I want to welcome you all to a new session of study at Charles Sturt University... you are here in the experimental design classroom, either in person or as a digital representation of yourself out there in the distance education domain. I am going to precursor everything by saying that the core of this subject’s intention is upfront right there in the title of the subject itself. That is to say we are here in the principal interest of experimenting, and designing, and particularly in experimenting with design. The subject has been split up in to specific movement to allow for a sense of pseudo modularity, that’s a fancy way of saying this subject is designed or manufactured in three movements, or three frameworks in which to approach design in hopefully new and exciting ways for your practice, built I would argue, to extend your practice and design capacity.

The three modules are pretty simply outlined in your subject outline, which if you haven’t viewed already, you should run through as a matter of urgency because it a fairly lofty tome of information in itself. These ideas are based around three thematic ideas, the first is ‘ongoing experimentation’, the second is ‘cultural and environmental sustainability’ and the final section is ‘creative industries models’. Whilst we don’t really have enough time to devote to all of these, what we can do is introduce a representative range of possibilities, and that is really what I am about in this subject, giving you a core idea, and letting you run away from it in whatever direction your heart desires, and then standing back and watching exciting things happen.

In the first module we are bounded by an equation that is; Complexity + Interdisciplinarity + Experimentation = Information Design.

Complexity in this instance takes the form of an information architecture set up as a hierarchy of data forms (or information). Complex data packets are transformed through research methodology in to easily accessible bytes of information (this is research methods). Interdisciplinarity takes the form of research choosing the right medium for the message, that is to say once we have established the data and its required dissemination we must find the right way of outputting this information for our target audience. Then we get to experiment, to try things, and to fail, but to pick ourselves back up and to try again. In the end this process of research, problem solving and experimentation will result in better, more rounded problem solvers and designers. So the basis of my argument here is, as a question, research that question, find more questions, and open up that question with design experimentation to search for solutions, or better questions. Yes, you heard me right, I am not specifically requesting you to ANSWER questions with ‘answers’, but maybe, just maybe, you find better questions and that, properly rationalised, is important enough!

So we actually begin this subject by looking at two fundamental questions that seem to, for better or worse, continue to arise. These questions are; what is design and what is research? These questions might take us on a journey to find what is design research, or more closely examined, how to research through design.
Okay so let’s get to work in bad dictionary definitions... in the design book ‘The Shape of Things’, Vilem Flusser states that;

In English the word ‘design’ is both a noun and a verb. As a noun it means – among other things – intention, plan, intent, aim, scheme, plot, motif, basic structure, all these being connected with cunning and deception. As a verb – to design – meanings include to concoct something, to stimulate, to draft, to sketch, to fashion, to have designs on something.

In the book ‘Design Research through Practice’ the word design is similarly well articulated, it says:

Any book on design has to face a difficulty that stems from the English language. The word ‘design’ is ambiguous, as it covers both planning (of products and systems), and what most other European languages would loosely call ‘formgiving’. The latter meaning is more restrictive than the former, which may cover anything from hair and food design to designing airplanes... ... The art and design tradition has an important message to more technically oriented designers. Above all, designers coming from the art school tradition have many ways to deal with the ‘halfway’ between people and things.

For me this idea of being halfway between people and things, as a sort of mediator or connectivist, is an interesting way to consider design. To consider the language some more:

Germanic languages usually have separate words for planning and formgiving, including German Gestaltung and Formgebung, and also the more general Entwurf (verb entwerfen), Dutch ontwerpen, and Swedish formgivning. Latin languages build more on the idea of planning, drawing, and projecting, like the Italian disegno and French conception. Other languages, such as Finnish, build on Germanic roots; thus, muotoilu is a direct translation from the Swedish form, while suunnittelu comes from planning.

Design research through Practice continues on to say that:

People negotiate their way through this halfway with their eyes, ears, hands, and body, as well as their sense of space and movement and many kinds of things they are barely aware of. Although everyone lives in this halfway every second, there are few words to describe it. However, it is the stuff of design education. In Sharon Poggenpohl’s words, it aims at developing sensibilities of visual, material, cultural, and historical contexts1.

1 She follows Polanyi’s distinction between tacit and explicit knowledge, which we try to avoid in this book, as we believe it unnecessarily dramatizes the difference between design and research. (I have copied and pasted from the text here because I am also trying to avoid this in this subject introduction).
There is no reason to be romantic or cynical about these sensibilities. Designers trained in the arts are capable of capturing fleeting moments and structures that others find ephemeral, imaginative, and unstable for serious research. They are also trained in reframing ideas rather than solving known problems. Above all, they are trained to imagine problems and opportunities to see whether something is necessary or not. It is just this imaginative step that is presented in discussions on innovation in industry.

I have to mirror here words taken from the American Institute of Graphic Arts that I have used as a loose definition in your subject outlines about graphic design more specifically than the wider term design which says:

Suppose you want to announce or sell something, amuse or persuade someone, explain a complicated system or demonstrate a process. In other words, you have a message you want to communicate. How do you “send” it? You could tell people one by one or broadcast by radio or loudspeaker. That’s verbal communication. But if you use any visual medium at all—if you make a poster; type a letter; create a business logo, a magazine ad, or an album cover; even make a computer printout—you are using a form of visual communication called graphic design.

Graphic designers work with drawn, painted, photographed, or computer-generated images (pictures), but they also design the letterforms that make up various typefaces found in movie credits and TV ads; in books, magazines, and menus; and even on computer screens. Designers create, choose, and organize these elements—typography, images, and the so-called “white space” around them—to communicate a message. Graphic design is a part of your daily life. From humble things like gum wrappers to huge things like billboards to the T-shirt you’re wearing, graphic design informs, persuades, organizes, stimulates, locates, identifies, attracts attention and provides pleasure.

Graphic design is a creative process that combines art and technology to communicate ideas. The designer works with a variety of communication tools in order to convey a message from a client to a particular audience.

Here design is also defined as a working methodology as a ‘research tool’ in and of itself. In Design as Art of Science it is theorised like this:

The fundamental goal of the design of a product, room, poster or building is the creation of a tangible artifact for a client and/or a consumer. In this process, design has to engage the professions of engineering and business, as the goods produced have to be manufactured and they have to be sold. In addition, they have to be appealing to the buyer. This form of appeal includes beauty, utility, safety, accessibility, affordability, sustainability, durability, identity, brand recognition, emotional connection, symbolic meaning, etc. Of all these qualities, beauty and utility
have garnered the most attention throughout design's history; form and function are regarded as the two primary concerns of the designer. Things have to look good and they have to work well. If designers are expected to create artifacts that are beautiful and functional, they have to be trained artistically and they need to understand the principles of engineering. It is therefore no surprise that design has been described at times as a form of art and at times as science. However, both these characterizations have been rejected by design scholars. The concept that design is closely related to the world of art is deeprooted. But opposing this widely shared opinion is the fact that design is design and not art'. Further along in the same essay, Bonsiepe and Cullars note that ‘there can be a scientific component to design discourse, but design by its very constitution is not science’. There is recognition that design is both, and cannot be strictly defined as one or the other. 'It is misleading to divide human actions into “art”, “science”, or “technology”, for the artist has something of the scientist in him, and the engineer of both, and the very meaning of these terms varies with time so that analysis can easily degenerate into semantics'.

Design is inherently interdisciplinary; it is the discipline, which straddles craft and science, creativity and commerce, the humanities and the social sciences, art and engineering. Design is generative and analytical; it demands creative thinking and critical problem solving. If such is the task of design, its practice necessitates the designer to draw upon the type of knowledge that resides in disparate disciplines, and requires a type of thinking that is flexible enough to fluctuate between divergent and convergent modes – divergent thinking for the creative and brainstorming tasks, convergent thinking for the analytical tasks.

So we have a loose definition of design both as noun and verb, but what is this research I am referring to? You will notice in your first assignment that you are being asked to:

- Identify a data-set or topic that provides adequate information that could be represented visually.
- Conduct research on it, not surface level stuff, real research.
- Then present the factual information in an accessible way, in the medium that makes sense with the message.

What I mean by this is to think about the design process as a process of mediating information, as being a method of imbuing objects with ideas, of contributing to meaning making processes. When I say identify a Data-Set I do not mean this literally, I mean find something in your own unique world that interests you, that there is information on, that houses a space for your own unique interests and that gives you capacity for information sharing. This doesn’t mean take complex mathematical data and make a graph, this means find a topic you enjoy, research it... everything is complex when you actually stop and think about it, and that’s why I have set this weeks workshop activities the way I have.
When you find something you are ‘interested in’ research should be easy… continuing with the assessment item… utilizing any combination of analogue or digital means students are required to utilize image and type to generate a new information graphic that takes a complex issue or complex data set and develops it into an easily readable, and genuinely understandable form. The physical outcome will differ from project to project and the final design may take the shape of printed, digital, analogue (painting and illustration for example), but must be of a minimum standard as listed in the subject outline as being an A2 Print or 30 Second video or A2 Illustration or Working Web Page or Zine or really, any other output through consultation with your subject coordinator or lecturers. Seriously, I don’t know what you are interested in, I don’t know what data set you are going to pick to work with and I certainly wont know where your research is going to take you, and until you have a firmer idea of this, we cannot be prescriptive on how the final outcome will come together and what format it will take. This is why staying in contact throughout the subject with the lecturers is CRITICAL as we need to see developmental work and your ideas in progression… sharing is key!

So here is the deal… You are finding something in the world that interests you, you are conducting research in to specific aspects of it based around a central question or central inquiry upon knowledge you want to know (come on, anything, do you listen to music? Ride a bike? Play guitar? Garden? Weld things? Do up cars? ANYTHING). So, you are learning right, you are finding information on ANY TOPIC. How can this information be made accessible to other people who are trying to find stuff out quickly, or, who is this information interesting too, can it be interesting more broadly than a narrow interest group? One question should lead to more questions. This is to say, for now, you are trying to find ‘A’ Question, not ‘The’ Question but ‘A’ Question. By finding a starting question you can begin the first phase of our subject which brings us to thinking about the phases of design research… which is the core of next weeks lecture, but for now I want to think about how to find that starting question!

It starts with you.

I am asking you to do this beginning investigation through this weeks workshop questions… Internal students will need to start this before their allotted workshop times… Distance students can follow the sequence online… That first workshop is called ‘taking time to design’ or ‘walking towards our design futures’.

"Many people anecdotally claim they do their best thinking when walking. We finally may be taking a step, or two, toward discovering why."

One of the ongoing aspects of this subject in experimental design is the taking of time away from the design desk to consider design. This might seem counter-intuitive at first but by clearing ones mind and clearing ones thoughts we can find an increased lucidity in our making in a process of critical self reflection. I
am calling this ‘taking time to design’ but might equally be considered ‘walking toward our design futures’ as recorded in this article: walking. This is because I am literally asking you to take time from your 10 hour work allocation towards this subject each week to walk (or drive, or meditate, or other action that removes you from your physical/normal workspace or place of undertaking). You are to take this time in critical reflection, free from the burdens of other tasks, you should make time (1-2 hours per week). If you don’t believe me that this will help then read the article Give Your Ideas Some Legs. Here I have set out our first week of walks and some things to consider… I would prefer if you did them before moving on to reading ‘why’ we are doing them, it just makes it more experiential and interesting. For the sake of ease when I use ‘walk’ from now on that could mean walk/drive/meditate etc.

Steve Jobs, the late co-founder of Apple, was known for his walking meetings. Facebook’s Mark Zuckerberg has also been seen holding meetings on foot. And perhaps you’ve paced back and forth on occasion to drum up ideas.

Other research has focused on how aerobic exercise generally protects long-term cognitive function, but until now, there did not appear to be a study that specifically examined the effect of non-aerobic walking on the simultaneous creative generation of new ideas and then compared it against sitting, Oppezzo said. A person walking indoors – on a treadmill in a room facing a blank wall – or walking outdoors in the fresh air produced twice as many creative responses compared to a person sitting down, one of the experiments found. "I thought walking outside would blow everything out of the water, but walking on a treadmill in a small, boring room still had strong results, which surprised me," Oppezzo said. The study also found that creative juices continued to flow even when a person sat back down shortly after a walk.

For the first part of this week’s workshop activities I am asking you to take a half hour (30 mins) walk either outside or inside it doesn’t matter so long as you have no direction, no place to be, and are free enough to just walk without distraction. You should do this first walk only after you have read through your subject outline, I want the subject to park in the background where walking is your primary focus. Don’t stop when/ if an idea comes to you, keep walking, you should not record anything but rather let ideas continue to manifest, dissolve and re-appear. You should make notes of your walking thoughts in your visual diary once returned to your home space, or even later when you feel more prepared to do so. These ideas will no doubt appear primarily as questions. These should not be well written, they should be free-form, more or less ad-hoc, not fully formed, unpolished and in their raw state. I am hoping that through looking at and reading your outline and hearing this lecture you can escape to a world that is asking you ‘who am I, and what is important to me?’… ‘what can I research?’ , ‘what do I really want to know?’ , ‘what can I share with the world through design?’ . We will be walking our way towards design thinking, hopefully regularly...
The following is an excerpt from ‘Visualising Research: A Guide to the Research Process in Art and Design’ by Carole Gray and Julian Malins. This is the best space for us to begin our experimental design journey.

As formal research in Art and Design has grown, one of the most urgent debates has been about methodology. How can we carry out rigorous and respectable inquiry using methodologies and methods appropriate to practice – research without wearing a lab coat and safety goggles? It was clear, and still is, that there are no simple answers! The most fruitful way to identify appropriate methodologies has been through an analysis of completed research, and through evaluations of research in progress. The growth in completed research in our sector has begun to give us some methodological confidence. This process of validation is necessarily slow, and such is the diversity and creativity of the sector that many different kinds of ‘route maps’ are likely to emerge.

Indeed, methodology in its scientific sense implies a common or shared research approach that is transferable. This is not likely to be effective for creative practitioners! What might be more useful is the notion of ‘protocols’ (Langlois, 2003) – explicit ‘rules of conduct’ – specifically related to an individual’s research project, allowing a clear understanding of procedure (transparency), but acknowledging that complete transferability is not achievable, nor perhaps desirable. So how should you start to consider your research approach? A common misconception is first to try to identify specific methods – rather like looking down the wrong end of a telescope when we should be looking out into the methodological universe.

This might be appropriate if we had a whole raft of methods from which to choose – as in science and social science, having over 300 years and 150 years (respectively) of research experience. Academic research in Art and Design is in its infancy relative to these more established research models. We must start from first principles and examine our assumptions about research.

So leading in, I do not expect anything more this week other than letting yourself go to the workshop tasks, and thinking about who you are, and placing yourself at the center of this subjects design journey. In order to fulfill the expectations placed upon designers in the future, they will need to employ a set of skills that include some beyond today’s typical scope. No single designer is likely to have all the skills required... and as such... you are here, in this subject to take a chance and experiment. There are numerous possible outcomes and students will need to be self-directed in working towards their individual goals. Listed below are areas of Graphic Design industry, including industry cross over, liaison, fusion & nexus that students should consider in their explorations. Realise your project need not be print-based, but could be more experimental, performative or anything (even an experience requires designing).

So I leave this initial lecture with six thoughts for us to consider.
Six major trends define design’s role in a much broader, strategic context that may involve many different forms, including intangibles such as strategy and experiences. Among designers and educators, there has been an enthusiastic response to taking on these trends, although there is also anxiety about whether designers are adequately prepared to take on the broader context of the roles these trends imply for them. They were, in the order of importance as identified by designers:

**Wide and deep: meta-disciplinary study and practice**
Designers must be able to draw on experience and knowledge from a broad range of disciplines, including the social sciences and humanities, in order to solve problems in a global, competitive market of products and ideas. As the contexts in which communication occurs become more diverse, designers need to experience meta-disciplinary study as well as training deeply in specific disciplines. They must understand the social sciences and humanities in order to understand the content they are asked to communicate and they must understand how to work collaboratively with other knowledge and practice specialists.

**Expanded scope: scale and complexity of design problems**
Designers must address scale and complexity at the systems level, even when designing individual components, and meet the growing need for anticipation of problem and solution rather than solving known problems. Design problems are nested within increasingly complex social, technological and economic systems and address people who vary in their cognitive, physical and cultural behaviors and experiences. The role of the designer is to manage this complexity, to construct clear messages that reveal to people the diverse relationships that make up information contexts and to deliver sustainable communication products and practices to clients.

**Targeted messages: a narrow definition of audiences**
Messaging will shift from mass communication to more narrow definitions of audiences (special interest design), requiring designers to understand both differences and likenesses in audiences and the growing need for reconciliation of tension between globalization and cultural identity. The most effective means of communicating has shifted from broad messages for large audiences to narrowly targeted messages for specific audiences. This is the result of both media capabilities (in terms of narrow-casting and mass customization of messages) and also global dynamics. This trend demands a better understanding of a variety of cultures, the value of ethnographic research, a sensitivity toward cultural perspectives, and empathy.

**Break through: an attention economy**
Attention is the scarce resource in the information age, and the attention economy involves communication design, information design, experience design and service design. The trend toward an “attention economy” encourages discussion of what is currently driving clients’ conception of form, the attraction
of business to design and the problems of designing for a market that values the short term “grab”.

**Sharing experiences: a co-creation model**
Designers must change their idea of customers/users to co-creators (mass customization) to coincide with the rise in transparency of personal and professional lives (social networking, blogging, etc.). This trend focuses on user-centered issues through a filter that identifies appropriate methods for understanding people (for example, the current movement toward ethnographic research, rather than focus groups). It brings communication design closer to the work of product designers (who really have the attention of business) and the emerging area of service design. Social advocacy issues both emerge from this phenomenon and are empowered by it.

**Responsible outcomes: focusing on sustainability**
Designers must recognize that the pursuit of excellence involves focusing clearly on human-centered design in an era of increasingly limited resources, in which appropriateness is defined by careful and necessary use of resources, simplicity, avoidance of the extraneous and sensitivity to human conditions.

Popular, political and business forces are all coming to grips with the challenges of working in a world of limited resources. Designers, as those who use creativity to defeat habit in the solutions they propose, must assume a leadership role in proposing responsible uses of resources. This involves both the traditional concept of sustainability and also an understanding of appropriate technology and resources for the uses proposed. Responsible outcomes embody ethical issues, social need, global imperatives and the unique contribution of design thinking.

And finally for now I need to reiterate what is written throughout the subject outline:

As you will notice the predominant focus of this subject is less about the perfection of specific outcomes as it is about trying things, making mistakes, reflecting on our own practices, and ultimately experimenting with design. What students at all times in this subject need to articulate is the research behind their decisions... **know WHY you are doing things, and articulating the why is key to your wider design futures.**