be a means, perhaps the only means, of institutional survival. Survival is a necessity. Like any species in an ecosystem, colleges and universities will seek to survive, and will choose change over the *status quo* in order to do so. The complexity of ecosystems, perhaps like systems of post-secondary education, can, on the hand, reflect the essential role that specialization and diversity play in maintaining the health of the system. Seen from this perspective, any system of higher education contains a plethora of unique niches that are constantly changing. (Lang 2002: 162)

The role international consortia play in the over-all development of international university co-operation may be perceived differently around the world. The data suggest that international consortia are generally structured to meet the needs of the community and culture to which they subscribe and that their potential role in higher education may further initiate new opportunities well beyond the realm of whatever services they currently have to offer. In this sense, they are correctly regarded as invisible colleges, whereby the physical infrastructure of institutions has given way to the formalised networks established. These types of international university organisations help higher education provide adequate quality and variety of instruction, monitor and remain current on worldwide trends, and further promote---or broker---a universal dissemination and advancement of new knowledge.

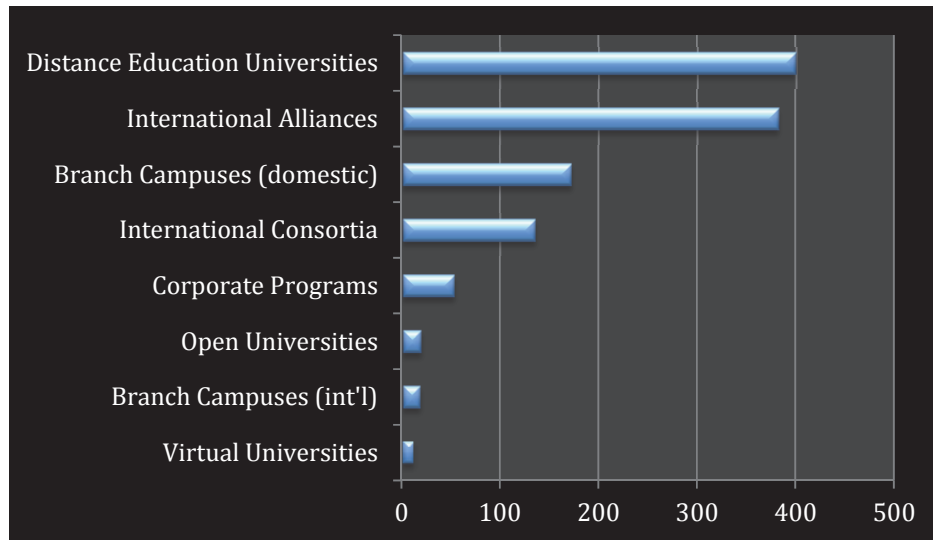
### **Studying International Consortia as part of University Cooperation**

An ongoing study on international university cooperation has been conducted to classify international university organisations, notably consortia, by purpose (function) and administrative patterns (structure). Between 1996-2008, surveys were sent to over 700 international university organisations worldwide and survey respondents were asked to classify their own organisation. The surveys were designed in part to identify organisational patterns between three types of international university organisations, specifically international consortia (*i.e.* inter-institutional partnerships), international alliances (*i.e.* groups, unions, councils, or associations), and international agencies (*i.e.* centers, institutes, or think tanks). While the characteristics among organisational types were purposely generalised to invite specific definitions by survey participants, the only stipulations were that each organisation must consist of at least three or more higher education institutions or the equivalent and that, as a collective whole, they must pursue a common *international* purpose for mutual benefit.

Organisations were identified utilising numerous sources and cited for their common purpose or primary mission. These included world-focused universities, satellite or extension (offshore) campuses, bridging and twinning programs, entrepreneurial profit-making groups (*e.g.* information and advising centers, overseas education brokers, credit evaluators, study/travel operators), inter-

governmental and non-governmental educational agencies, and those entities based on bilateral and multilateral memoranda of understanding, mutual compliance, or exclusivity of membership.

**Figure 3: Distribution of Formalised International University Organisations**



Sources used to collect information on these and other forms of international university co-operation included the following directories and reference materials:

- NAFSA: Association of International Educators
- European Association of International Educators (EAIE)
- Institute of International Education (IIE)
- American Council on Education (ACE)
- UNESCO's International Association of Universities (IAU)
- Australian Vice Chancellors' Committee (AVCC)
- The Observatory on Borderless Higher Education
- Meetings with key people in their respective regions

Although in Figure 3 above, the distribution does not attempt to reflect levels of activity by percentage in terms of cross-border higher education worldwide, it does help to substantiate how differentiated cross-border higher education is, including distance education, and what types of organisations this study investigates. If one were to accept Verbik and Lasanowski's estimates that the total number of mobile tertiary education students worldwide has reached more than 2.7 million in 2005,<sup>1</sup> then conservatively speaking---with 30 students to a program---there would be close to 90,000 international university organisations worldwide. Satellite (offshore) campuses, including those which are mobilised academic programs as well as 'bricks

<sup>1</sup> (Verbik & Lasanowski 2007: 1)

and mortar', are steadily increasing with more than 843 in 2007<sup>2</sup> while study abroad offerings continue to offer the vast majority of programs and exchanges worldwide. Bridging and twinning programs originating in Australia in 2003 alone included some 442 programs with an additional 253 estimated and identified as distance education-oriented.<sup>3</sup> Indeed, based on the data collected in this study, it is thought there may be some 517 international consortial alliances and separate-entity agencies.

### **Organisational Characteristics**

Among those organisations that classified themselves as international consortia, it was found that there are at least two types, namely economic-oriented and sharing-oriented international consortia, both of which share a common administrative characteristic. They each have a tendency to form at the institutional level, and as a result, can be further classified as faculty-initiated partnerships, institution-initiated partnerships, cluster-type inter-institutional partnerships, or market-driven partnerships.

#### **Faculty-initiated partnerships**

- formed between faculty members of different institutions who are interested in conducting joint or collaborative international research. Most are likely to be project-based. Examples may include a specific field of study, a concentrated area of scholarly focus such as language study, regional studies, cultural studies, or development studies.

#### **Institution-initiated partnerships**

- types of partnerships that are either project- or program-based. The project- or program-based function tends to be directed to an individual department, school, or faculty and may be dependent on external funding controls such as foundation or governmental support 'soft monies', short-term institutional funds, or donor wishes. They may also be considered self-supporting inter-institutional partnerships in which membership fees, tuition fees, program fees, and the sale of publications are used to help defray program-based costs. Quality control measures and maintenance of standards may also be imposed to ensure academic integrity. Examples may include projects that are research-oriented or program-based initiatives aimed at promoting and developing the internationalisation efforts of partners.

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<sup>2</sup> These figures are a conservative estimate of the numbers identified from the American Council on Education (2007: 10) and the Australian Vice Chancellors' Committee's (*Offshore Programs of Australian Universities* 2003).

<sup>3</sup> Please refer to Australian Vice Chancellors' Committee's (*Offshore Programs of Australian Universities* 2003).

### Cluster-type inter-institutional partnerships

- represent a consolidation of resources as a means to reduce administrative costs, minimize duplication, and build on inter-institutional relationships through student and faculty exchanges, joint research, and the sharing of knowledge. They may also incorporate an exclusive membership in the form of a 'club', which shifts the focus of partnerships based on voluntary participation to privileged invitation.

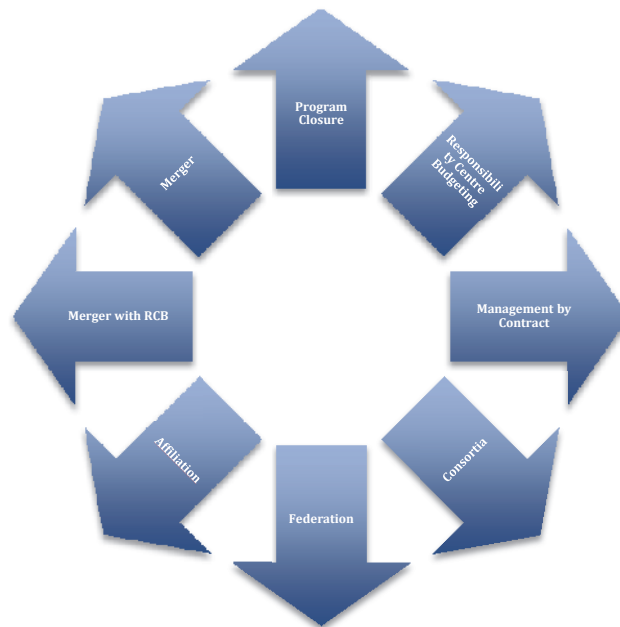
### Market-driven partnerships

- economic-oriented international consortia.

### Observations

As noted in the foregoing text and study, clear trends have emerged in higher education collaboration. Some scholars conclude that there is a shift in attitude from altruism to institutional survival. Lang identifies a continuum of inter-institutional co-operation, suggesting that international consortia sit well between the extremes, program closures and mergers. This middle-ground position may infer institutional stability, expansion, and performance, but for international consortia to sustain their activities, they require ownership, direction, and strategic purpose for *all* partner institutions.

Figure 4: Continuum of Inter-Institutional Co-operation



Source: Modified version of (Lang 2002: 158) and Grant Harman's (1989) earlier version.

Neo-populism asserts the notion that like-minded intellectuals [leaders] respond to similar situations and issues, suggesting that they validate one another's work, sometimes even to the detriment of progress. Thus, when scholars attempt to collectively work together, either in economic or educational terms, there is an increasing need to look at other like-minded models to identify the roles these linkages play, regardless of formality (structure and function), and anticipate the challenges that may lie ahead. There continues to be a need for caution in preserving identities and not overstepping one's bounds to commodify education for one's personal benefit. Table 5, drawn from a recent study, confirms that individual professors tend to prefer to collaborate with groups of 1-10, yet are more willing to share information with the whole network and cite references from the group rather than collaborate regularly with the whole.

Table 5: Information Exchange, Collaboration and Citations between Professors

	The whole network		Individual professors (n=104)				Centrality mean
	Density	Centralisation	Centrality				
	%	%	0	1-10	11-20	20<	
Information	0.12	24.6	1	43	47	13	12.2
Collaboration	0.04	12.0	11	89	4	--	3.9
Citation	0.13	27.8	9	70	15	10	7.6

Source: Tuire and Erno 2001: 502.

These kinds of academic relationships seem to suggest that all types of international university co-operation may be considered 'invisible colleges'. Of course, only the more formalised programs are visible. It also suggests that invisible colleges are here to stay, particularly international consortia, and that they will continue to grow. Not only do international consortia offer voice and validation of research and teaching within a discipline or set of disciplines, they also help to promote and advance new knowledge in terms of specialisations. While they may do so out of economic imperatives more than anything else, what appears promising is that international consortia help to broaden not only the reputations of those scholars who represent the group but also the institutions to which they are related. Generally, the ongoing challenges for international consortia to prosper are institutional and individual support, ownership of research direction and/or program purpose, and ongoing financial support.

A reasonable assumption can be made that the trend toward collaboration began in Europe. Shared consciousness or "collective wisdom" in education as Teichler prefers to use, has a longstanding history in Europe. Neave dates it back to the late 1700s during the Austro-Hungarian empire. He states,



The Austrian reforms, curtailed though they were, provide a useful exemplar of the general process which, first applied to government, moved progressively back into the university and from there infiltrated steadily downwards by dint of educational provision generally. From being a universal community of belief and faith, territorial unity became equated with the particularism of dynastic loyalty. (Neave, 1997; 8)

Thus, the idea of a knowledge society of the late 1700s suggests that it was initially perceived as a form of national identity, or more precisely in medieval times, empire citizenry. This seems to indicate that invisible colleges do have a symbiotic relationship with that of history, as it was the nation-state and not economic institutions that shaped social structures. On the other hand, North America, as taking on a more individualised form of consciousness, has been historically less nationalistic and more competitive in focus. It therefore is likely that in other environments that espouse economic free trade, cooperation will not function without competition. Further research should be undertaken to differentiate patterns in invisible college formation based on educational systems.

On a positive note, it is more than likely that new programs, projects, and initiatives will emerge as a result of co-operation. By reactions to free trade agreements, mounting global issues, and demographic shifts, higher education is increasingly seen as crucial to the well-being of a nation-state and region. It therefore appears likely that other forms of education will emerge to offset the costs associated with higher education. This should not be seen as a threat, but a more even distribution to offer *all* opportunities for an education. The hope is that the developments of other cross-border higher education will not end up as a homogenisation of educational opportunity. To quote Feyerabend, who in turn quotes Jacob,

In humans, natural diversity is...strengthened by cultural diversity, which allows mankind to better adapt of a variety of life conditions and to better use the resources of the world. In this area, however, we are now threatened with monotony and dullness. The extraordinary variety which humans have put into their beliefs, their customs and their institutions is dwindling every day. Whether people die out physically or become transformed under the influence of the model provided by industrial civilization, many cultures are disappearing. If we do not want to live in a world covered with a single technological, pidgin-speaking, uniform way of life---this is, in a very boring world---we have to be careful. We have to use our imagination better<sup>4</sup> (Jacob in Feyerabend, 1987; 5).

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<sup>4</sup> Feyerabend quotes from François Jacob's *The Possible and the Actual*, Seattle and London 1982: 67.

The over-riding challenge concerns that of a Global-North paradigm, which imposes specific norms, expectations, and measures. It is based on the premise that education is valued as an investment in economic terms which, in turn, may define and re-define social standards and various levels of social stratification. It is hoped that invisible colleges could help minimise disparity in terms of educational access, equity, and co-operation, but educational provision in whatever form should be the product of a series of strategic inter-institutional decisions acted upon in a timely manner and addressing both need and contingency.

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